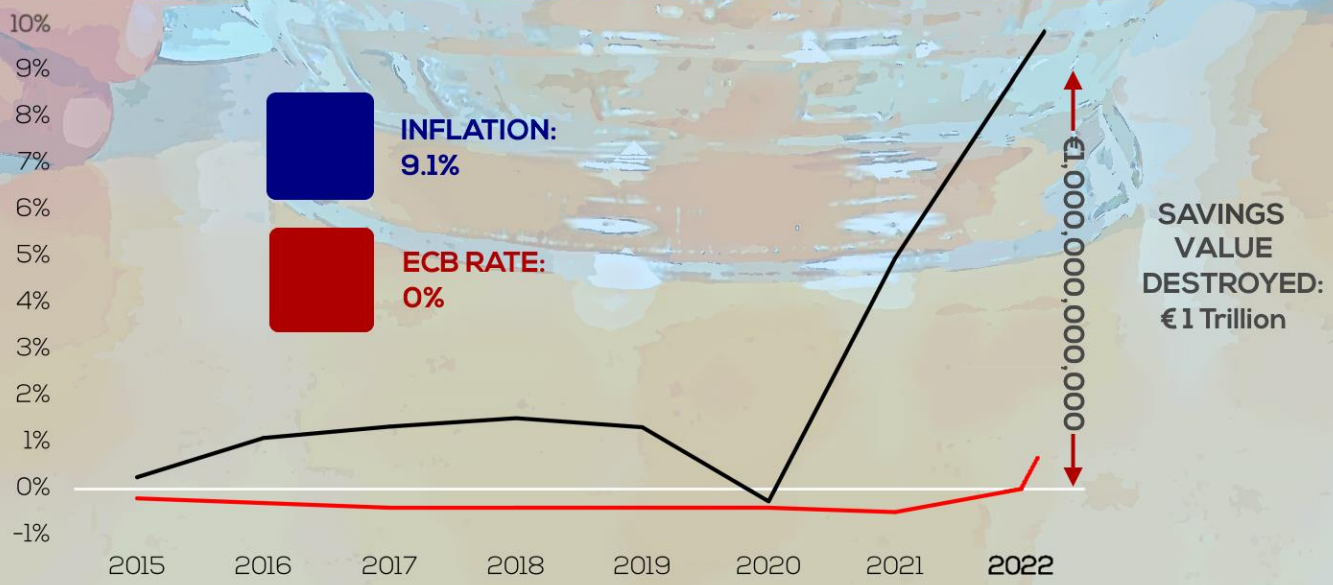
BETTER FINANCE

The European Federation of Investors and Financial Services Users
Fédération Européenne des Épargnants et Usagers des Services Financiers

Long-Term & Pension Savings | The Real Return

2022 Edition



Pension Savings: The Real Return

2022 Edition

A Research Report by BETTER FINANCE

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Since the first edition in 2013, and on an ongoing basis, **BETTER FINANCE invites all interested parties to submit proposals and/or data wherever they believe that the gathered publicly available data is incomplete or incorrect** to the email address info@betterfinance.eu.

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Pension Savings: The Real Return

2022 Edition

Executive Summary

"With the two of three worst financial meltdowns of the past hundred years occurring in the past 12 years, can our societies rely on financial markets to deliver decent retirement outcomes for millions around the world?"[1]

Strong equity returns in 2021 slowed down by inflation, which is here to stay

How much did pension savers earn on average?

In this report, we aim to provide pension comparisons on every front possible. The aggregate summary return tables compare the annual average rates of returns between occupational/collective (Pillar II) pension schemes and between voluntary/individual ones (Pillar III) on 5 periods: 1, 3, 7, 10 years. These standardised periods eliminate inception and market timing biases, allowing to "purely" compare performances between different pension schemes. For information purposes, we also show the average return since data is available (last column).

Aggregate summary return table	Pillar II								
	1 year		3 years		7 years		10 years		max. available*
	2021	2020	2019-2021	2018-2020	2015-2021	2014-2020	2012-2021	2011-2020	
Austria* **	3.08%	1.40%	4.12%	1.23%	1.92%	2.35%	2.68%	1.79%	1.56%
Belgium	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Croatia	2.55%	8.06%	3.38%	2.81%	4.76%	4.99%	4.82%	4.10%	3.25%
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	1.30%	7.97%	4.60%	2.10%	1.61%	2.13%	2.35%	1.31%	0.75%
France	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Germany	n.a.	3.53%	n.a.	2.23%	n.a.	2.63%	n.a.	2.46%	2.35%
Italy	1.44%	7.30%	3.96%	1.85%	1.97%	2.81%	3.30%	2.66%	0.86%
Latvia	2.21%	8.43%	4.22%	1.12%	1.15%	1.54%	2.30%	1.45%	0.05%
Lithuania	5.97%	14.92%	8.60%	4.72%	3.95%	4.07%	4.60%	3.52%	1.95%
Netherlands	0.85%	6.23%	6.58%	5.01%	3.84%	5.79%	5.00%	5.26%	2.80%
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	-2,58%	2,59%	1,64%	1,81%	1,23%	2,68%	2,83%	2,95%	2,04%
Slovakia	3.38%	5.37%	3.13%	0.70%	1.59%	1.50%	1.43%	0.79%	0.21%
Spain	1.52%	2.10%	2.25%	2.40%	3.02%	3.86%	2.56%	2.86%	0.86%
Sweden	13.50%	6.45%	17.44%	8.23%	n.a.	n.a.	n.a.	n.a.	10.59%
UK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

*Source: BETTER FINANCE own composition; *whole reporting period differs between countries; **UPF data used as proxy for Pillar II; ***Pension funds used as proxy for Pillar II, 2021 data is estimated; data for Netherlands Pillar II is only occupational pension funds*

[1] Amin Rajan (Crate Research), 'Coronavirus Crisis Inflicts a Double Blow to Pensions' (FT.com, 15 April 2020) available at: https://www.ft.com/content/bd878891-4f20-46c3-ab23-939162a85d9c.

Voluntary pension products vary in market share based on the jurisdiction: in some cases, insurance-based products are more prevalent, whereas in some countries pension funds are preferred. The table below shows the average real net returns for supplementary pensions by standardised holding periods.

Aggregate summary return table	Pillar III								
	1 year		3 years		7 years		10 years		whole reporting period*
	2021	2020	2019-2021	2018-2020	2015-2021	2014-2020	2012-2021	2011-2020	
Austria*	0.44%	1.27%	0.96%	2.65%	1.29%	3.09%	1.50%	3.30%	1.95%
Belgium	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a	n.a
Croatia	2.00%	-1.41%	2.97%	2.13%	3.48%	4.57%	4.41%	3.75%	3.51%
Denmark	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Estonia	6.30%	4.51%	8.14%	2.37%	3.04%	3.19%	4.00%	2.04%	1.78%
France*	0.37%	1.13%	1.55%	0.65%	1.07%	1.43%	1.63%	1.47%	1.47%
Germany**	-3.72%	2.68%	-0.16%	1.30%	0.64%	1.62%	1.11%	1.64%	1.20%
Italy	1.92%	0.03%	3.04%	1.18%	2.18%	2.58%	3.18%	2.49%	1.91%
Latvia	-1.01%	2.14%	3.18%	0.82%	0.59%	1.75%	2.17%	1.58%	1.34%
Lithuania	0.54%	4.83%	4.65%	2.29%	2.17%	2.85%	3.37%	1.98%	1.03%
Netherlands	-2.29%	1.83%	-0.04%	1.39%	1.19%	1.14%	0.33%	0.27%	0.02%
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	-3,07%	0,99%	0,60%	0,35%	0,22%	1,53%	1,90%	1,91%	-1,00%
Slovakia	1.92%	1.30%	3.03%	0.08%	0.92%	1.00%	1.39%	0.44%	0.71%
Spain	2.10%	0.86%	1.58%	1.33%	2.20%	3.08%	2.26%	1.60%	0.35%
Sweden	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
UK	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

*Source: BETTER FINANCE own composition; *whole reporting period differs between countries; ** Riester pension insurances contracts. Acquisition charges are included and spread over 5 years*

Unfortunately, due to unavailability of data breakdowns, for some country cases (UK, Belgium, Denmark, Poland) we were not able to calculate the annual real average returns by Pillar. Nevertheless, the results by retirement provision vehicle are available in Graphs 19 and Table 20 in the *General Report* and on an annual basis (nominal, net and real net return) in each country case).

***Note**: For a few pension systems analysed in the report, the data available on retirement provision vehicles clearly distinguishes between Pillar II and Pillar III (such as Romania or Slovakia). In other countries, where pension savings products may be used for both Pillars, the categorisation is more difficult since return data is not separated as such. However, for reasons of simplicity and comparability, the authors of the report have put in all the necessary efforts to correctly assign each product according to the pillar it is, or should be, used for.*

Taxation

What happens to investment returns after charges and inflation are deducted?

Charges, investment strategies, and inflation influence earnings, but the actual sum the pension saver will be able to withdraw and spend at retirement will depend on the *taxation regime*. In other words, when and how much do savers lose of their pensions due to taxes?

The actual taxation rates (in %) are highlighted in Table GR10 and in the *Taxes* sub-section of each individual country case. The purpose of the "pillar"-system is to stimulate pension savings by giving tax incentives (exemptions, lower taxes, deductibility, subsidises etc).

The table below shows whether the three pension saving steps (contribution – *what you pay for your pension*; returns – *what your investments earn*; and pay-outs – *what you will withdraw*) are **exempt (E)** or **taxed (T)** in each country under review.

Taxation of pension savings						
	Contributions		Returns		Pay-outs	
	Pillar II	Pillar III	Pillar II	Pillar III	Pillar II	Pillar III
Austria	E	E	E	E	T	T
Belgium	E	E	E	E	T	T
Bulgaria	E	E	E	E	E	E
Croatia	E	E	E	E	T	T
Denmark*	T	T	T	T	T	T
Estonia	E	E	E	E	T	T
France	E	E/T	T	T	T	T
Germany	T	T	E	T	T	T
Italy	E	E	T	T	T	T
Latvia	E	E	E	E	T	T
Lithuania	E	E	E	E	E	E
Netherlands	E	E	E	E	T	T
Poland	T	E/T	E	E	E	E/T
Romania	E	E	E	E	T	T
Slovakia*	E/T	E	E	E	E	T
Spain*	E	E	E	E	T	T
Sweden	E	E	T	T	T	T
UK	E	E	E	E	T	T

**There are rules and exceptions based on the type of pension vehicle. For details, see the relevant country case; Source: BETTER FINANCE own composition*

Pension plan types: defined contribution on top

Who bears the risk of adequate pensions at retirement?

Originally, the level of pension (*benefit*) would be pre-defined by the provider of the pension plan, usually based on a formula that used some standard variables for each saver (income/salary, inflation, etc). As such, the pension plan provider bears the risk of obtaining

the necessary resources (money) to pay out this ***defined benefit*** pension to the saver at retirement age.

Nowadays, most private pension plans (Pillar II and III) use a ***defined contribution*** rule. This means that the saver only knows how much he can pay for his future pension, but the actual amount and income level at retirement will depend on external factors and will be subject to capital market fluctuations, just as any other investment. In other words, the risk of obtaining an adequate pension at retirement depends on the investment decisions made by the saver, where the provider is only obliged to pay-out the ***real net returns***, before tax, earned during the investment period.

Pension scheme type (*who bears the risk?*)				
	Provider (defined benefit)		Saver (defined contribution)	
	Pillar II	Pillar III	Pillar II	Pillar III
Austria	X		X	X
Belgium	X	X	X	X
Bulgaria			X	X
Croatia	X			X
Denmark	X	X	X	X
Estonia			X	X
France	X		X	X
Germany	X		X	X
Italy			X	X
Latvia			X	X
Lithuania			X	X
Netherlands	X		X	X
Poland			X	X
Romania			X	X
Slovakia			X	X
Spain	X		X	X
Sweden	X		X	X
UK	X		X	X

Source: BETTER FINANCE own composition

For more details on how this information unfolds, what factors influence pension savings and how Governments tax pension earnings, read the following chapter or the individual country case corresponding to your domicile.

Pension Savings: The Real Return

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Policy Recommendations

Value for money, transparent, comparable and simple long term and pension savings products

1. End the sovereign debt and fixed income biases in pension vehicles

Prudential rules hamper long-term investments by imposing a debt, particularly sovereign, bias.

All regulations applying to long-term and pension savings should not discriminate long-term equity investments, in particular life-cycle strategies which adapt risk to the investment horizon of the saver (as is the case of the AP7 Safa fund). Also, the investment risk scale has to be reviewed to stop promoting such asset classes as money market as the safest for pension products

2. Stop penalizing taxation of long term and pension products

Taxation on pensions (either contributions, returns, or pay-outs) should be on **real values**, not nominal. Tax should be levied only after adjusting values by the harmonised consumer price index. To recoup the value of pension pots, at least Pillar II schemes should apply an "EEE" regime. Pillar II contributions should be deductible from the income base tax.

3. Urgently improve long-term and pension reporting

This report showcases the growing difficulty to obtain even the net returns of long-term and pension savings. On charges, it is an almost impossible task.

EU law should take the example of the certain national competent authorities which are required, by law to adequately report figures on a monthly basis, and constantly publicly report and update: the assets under management and net assets under management; the unit value; the asset allocation; the number of participants of all supervised vehicles in the area of long-term and pension savings.

EU authorities should follow-up on the High-Level Forum on the Future of the Capital Markets Union (HLF CMU) recommendations to establish individual pension tracking systems.

4. Provide simple, intelligible, and comparable reporting on long-term and pension products across the EU

Obtaining information on long-term and pension vehicles, as well as monitoring them, should not be difficult for non-professional savers. This implies also reinstating standardised actual

cost and past performance disclosure, and in **real terms alongside the less relevant nominal ones.**

5. Harmonise and reinforce rules to curb the conflicts of interests in the distribution of long-term and pension saving products

In certain cases – showcased in our report – savers are directed to fee laden and often poorly performing products, mostly due to biases in the distribution process of investment products. Value for Money should be enforced in this service as well and the incentive of distributors should be aligned with those of their clients.

6. Improve the European Supervisory Authorities' (ESAs – ESMA, EIOPA) reports on cost and performance of retail investment products

Currently, the data and coverage of these reports – on markets under their supervision – are incomplete and based on commercial databases or surveys. Regulatory reporting should be the main source of these reports.

7. Improve the governance of collective long-term and pension schemes

In order to drive long-term **real** outperformance, the governing bodies of these schemes must have independent members representing the interests of beneficial owners.

8. Allow savers to defer contributions to pension products without penalties

9. Introduce auto-enrolment in occupational pensions

Romania, Sweden and Slovakia serve as *best practice* examples: the active labour force should be enrolled automatically in a default pension fund, with the free choice to withdraw or switch providers at no additional cost. This was also a recommendation of the HLF CMU report.

10. Urgently establish harmonised insurance guarantee schemes in the EU

EU citizens are partially covered against the default of product manufacturers through Deposit Guarantee Schemes ("DGS" Directive 2014/49/EU) and Investor Compensation Schemes ("ICS" Directive 97/9/EC). However, many pension savers across the EU lack an appropriate protection for insurance-based pension products. This is all the more important as these products (such as life insurances) are predominant in some EU pension systems (France for instance).

BETTER FINANCE calls on the EU co-legislators to revamp the project for a Regulation on Insurance Guarantee Schemes, which should mimic the rules from the DGS Directive, and urgently harmonise protection against insurance defaults at a minimum level across the EU.

11. Provide clear intelligible information on sustainability of European long-term retirement savings and investments

More and more retail investors are asking to invest in financial products that take into consideration sustainability criteria considering environmental, social and governance objectives as important factors for their investments.[2]

- Develop a clear, precise and common **taxonomy** established on science and facts focussing on all the three criteria (E, S, G);
- Develop **a well-designed EU-wide Ecolabel** for retail investment products, that avoids the pitfalls of existing national labels;
- **Address the short-termism by e**nsuring the link and consistency between **sustainability** and **long-term value creation** by putting exemplarity with regard to investor protection rules first and ensuring decent returns for individual investors at the very least that the very least do not destroy the value of their savings;
- Combine clear and intelligible ESG disclosures with the financial disclosures, preferably integrated in one document to ensure that savers and investors are able to see the **holistic picture of a** product;
- Require sustainability or ESG-specific knowledge and training of board members in long-term and pension vehicles.

[2] FINANCING A SUSTAINABLE EUROPEAN ECONOMY, Final Report 2018 by the High-Level Expert Group on Sustainable Finance https://ec.europa.eu/info/sites/info/files/180131-sustainable-finance-final-report_en.pdf

Financial Repression: The Hidden "Tax" on Today's Savings and Tomorrow's Pensions

"Can we pretend that money creation can exempt our societies indefinitely from having to face the question: 'who will pay?'"

- Jacques de Larosiére[3]

The front cover to this 10-year anniversary edition showcases ***financial repression***, a process which helps Government borrowing and reduces its cost. However, there is a high price to pay by ordinary citizens and pension savers, and we will debunk it.

What is *Financial Repression*?

The term was coined by two authors back in the '70s[4] to describe "*a range of policies that use the domestic financial sector to redirect savings held in the financial intermediaries to the government*".[5]

Typically, a sovereign public entity (mostly independent States) funds its expenses through taxation. More and more, it also borrows money, from banks or from fixed income markets (bonds and treasury bills). These public policies labelled as "financial repression" are not only redirecting savings to Government funding, but also lowering its price for the latter at the expense of the former. Hence the term "repression" used by the economists.

There are five ways for public authorities to cope with the extra spending and debt, but the easiest is "*a steady dosage of financial repression that is accompanied by an equally steady dosage of inflation*".[6] We saw that Eurozone inflation mushroomed from 3.4% to 10% in one year,[7] further deepening Europe's cost-of-living crisis, yet the best the European Central Bank (ECB) could muster is a late and timid hike of the deposit facility interest rate from 0 to 0.75%.

[3] Jacques de Larosiére, 'Reflections on the Health and Financial Crisis' (April 2020) Official Monetary and Financial Institutions Forum, available at: https://www.omfif.org/wp-content/uploads/2020/04/Reflections-on-the-health-and-financial-crisis_Jacques-de-Larosi%C3%A8re.pdf.
[4] The publications of Edward Shaw, 'Financial Deepening in Economic Development' (1973) Oxford University Press, and Ronald McKinnon, 'Money and Capital in Economic Development' (1973) Brooks Institute.
[5] Explanation provided in footnote 1 in the work by Bo Becker, Victoria Ivashina, 'Financial Repression in the European Sovereign Debt Crisis' (2018) 22(1) Review of Finance, 83-115, p. 84, available at: https://dash.harvard.edu/handle/1/40549673.
[6] Carmen M. Reinhart, Belen Sbrancia, 'The Liquidation of Government Debt' (March 2011) National Bureau of Economic Research Working Paper Series, Working Paper 16893, Box 1, p. 6, available at: http://www.nber.org/papers/w16893.
[7] The 3.36% represents September 2020 – September 2021, and the 10% is the estimate for September 2022.

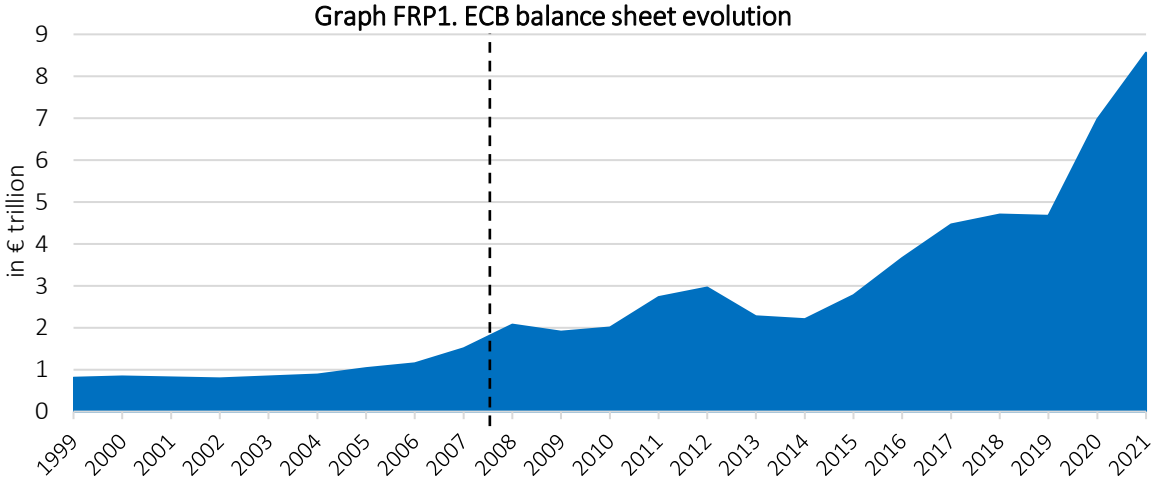
What is inflation?

Inflation describes the ***general increase*** in prices for the same amount of goods or services. Generally, inflation is measured on all goods and services consumed by the population (e.g. consumer staples, energy, dining, transport, housing, health, communication etc.) and is called the ***consumer price index*** (CPI). In the European Union, Eurostat calculates and publishes the ***harmonised index of consumer prices*** (HICP), so that it is comparable from one Member State to the other.

The real cause of inflation | Recently, inflation has been presented to the court of public opinion as a reaction to sectoral crises, short-term economic and political triggers. However, we contend that the general price increases across all sectors is much more a monetary phenomenon, strongly enabled by the unprecedented increase of the money supply by the European Central Bank (ECB).

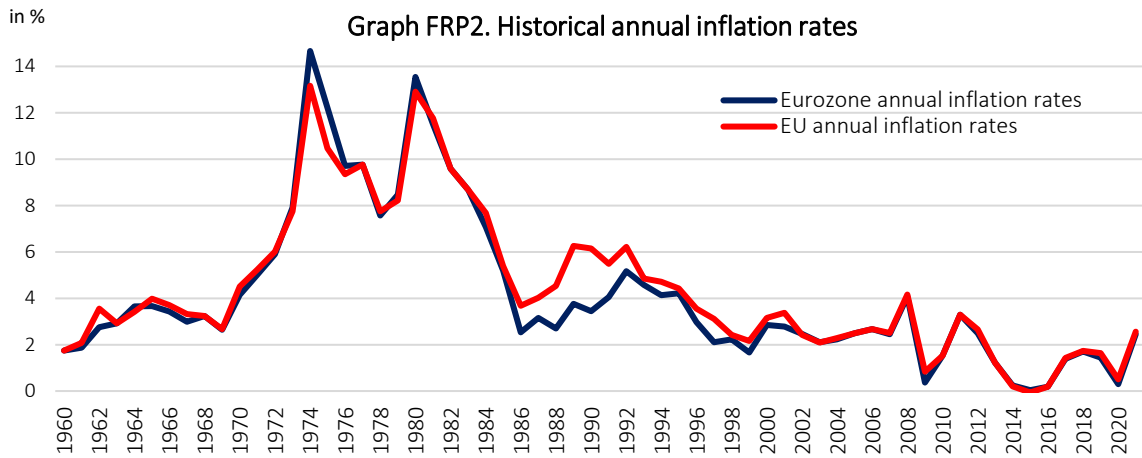
In the nine years of its functioning and preceding the global financial crisis 1999 – 2007), the total value of assets held by the ECB increased from €0.8 trillion to €1.5 trillion, which is a +89% increase; by 2012, it doubled to €2.96 trillion, and at the end of 2021 its balance sheet mushroomed to €8.6 trillion. In short, before the crises (2008, 2013, 2020-2022), the ECB increased its assets by +89%, and afterwards by +468%.

Graph FRP1. ECB balance sheet evolution



Source: Own composition based on ECB SDW data

Inflation transitioned from risk to reality | Inflation is generally presented as a ***risk***, although its long-term and persistent presence proves it to be a **reality**: except for 2014 and 2017, the last three decades have seen inflation eroding the real value of income and savings year after year.



Source: Own composition based on World Bank data (2022)

Inflation can have a heavy toll over long-term periods | Maybe we generally don't notice it, but over the last 30 years inflation halved the purchasing power of money. In other words, it's not a phenomenon we can easily ignore of absorb.

Table FRP3. Cumulative effect of inflation over time

	1960-1980	1960-2000	1960-2021	Annual average
Eurozone	341%	831%	1,208%	4.1%
EU	336%	954%	1,412%	4.4%

Source: own calculations based on World Bank data (2022)

From inflation to financial repression

Financial repression has been used to inflate away debt on several occasions in the post-war era[8] and has become a cherished tool among politicians and policymakers, thanks to its covert capacity to reduce debt and pass it on to future generations, whilst supporting high levels of spending.

There are various ways for public entities to financially repress creditors (who are essentially households as savers):

- for example, favourable or incentive legislation (bias) towards sovereign fixed income securities:
    - imposing pension funds to hold a large part of investments in sovereign bonds (sectoral regulations);

[8] For instance, the second World War, the 1980 debt crisis, the global financial crisis (2007-2008), the European sovereign debt crisis (2013), and now the global health pandemic (2020-2021) – see Gavin Davies, 'Is Financial Repression Coming?' (FT.com, 19 May 2011) available at: https://www.ft.com/content/551b103a-321b-3e20-b8ea-98356559f82b; Carmen M. Reinhart, Belen Sbrancia, 'The Liquidation of Government Debt' (March 2011) National Bureau of Economic Research Working Paper Series, Working Paper 16893, figure 1, p. 8, available at: http://www.nber.org/papers/w16893; Andreas Hoffman, 'Beware of Financial Repression: Lessons From History' (2019) 54(4) Intereconomics, 259-266, available at: https://www.intereconomics.eu/contents/year/2019/number/4/article/beware-of-financial-repression-lessons-from-history.html; Bo Becker, Victoria Ivashina, 'Financial Repression in the European Sovereign Debt Crisis' (2018) 22(1) Review of Finance, 83-115, p. 84, available at: https://dash.harvard.edu/handle/1/40549673;

  - requiring insurance companies to buy sovereign bonds as safe capital (Solvency II);
  - same for banks capital requirements if holding sovereign fixed income instruments (CRD IV, Basel III);
- but the most effective way is for central banks to artificially lower the price of sovereign bonds by using various monetary policy instruments.

Central bank monetary financing | Since 2012 central banks started the famous *quantitative easing* programmes: sovereign bonds are sold on the market to investors (institutional or individual), which will in turn be bought by central banks on secondary markets.

It is important to note that, in the EU (incl. Eurozone) central banks are prohibited from direct monetary financing:

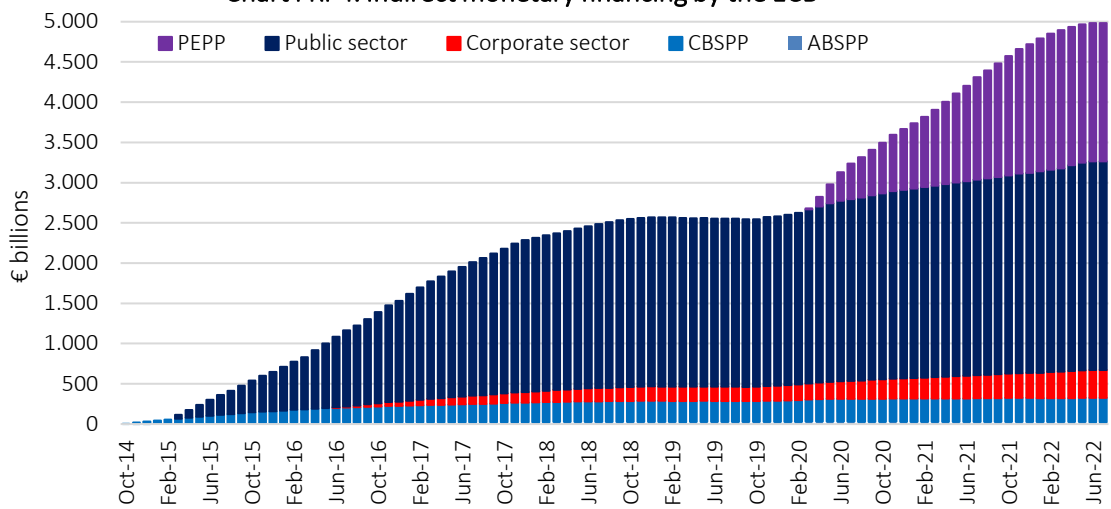
> "*Overdraft facilities or any other type of credit facility with the European Central Bank or with the central banks* (…) *in favour of* (…) *central governments* (…) *or other public authorities* (…) *shall be prohibited,* ***as shall the purchase directly from them by the European Central Bank or national central banks of debt instruments***" – emphasis added, Art. 123 TFEU.[9]

Yet, nothing prevents the ECB from buying bonds as soon as they are listed on the secondary market, right after their issuance. This was part of the so-called "asset purchasing programmes"[10] which aimed to bring down the cost of Government borrowing on capital markets.

In addition, the new governor of the European Central Bank launched a new ***quantitative easing*** programme during the global health pandemic of an initial €750 billion, which was resupplied twice by another €600 billion and €500 billion. By July 2022, the European Central Bank bought an additional €1.72 trillion (€1,717,352,000,000) only in Government-issued bonds.

[9] Consolidated version of the Treaty on the Functioning of the European Union, available at: https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX%3A12008E123%3AEN%3AHTML.
[10] European Central Bank, *Asset Purchase Programmes* (accessed 1 September 2022), available at: https://www.ecb.europa.eu/mopo/implement/app/html/index.en.html.

Chart FRP4. Indirect monetary financing by the ECB



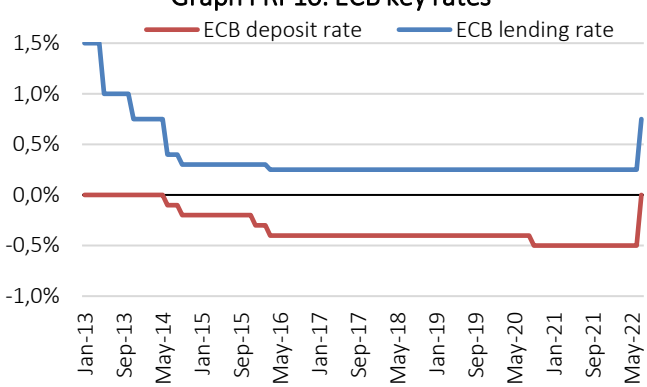
Source: Own calculations based on ECB data

Key interest rates | Central bank have at their disposal several monetary policy and price stability instruments. The most important is the power to set three types of baseline rates:

- the **deposit rate**, which can be positive (we earn money for depositing money) or negative (we have to pay to deposit money);
- the **lending rates**, meaning the cost for borrowing money:

These key interest rates can also be used for financial repression as they determine how much money is released into the economy: low, or negative, interest rates for deposits indicate the central bank's push for more spending, and vice-versa.

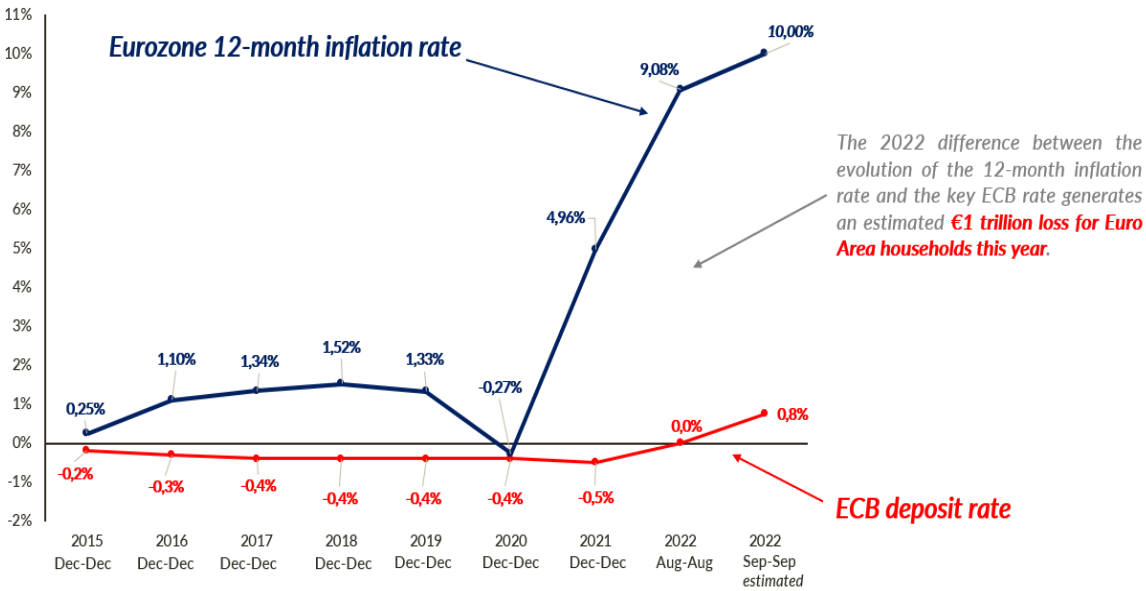
Graph FRP10. ECB key rates



Since June 2014, the ECB charged banks for depositing money, reaching a historical low of -0.5% for the deposit rate. In tandem, the cost for borrowing money has been reduced constantly until April 2016 at 0.25% from 1.5% at the beginning of 2013.

Source: Own composition based on ECB data

The result | We have been living through a new era of financial repression since more than a decade now. Working its magic through quantitative easing, key policy rates, inflation and the forced inclusion of sovereign bonds in households' long-term portfolios, financial repression is beating record after record, with the latest peak recorded in 2022. A conservative estimate by BETTER FINANCE puts losses for Eurozone savers at more than €1 trillion, since the majority of their savings are linked to nominal interest rates.



Source: BETTER FINANCE, 2022

HOW TO ADDRESS THIS ISSUE

Start with fair disclosures | Inflation risk must feature in the mandatory "risk" indicators for retail investment products and a prominent warning should be included in pre-contractual disclosures for consumers. At the same time, actual cost and past performance must be re-introduced so that savers can compare nominal net and real net return, waking savers up to the hugely damaging impact inflation has on their savings.

Distribution rules | Whether advisers or sellers of financial products, distributors in general should inform and educate their non-professional clients about inflation. Furthermore, when advisers undertake a suitability assessment (same for sellers and appropriateness evaluations), the knowledge and experience of the client should also cover the understanding of the exponential impact of inflation on returns.

ESAs to lead by example | The annual cost and past performance reports of the products supervised by the European financial supervisory authorities (EIOPA and ESMA) should take into account the risk and negative impact of inflation by increasing awareness and education, and provide, where relevant, both the nominal return of long-term saving and investment products, as well as the actual return in real terms (net of inflation). The European Banking Authority (EBA) should do the same for bank savings products.

Pension Savings: The Real Return

2022 Edition

General Report

One can supervise only what one can measure:
Why is this long-term savings performance report (unfortunately) unique?

I. INTRODUCTION

2022 marks the anniversary edition of BETTER FINANCE's Long-Term and Pension Savings Report. For 10 years, BETTER FINANCE aggregated and updated data and information on pension systems' structure, characteristics, charges, tax, and real net returns in a unique publication in this field.

Our report grew from the initial three country cases (Denmark, France, and Spain) covered in the 2013 report ("Private Pensions: The Real Return"[11]) to reach 18 jurisdictions and true long-term reporting horizons: where available, 22 years of gross, net, and real net returns of private occupational and voluntary retirement provision vehicles.

Today, BETTER FINANCE's research on the real returns of long-term and private pension savings comprises:

- this report (full version);
- the summary booklet;
- the *pensions dashboard*, an interactive tool on BETTER FINANCE's website to view and compare returns between private retirement provision vehicles.

1.1. The actual performance of this market is generally unknown to clients and to public supervisors

This report was built to respond to one of the big problems for the pensions market in the EU: lack of comprehensive and comparable data on real net performances. So far, two other publications also aim to provide transparency on the topic, but have a limited scope and are too general to be useful for the average pension saver:

[11] Link for the print version available here: http://www.betterfinance.eu/fileadmin/user_upload/documents/Research_Reports/en/Pension_Study_EN_website.pdf.

Table GR1. Comparison BETTER FINANCE report with EIOPA/OECD		
	EIOPA	OECD
Private pension products	Only insurance-based pension products (unit-linked and profit-participation) based on surveys (68 providers/17 EU Member States/200 products)	Only pension funds (20 EU jurisdictions)
Distinction between pillars (occupational vs voluntary)	No	No
Time horizon	5 years	15 years max.
Data/information on public pension systems	No	Yes
Pension system description (structure, conditions, costs, taxes)	No	Yes
Asset allocation	No	Yes
Gross returns	No	No
Nominal net returns	Yes	Yes
Real net returns	Yes	Yes
Real net returns, after tax	No	No

Source: BETTER FINANCE own research

Our report closes this informational gap for pension savers in 17 EU Member States. This is in line with the European Commission's "Action" to improve the transparency of performance and fees in this area (as part of its Capital Markets Union – CMU - Action Plan) and it corresponds with the current tasks of EIOPA in the area of personal pension products with respect to past performance and costs comparison.[12]

It is the ambition and challenge of this research initiated by BETTER FINANCE and its partners to collect, analyse and report on the actual past performance of **all** long-term and pension savings products.

Reporting the real net return[13] of pension saving products should be:

- the long-term return (at least covering two full economic and stock market cycles, since even long-term returns are very sensitive to entry and exit dates);
- net of all fees, commissions and charges borne directly or indirectly by the customer;

[12] The European Supervisory Authorities (ESAs) have a legal duty to collect, analyse and report data on "consumer trends" in their respective fields (Article 9(1) of the European Regulations establishing the three ESAs).

[13] A limitation of the present report is that it does not take into account real estate as an asset for retirement. The proportion of households owning their residences varies greatly from one country to another. For example, it is especially low in Germany, where a majority of households rent their residences and where home loan and savings contracts have consequently been introduced as the most recent state-subsidised pension savings scheme. For the time being, returns on pension savings are all the more important since a majority of retirees cannot rely on their residential property to ensure a decent minimum standard of life. However, residential property is not necessarily the best asset for retirement: indeed, it is an illiquid asset, and it often does not fit the needs of the elderly in the absence of a broad use of reverse mortgages. The house might become too large or unsuitable in case of dependency. In that case, financial assets might be preferable, on the condition that they provide a good performance.

- net of inflation (since for long-term products only the real return matters; that is the right approach taken by OECD as mentioned above);
- when possible, net of taxes borne by the customer (in the USA it has been mandatory for decades to disclose the past performance of mutual funds after tax in the summary of the prospectus).

Table GR2. BETTER FINANCE report structure and scope	
Structure	1. Executive summary 2. General report (overview of data and findings) 3. Individual country cases (Austria, Belgium, Bulgaria, Croatia, Denmark, Estonia, France, Germany, Italy, Latvia, Lithuania, Poland, the Netherlands, Romania, Slovakia, Spain, Sweden, UK until 2019), representing 87% of EU27 population
Time horizons	22 years (December 1999 – December 2021) or maximum available
Products covered	1. Occupational pension pillar (pension funds, insurance-based pension products, other defined-benefit/contribution vehicles) 2. Voluntary pension pillar (pension funds, insurance-based pension products)
Public pensions	Structure, coverage, funding type, entry/pay-out conditions
Occupational pensions	Architecture (types of products offered), coverage, assets and/or asset allocation, costs, applicable tax regime(s)
Voluntary (individual pensions)	Architecture (types of products offered), coverage, assets and/or asset allocation, costs, applicable tax regime(s)
Returns	1. Gross returns (before costs, tax, and inflation – where available) 2. Nominal net returns (before tax and inflation – where available) 3. Real net returns, before tax, inflation deducted 4. Real net returns, after tax (where available)
Data sources	Publicly available data and information sources

We have chosen a period starting from 31 December 1999 because pension savings returns should be measured over a long-term horizon, and because it includes two market upturns (2003-2006 and 2009-2019) and two downturns (post dot com bubble of 2001-2003 and the 2008 financial crisis).

1.2. Information on the returns of long term and pension savings is deteriorating

This report shows that it is not an impossible, but a very challenging task for an independent expert centre such as BETTER FINANCE to collect the data necessary for this report since quite a lot of data are simply not available at an aggregate and country level, especially for earlier years. The complexity of the taxation of pension savings in EU countries makes it also extremely difficult to compute after tax returns.

Once more, for 2021, we find that information on long-term and pension savings returns is actually not improving but on the contrary deteriorating:

- ***Insufficient information***: for example the Belgian insurance trade organisation Assuralia no longer reports the returns of insurance-regulated « Branch 21 » occupational and personal pension products since 2014, and the national supervisor FSMA does not do it either; in Bulgaria, the necessary data for Professional Pension Funds (pillar II and III) is no longer available since 2018 and the transfers to Pillar I (data from NSSI) are not disclosed; in the UK, the survey conducted by the Department for Statistics has been discontinued and information on British pension funds stopped at 2017;
- ***Late information***: at the time of printing, still a lot of 2021 return data have not been released by the national trade organisations or other providers. OECD has published preliminary data for December 2021, but on a limited number of jurisdictions and only for pension funds; moreover, considering that, in many countries, pension funds are not the most popular vehicle, this constitutes a large information gap.
- ***Unchecked information***: the principal source remains the national trade organisations, their methodology is most often not disclosed, return data do not seem to be checked or audited by any independent party, and sometimes they are only based on sample surveys covering just a portion of the products.

Moreover, savvy retail savers and EU public authorities must rely on private databases (and divergent methodologies) to learn some of the costs and performances of "retail" saving products. This is because the PRIIPs Key Information Document (KID) eliminated pre-contractual disclosure of past performance and actual costs for UCITS and requires return and cost estimations instead for all "retail" investment products, including pension products. This severe setback in transparency and comparability is completely inconsistent with the CMU initiative. Four high-level initiatives have struggled to repair this situation, without success: the NextCMU Report, the High-Level Forum Final Report, the ECON CMU Report and the ESAs' draft RTS on PRIIPs Level 2. BETTER FINANCE continues to deplore the content of the PRIIPs KID.

2. Value for Money: how to achieve pension adequacy?

Public pension authorities typically stress two requisites to achieve "pension adequacy":

a) the need to start saving as early as possible;
b) the need to save a significant portion of one's income before retirement activity income: "*to support a reasonable level of income in retirement, 10% - 15% of an average annual salary needs to be saved*".[14]

BETTER FINANCE continues to disagree: saving earlier and more is not enough. A third and even more important factor is the need to deliver positive and decent long-term **real net** return (i.e., net of inflation and fees). A simple example will illustrate why:

[14] World Economic Forum White Paper: 'We'll live to 100 – How can we afford it?' May 2017

Assuming no inflation and saving 10% of activity income for 30 years,[15] the table below shows that **unless long-term net returns are significantly positive** (in the upper single digits), **saving early and significantly will not provide a decent pension.**

Annual net return	Replacement income
negative 1%	10%
Zero	12%
2%	17%
8%	49%

© BETTER FINANCE, 2018

Moreover, in light of the special analysis undertaken in this report on *financial repression*, savers must also be aware and take into account the effects of ***inflation***, particularly since currently it reaches historical records.

What is pension adequacy?

This question ultimately revolves around the level of retirement income (pension) compared to the pre-retirement income. The EU defines *pension adequacy* indirectly through three objectives that a pension system should achieve:

1) **income replacement**: ensure a minimum standard of living at retirement,
2) **sustainability**: ensure that the public pension system is sustainable; and
3) **transparency**: inform workers about the need to plan for their retirement.[16]

On income replacement, the EU's Open Method of Coordination on Social Protection and Social Inclusion[17] further specifies that pensions should:

- *in general*, be at a certain level so that the standards of living pre-retirement are maintained, to "*the greatest possible extent*", after retirement;
- *for special cases*, ensure a minimum standard of living at retirement so as to avoid pension poverty.

To measure the two above objectives, two indicators are generally used: the *aggregate replacement ratio*,[18] showing how big the gross pension is compared to the salary, and the

[15] As recommended by Public Authorities assuming 25-year life expectancy at retirement, gross of fees and taxes.
[16] Directorate-General for Employment, Social Affairs and Inclusion of the European Commission and the Social Protection Committee, *Pension Adequacy in the European Union 2010-2050* (May 2021) European Commission, available at: file:///C:/Users/Stefan/Downloads/pension%20adequacy%20in%20the%20european%20union%202010-2050-KE3012757ENN.pdf.
[17] See Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - "*A renewed commitment to social Europe: Reinforcing the Open Method of Coordination for Social Protection and Social Inclusion*" {SEC(2008) 2153} {SEC(2008) 2169} {SEC(2008) 2170} {SEC(2008) 2179}, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52008DC0418.
[18] According to Eurostat, the *aggregate replacement ratio* is the ratio of the median individual gross pensions of 65-74 age category relative to median individual gross earnings of 50-59 age category, excluding other social benefits.

theoretical replacement rate, showing the instant change (drop/increase) in income when retiring from active life:

$$Aggregate\ replacement\ ratio = \frac{gross\ median\ pension\ (pop.aged\ 65-74\ yo)}{gross\ median\ income\ (pop.aged\ 50-59\ yo)}$$

$$Theoretical\ replacement\ ratio = \frac{pension\ in\ the\ first\ year\ of\ retirement}{income\ in\ the\ last\ year\ of\ work}$$

The International Labour Organisation obliges parties to the Treaty to guarantee a minimum 40% of the previous earnings (prior to retirement) after 30 years of contributions;[19] the same threshold is used by the European Code of Social Security.[20] However, an actual threshold for pension adequacy was never agreed, although EU Member States agree on its objectives (to prevent old-age poverty, to replace income at a rate to *maintain* the standard of living, to be sustainable).

The reality is that pension adequacy[21] comprises two additional components, besides the actual *pension vs salary* ratio:

- the time spent to earn the pension vs the time spent receiving it;
- the amount of contributions to pension provision, namely mandatory (State) schemes and voluntary (occupational/individual) ones; put simply, *pension savings*.

To achieve *pension adequacy*, retirement benefits altogether (State and private pensions) should amount to at least 70%-80% of late working life gross salary.

Currently, the aggregate replacement rate (mostly State pension) is very low across the countries in scope of our report: fourteen out of seventeen jurisdictions provide a replacement rate lower than 60% for over more than 30 years of working life.

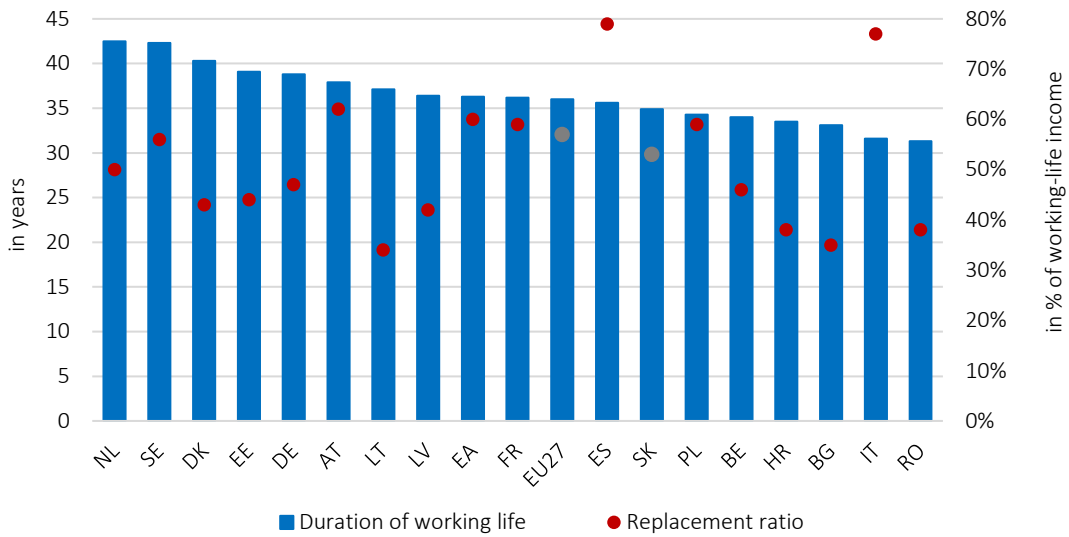
The indicator is based on the EU-SILC (statistics on income, social inclusion and living conditions) – See Eurostat, *Aggregate Replacement Ratio for Pensions (excluding other social benefits) by sex*, available at: https://ec.europa.eu/eurostat/databrowser/view/tespn070/default/table?lang=en.

[19] Art. 67 of Convention C102 on Social Security (Minimum Standards) of the International Labour Organisation, available at: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C102; Art. 29 of the later adopted Convention C128 on Invalidity, Old-Age and Survivors' Benefits Convention of the International Labour Organisation (available here: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:55:0::NO::P55_TYPE,P55_LANG,P55_DOCUMENT,P55_NODE:CON,en,C128,/Document) required a higher threshold, i.e. 45%.

[20] Art. 67, Schedule to Part XI, of the European Code of Social Security, available at: https://rm.coe.int/168006b65e.

[21] Here we take only the financial point of view, but there are several other factors (non-financial) that contribute to "*maintaining the standard of life at retirement*", such as home ownership, sources of income, employment opportunities and access to non-financial benefits – see European Commission, *European Semester Thematic Factsheet: Adequacy and Sustainability of Pensions* (2017) European Commission, p. 3, available at: https://ec.europa.eu/info/sites/default/files/file_import/european-semester_thematic-factsheet_adequacy-sustainability-pensions_en_0.pdf.

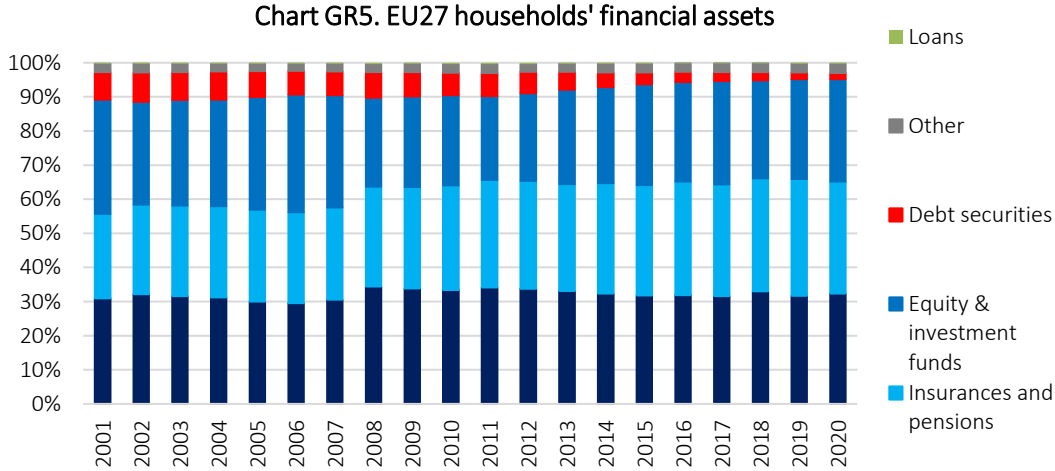
Chart GR4. Pension adequacy across jurisdictions



Source: own composition based on Eurostar data; *EU27 replacement ratio corresponds to 2019; Slovakia replacement ratio corresponds to 2020

There has been a shift from the full reliance on the public scheme of redistribution (tax-funded defined-benefit) to a more capital markets reliant system, where the main pension income stream should come from private pension products. Pension performances are subject to inflation and to tax, which eat into the retirement pot.

Chart GR5. EU27 households' financial assets



Source: BETTER FINANCE based on Eurostat data

Our findings clearly confirm that capital market performances have unfortunately very little to do with the performances of the actual savings products distributed to EU citizens. This is particularly true for long-term and pension savings. The main reason is the fact that most EU citizens do not invest the majority of their savings directly into capital market products (such

as equities and bonds), but into "packaged products" (such as investment funds, life insurance contracts and pension products).

3. Performance: capital markets are not a proxy for retail investments

One could then argue that insurance and pension products have similar returns to a mixed portfolio of equities and bonds, since those are indeed the main underlying investment components of insurance and pension "packaged" products. However, this is not true as the share of packaged products and debt instruments are dominant in most pension portfolios. Realities such as fees and commissions, portfolio turnover rates, manager's risks, etc., invalidate this approach.

Table GR3 and Graph GR4 below show two striking – but unfortunately not uncommon – real examples of this largely ignored reality: capital market performance is not a valid proxy for retail investment performance and the main reasons for this are the fees and commissions charged directly or indirectly to retail customers. The European Commission itself publicly stressed this fact (see footnote 2 above).

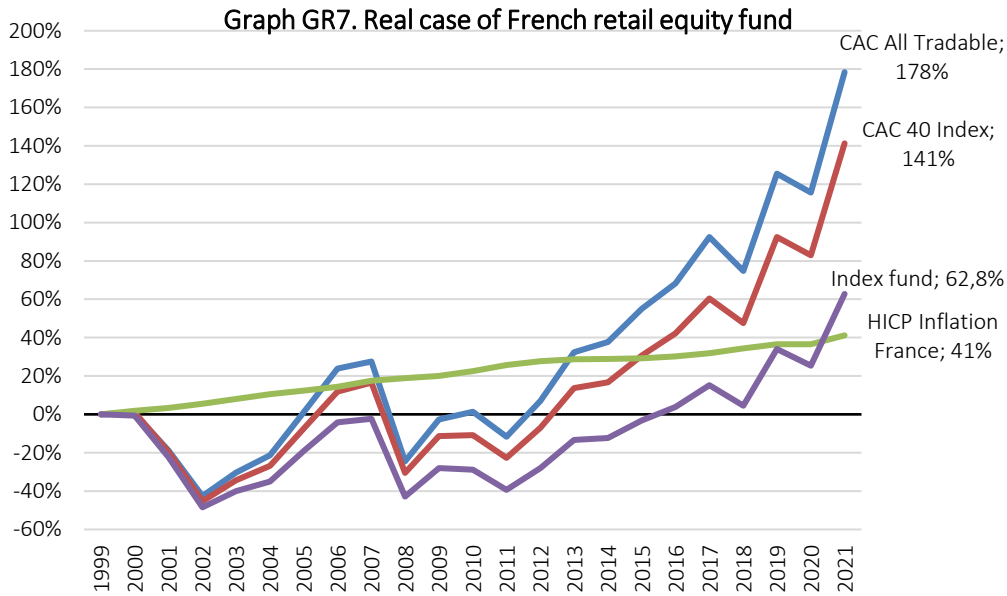
Table GR6. Real case of a Belgian life insurance (branch 23)

Capital markets vs. Belgian individual pension insurance 2000-2021 performance

Capital markets (benchmark index*) performance	
Nominal performance	288%
Real performance (before tax)	183%
Pension insurance performance (same benchmark)	
Nominal performance	182%
Real performance (before tax)	116%

*Source: Sources: BETTER FINANCE own computations based on Morningstar public website; *Benchmark is composed of 50% bonds (LP06TREU) and 50% STOXX All Europe Total Market Return*

The real case above illustrates a unit-linked life insurance product (Pillar III in Belgium). The pension product's nominal return amounted to less than two thirds of its corresponding capital market benchmark's return.



Source: Own elaboration based on Graph FR3 in the French chapter

The real case above illustrates an investment fund domiciled in France, a so-called retail CAC 40 "index" fund.[22] The fund actually underperformed the relevant equity index by 78.5 p.p. after 22 years of existence (1.85% per year), with the performance gap fully attributable to fees. The fund has also massively destroyed the real value of its clients' savings, as inflation has been almost twice as high as its nominal performance. It is quite surprising that with such a huge return gap vis-à-vis its benchmark, this fund is still allowed to portray itself as an "index-tracking" one, and that no warning is to be found on the Key Information Document (KIID) of the fund.

4. European Pension returns outlook

Our research findings show that most long-term and pension savings products did not, on average, overperform a broad capital markets index (balanced 50% equity – 50% bond), and in one too many cases even destroying the real value for European pension savers (i.e., provided a negative return after inflation). Based on our calculations and available data, 37 out of the 41 retirement provision vehicles analysed underperformed European capital markets by an average 1.93% per year. Moreover, three out of these 37 even delivered real negative performances over long-term periods (between 15 and 22 years).

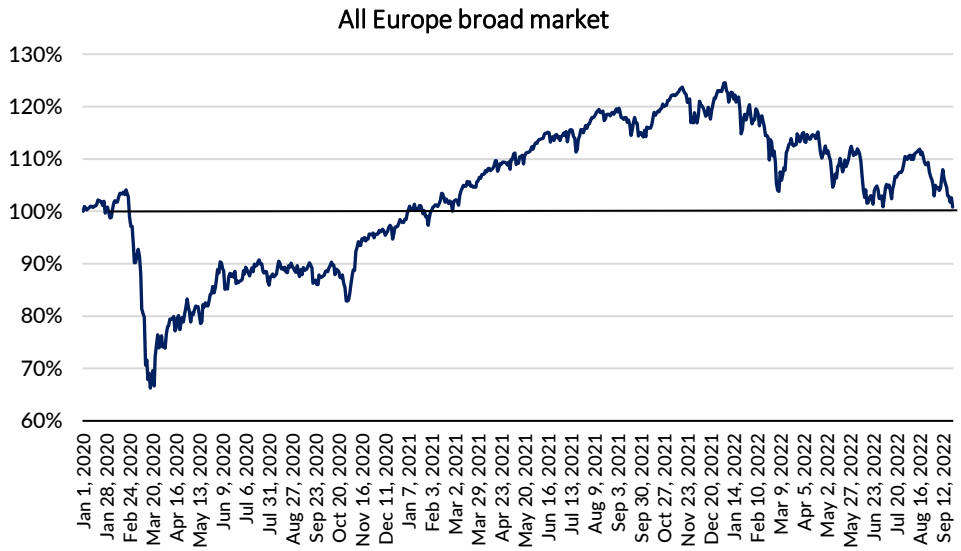
At the time of writing, the overall mid-term outlook for the adequacy of European pension savings is worrying when one analyses it for each of these main return drivers:

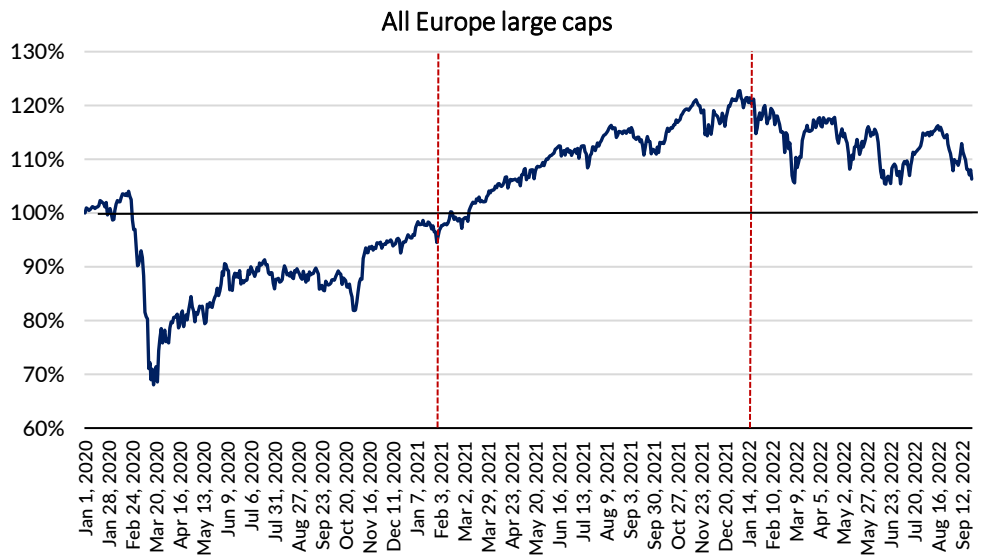
a) it is unlikely that the European bond markets will come any closer to the extraordinary returns of the period ended in 2020 for bonds due to the continuous

[22] Wrapped in an insurance contract as suggested by the distributor.

fall of interest rates, currently at rock-bottom levels; moreover, the reversal of quantitative easing programmes of Eurozone central banks will further affect the returns on sovereign bonds; the negative impact of this foreseeable trend in bond returns on pensions' returns will be reinforced by a higher proportion of bonds in pension products' portfolios in recent years; this is all the more relevant due to monetary policy response to the health-generated recession;

b) the strong growth of equities in 2020 and 2021 is already reverting, with the European all country broad equity index reaching pre-2020 levels and the large caps market also close by;

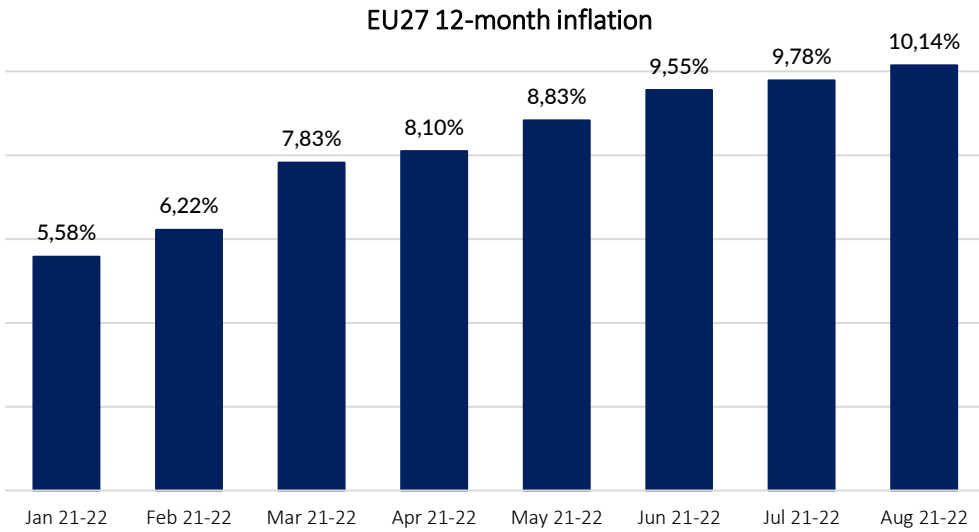


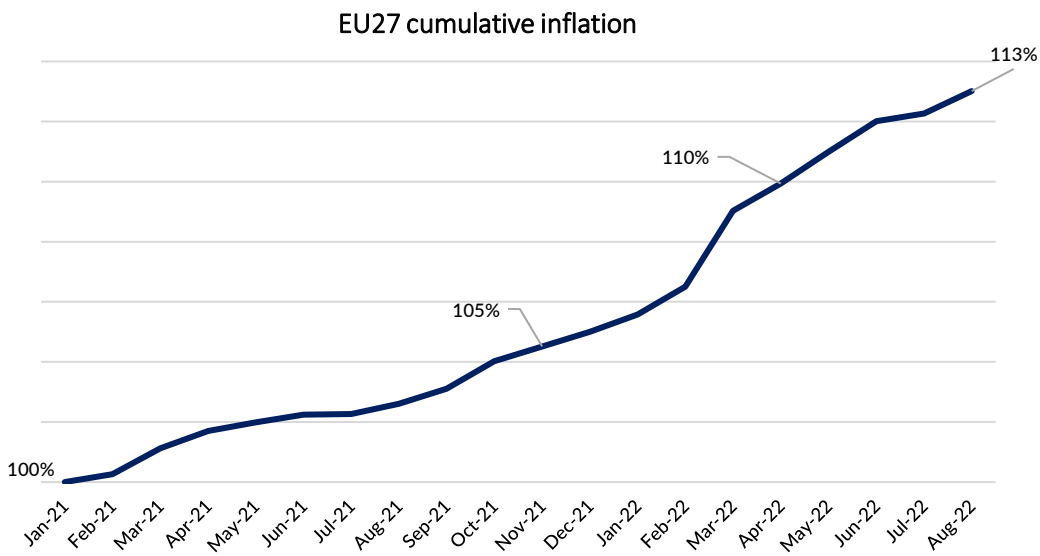


Source: Own composition based on MSCI data

c) costs and charges, as far as our data indicates, are not significantly improving;

d) inflation already took a heavy toll on pension returns in 2021 and it will be much, much stronger in 2022 due to record rates;





Source: Own composition based on Eurostat data

e) Taxes on long-term and pension savings do not show any significant downward trend either.

II. COUNTRY PROFILES

This second part onward analyses each country profile available in this study. Tables GR9 (A and B) includes some key indicators of the pension systems in the countries under review in this research report. These indicators, explained below, are representative for the sustainability of a pension system, or otherwise the pressure on State (public) pensions. Our aim is to highlight the importance of additional private pension savings for pension adequacy.

What is old-age dependency ratio?

It is defined as the ratio between the total number of elderly persons when they are generally economically inactive (aged 65 and above) and the number of persons of working age:

- when the ratio is low (e.g., Slovakia with 25% or 1 pensioner to 4 workers), it means that the pressure on the state pension is low;
- when the ratio is high (e.g., Italy with 37% or 1 pensioner to less than 3 workers), it means that the burden on PAYG schemes is high, and it can be alleviated through private pension sources.

What is population ageing trend?

An ageing population means that the number of retirees increases relative to the number of workers. This indicator refers to public (PAYG) pensions.

The effect is that the same pension contributions need to pay for a higher number of pensioners, which can make it difficult for the state pension to ensure an adequate level of retirement income stream.

What is the projected old-age dependency ratio?

It shows how the number of pensioners to working people will evolve in time.

If the old-age dependency ratio is now, on average, 1-to-3, by 2050 this level will be for most countries in this Report above 50%. In other words, every state pension will depend on the level of contributions of almost two working-age individuals.

What is the net equity of households?

It represents the value of technical (mathematical) provisions insurance and pension fund providers hold to pay future pension liabilities (entitlements of savers). This indicator is expressed both in nominal terms (in € billion) and as a percentage of the GDP for 2019. Therefore:

- a high value-to-GDP rate of *net equity of households* reflects well established privately funded systems, indicating a lower dependency on state pensions;
- a low value-to-GDP shows either that the private system is relatively new (as in Romania or Bulgaria) or that households do not contribute too much to pension funds and life insurances, relying more on state pensions.

What is the aggregate replacement ratio for pensions?

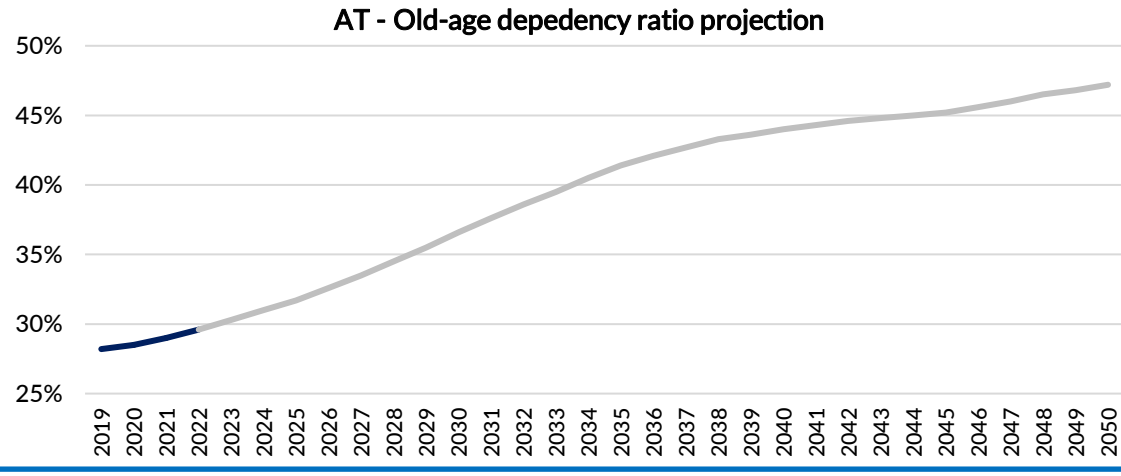
It represents the ratio between to median individual pension income of population aged 65-74 relative to median individual earnings from work of population aged 50-59, excluding other social benefits.

Note: In the previous editions of this report, the indicator used was *net pension replacement rate* – aggregated by the OECD – which was discontinued in 2019. Thus, the research team replaced it with the *aggregate replacement ratio for pensions* computed by Eurostat.

Below we present, under the form of country cards, the data from Table GR8 on country profiles.

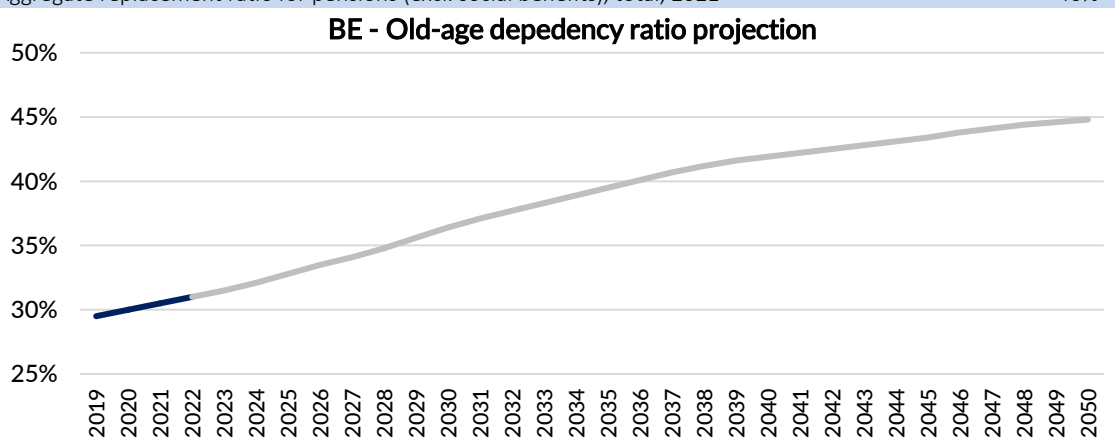
Austria

Net equity of households in pension funds reserves (in € bln)	50	Net equity of households in pension funds reserves as % of GDP	13.1%
Net equity of households in life insurance reserves (in € bln)	84	Net equity of households in life insurance reserves as % of GDP	22.1%
Active population (mil.), 2021	4.7	Old-Age dependency ratio, old (% of working population), 2021	29.5%
Population ageing trend (2021-2050)	60%	Projected old-age dependency ratio by 2050	47%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			62%



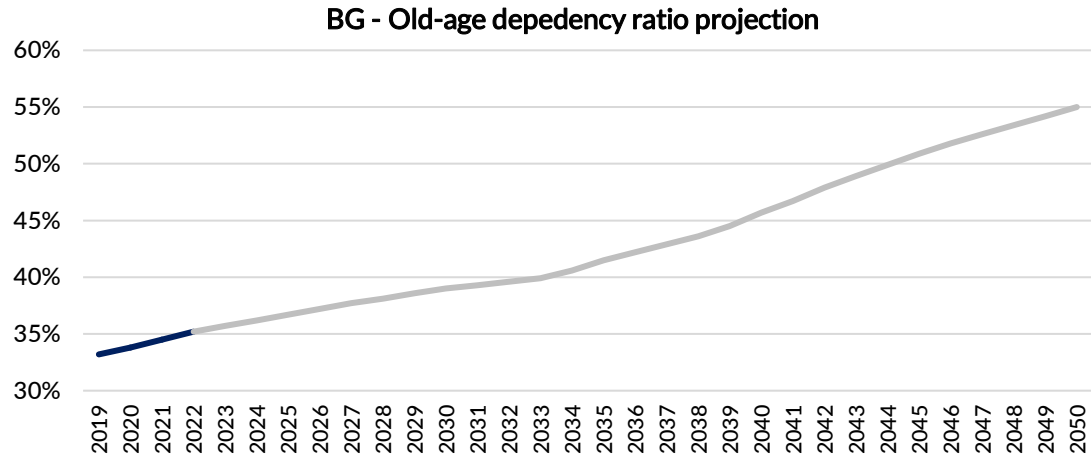
Belgium

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	201	Net equity of households in life insurance reserves as % of GDP	44.10%
Active population (mil.) 2021	5.2	Old-Age dependency ratio, old (% of working population), 2021	30.84%
Population ageing trend (2021-2050)	45%	Projected old-age dependency ratio by 2050	44.80%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			46%



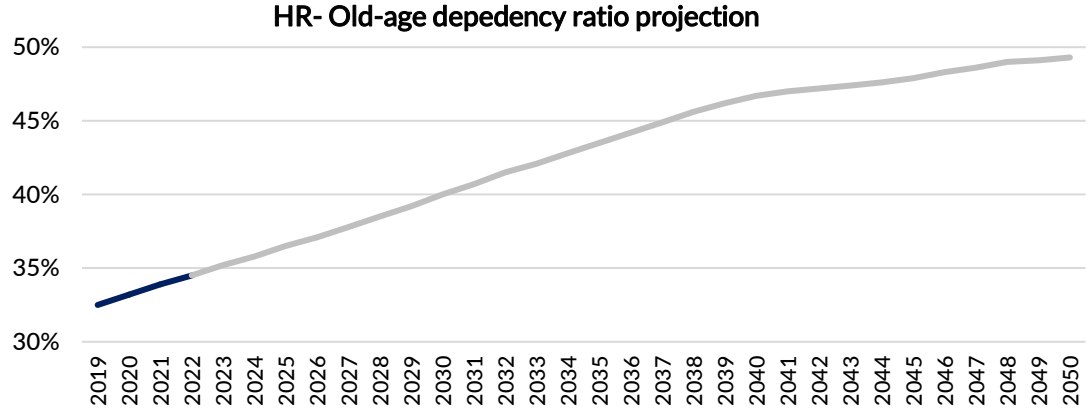
Bulgaria

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	1	Net equity of households in life insurance reserves as % of GDP	1.5%
Active population (mil.) 2021	3.3	Old-Age dependency ratio, old (% of working population), 2021	34.2%
Population ageing trend (2021-2050)	61%	Projected old-age dependency ratio by 2050	55%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			35%



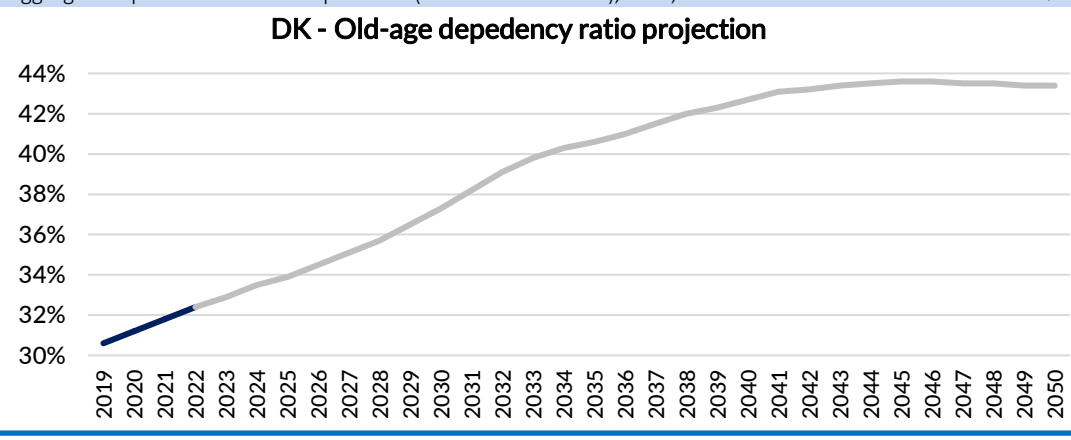
Croatia

Net equity of households in pension funds reserves (in € bn), 2020	16	Net equity of households in pension funds reserves as % of GDP	32.3%
Net equity of households in life insurance reserves (in € bn), 2020	2	Net equity of households in life insurance reserves as % of GDP	5%
Active population (mil.) 2021	1.7	Old-Age dependency ratio, old (% of working population), 2021	33.9%
Population ageing trend (2021-2050)	55%	Projected old-age dependency ratio by 2050	52.5%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			38%



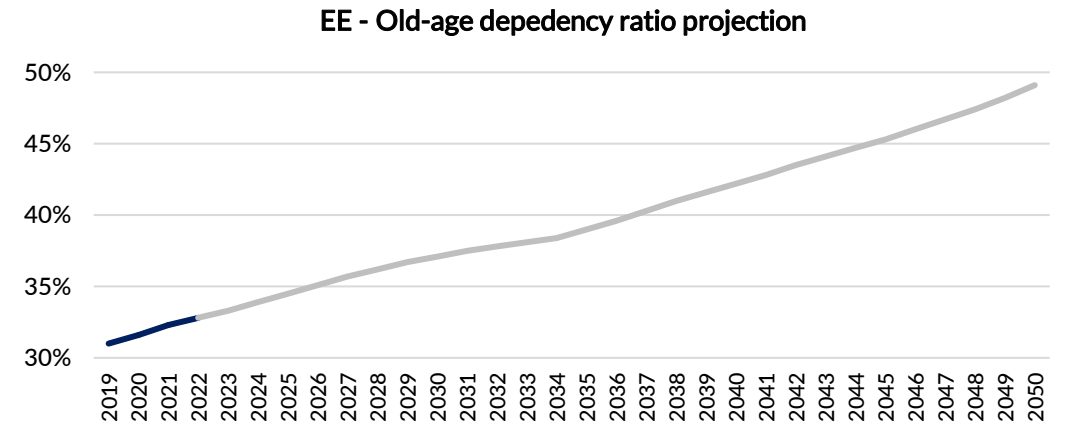
Denmark

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	319	Net equity of households in life insurance reserves as % of GDP	102.2%
Active population (mil.) 2021	3.0	Old-Age dependency ratio, old (% of working population), 2021	32.1%
Population ageing trend (2021-2050)	35%	Projected old-age dependency ratio by 2050	43.4%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			43%



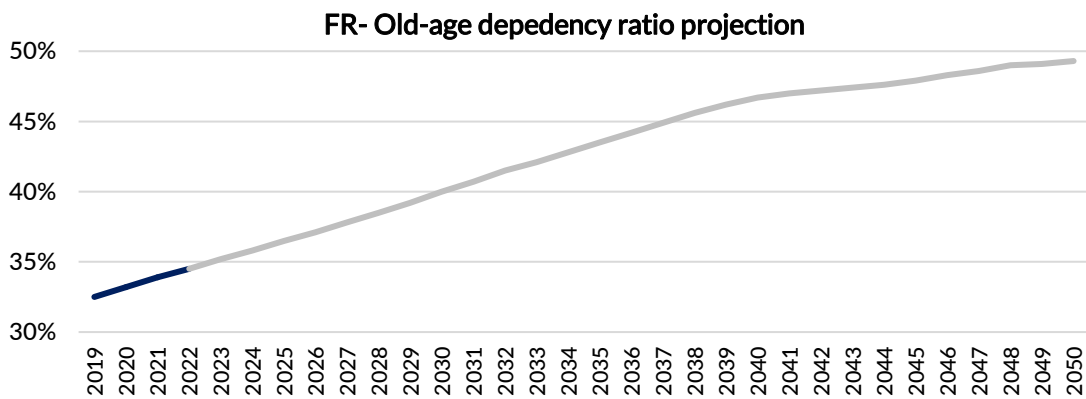
Estonia

Net equity of households in pension funds reserves (in € bn), 2020	5	Net equity of households in pension funds reserves as % of GDP	19.6%
Net equity of households in life insurance reserves (in € bn), 2020	1	Net equity of households in life insurance reserves as % of GDP	2%
Active population (mil.) 2021	0.7	Old-Age dependency ratio, old (% of working population), 2021	33.1%
Population ageing trend (2021-2050)	48%	Projected old-age dependency ratio by 2050	49.1%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			44%



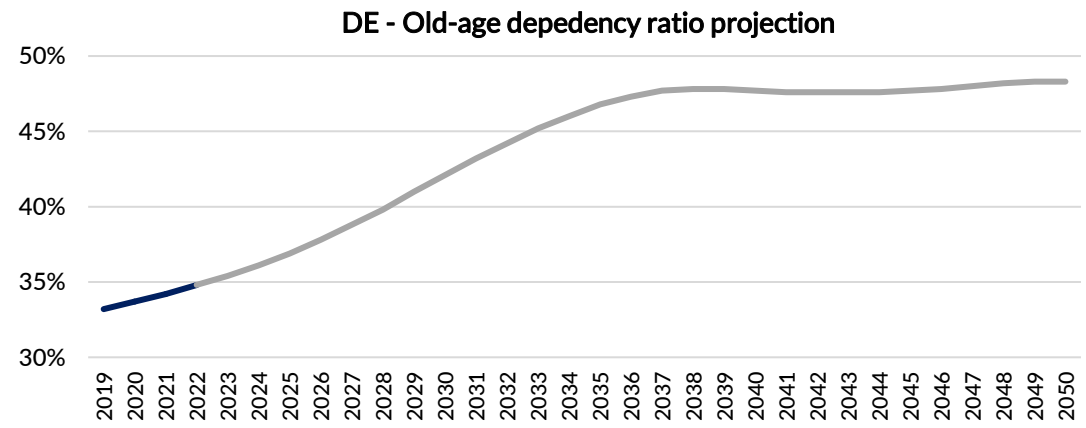
France

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	2,137	Net equity of households in life insurance reserves as % of GDP	92.8%
Active population (mil.) 2021	31.0	Old-Age dependency ratio, old (% of working population), 2021	34.3%
Population ageing trend (2021-2050)	44%	Projected old-age dependency ratio by 2050	49.3%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			48%



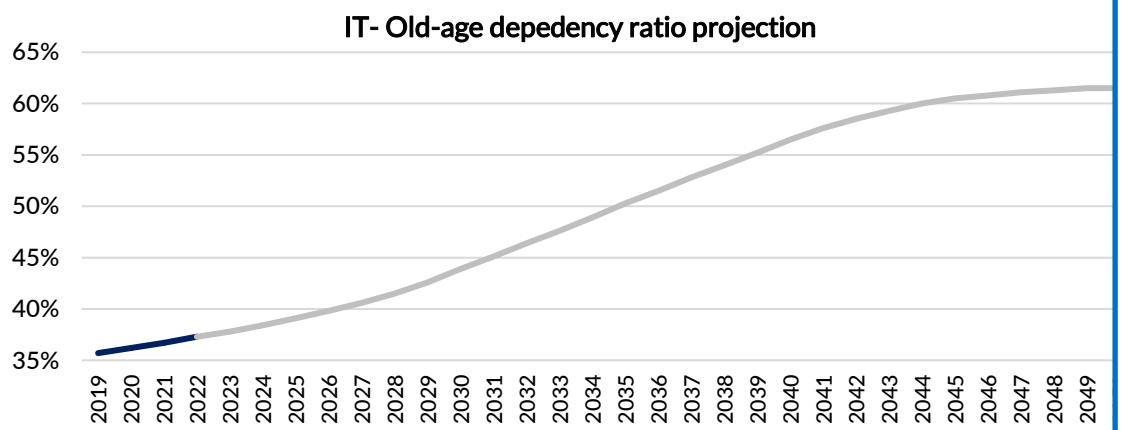
Germany

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	1,112	Net equity of households in life insurance reserves as % of GDP	33.0%
Active population (mil.) 2021	43.8	Old-Age dependency ratio, old (% of working population), 2021	32.1%
Population ageing trend (2021-2050)	50%	Projected old-age dependency ratio by 2050	48.3%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			47%



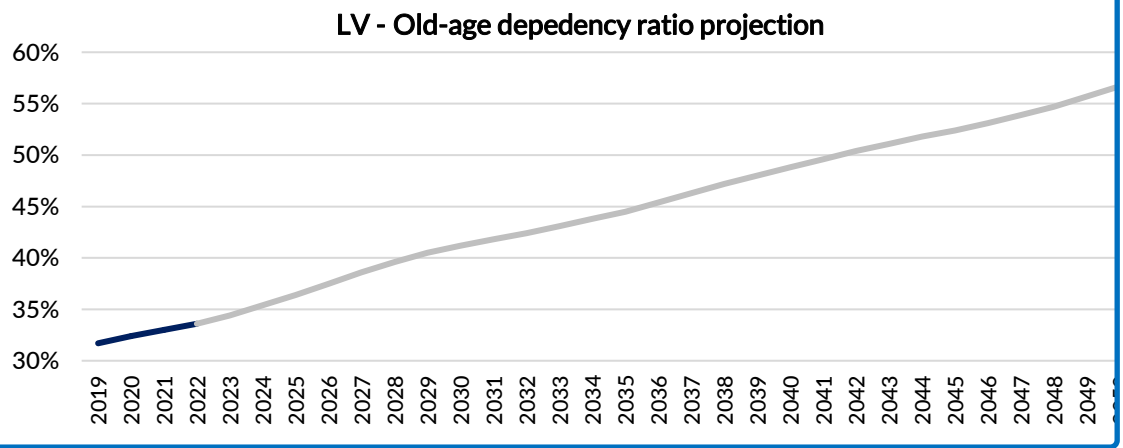
Italy

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	868	Net equity of households in life insurance reserves as % of GDP	52.5%
Active population (mil.) 2021	25.0	Old-Age dependency ratio, old (% of working population), 2021	37.1%
Population ageing trend (2021-2050)	65.70%	Projected old-age dependency ratio by 2050	61.5%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			77%



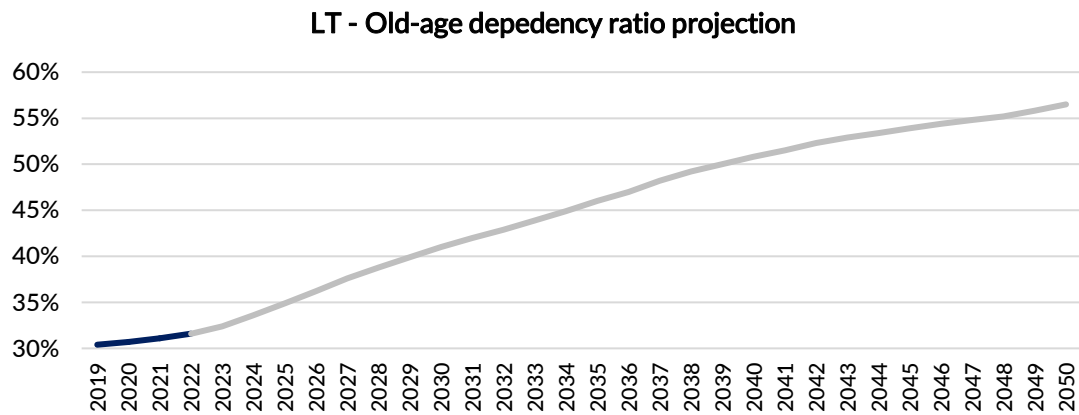
Latvia

Net equity of households in pension funds reserves (in € bn), 2020	5	Net equity of households in pension funds reserves as % of GDP	18.2%
Net equity of households in life insurance reserves (in € bn), 2020	1	Net equity of households in life insurance reserves as % of GDP	3.0%
Active population (mil.) 2021	0.94	Old-Age dependency ratio, old (% of working population), 2021	33.8%
Population ageing trend (2021-2050)	68%	Projected old-age dependency ratio by 2050	56.7%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			42%



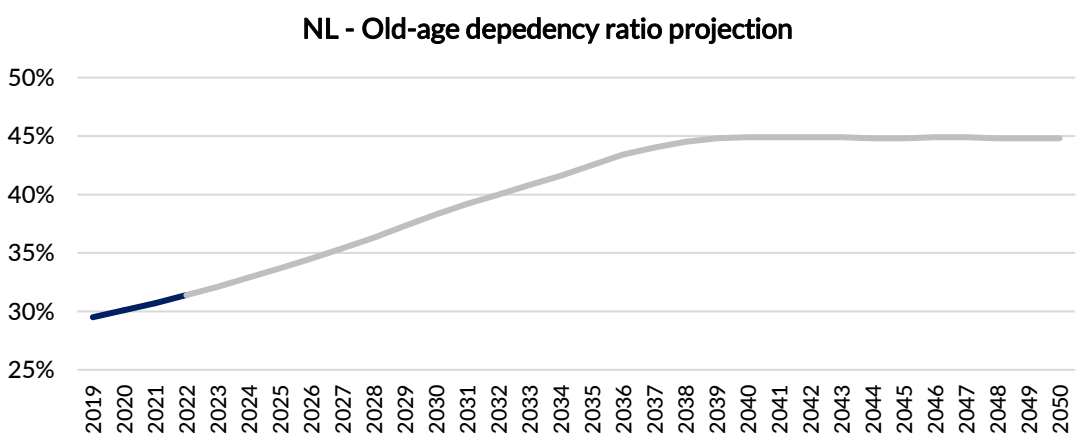
Lithuania

Net equity of households in pension funds reserves (in € bn), 2020	5	Net equity of households in pension funds reserves as % of GDP	9.4%
Net equity of households in life insurance reserves (in € bn), 2020	1	Net equity of households in life insurance reserves as % of GDP	2.2%
Active population (mil.) 2021	1.5	Old-Age dependency ratio, old (% of working population), 2021	33.3%
Population ageing trend (2021-2050)	70%	Projected old-age dependency ratio by 2050	56.5%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			35%



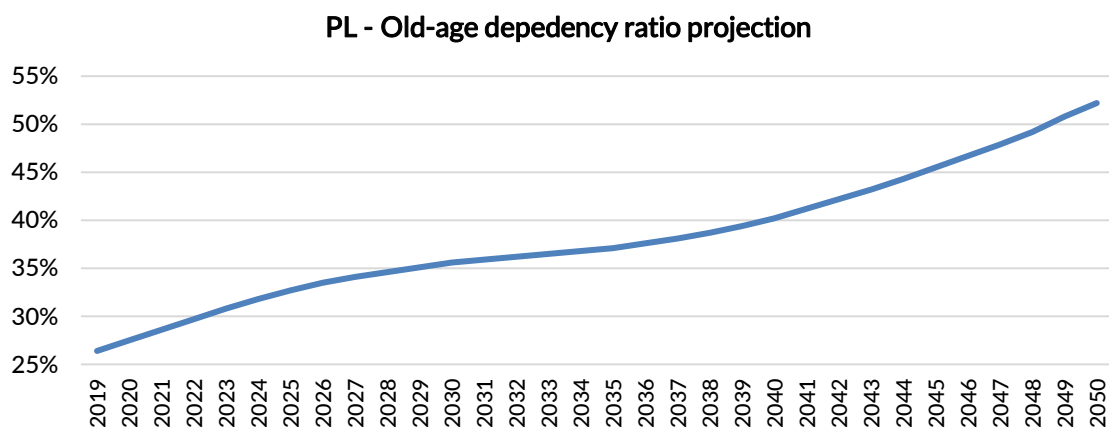
The Netherlands

Net equity of households in pension funds reserves (in € bn), 2020	1,906	Net equity of households in pension funds reserves as % of GDP	239.3%
Net equity of households in life insurance reserves (in € bn), 2020	193	Net equity of households in life insurance reserves as % of GDP	24.3%
Active population (mil.) 2021	9.9	Old-Age dependency ratio, old (% of working population), 2021	32.0%
Population ageing trend (2021-2050)	40%	Projected old-age dependency ratio by 2050	44.8%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			50%



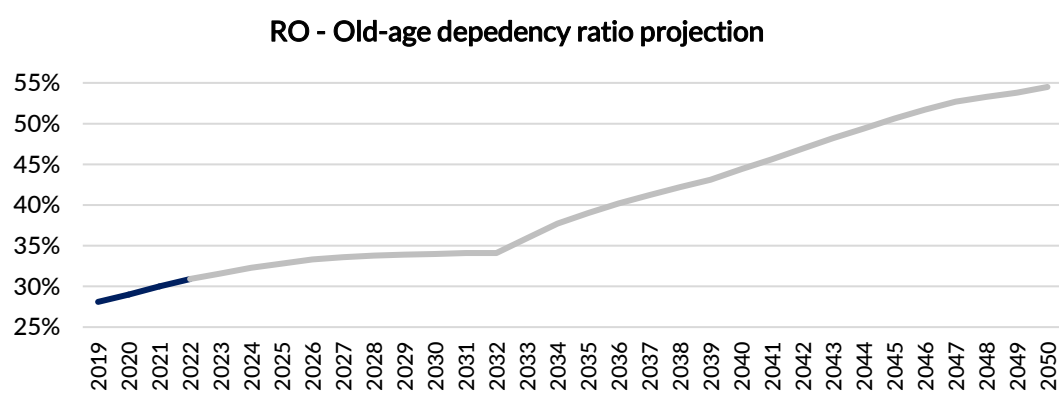
Poland

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	15	Net equity of households in life insurance reserves as % of GDP	2.9%
Active population (mil.) 2021	18.3	Old-Age dependency ratio, old (% of working population), 2021	29.6%
Population ageing trend (2021-2050)	76%	Projected old-age dependency ratio by 2050	52.2%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			58%



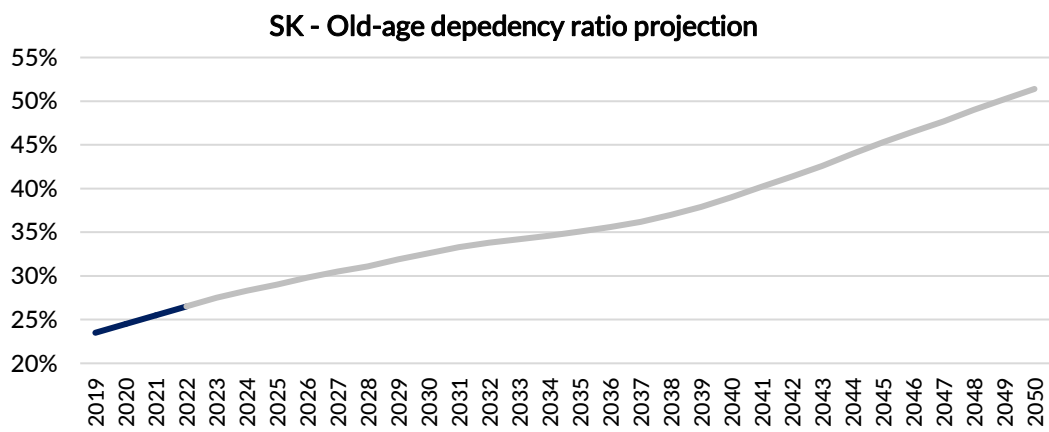
Romania

Net equity of households in pension funds reserves (in € bn), 2020	16	Net equity of households in pension funds reserves as % of GDP	7.4%
Net equity of households in life insurance reserves (in € bn), 2020	2	Net equity of households in life insurance reserves as % of GDP	0.9%
Active population (mil.) 2021	8.4	Old-Age dependency ratio, old (% of working population), 2021	30.3%
Population ageing trend (2021-2050)	80%	Projected old-age dependency ratio by 2050	54.5%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			38%



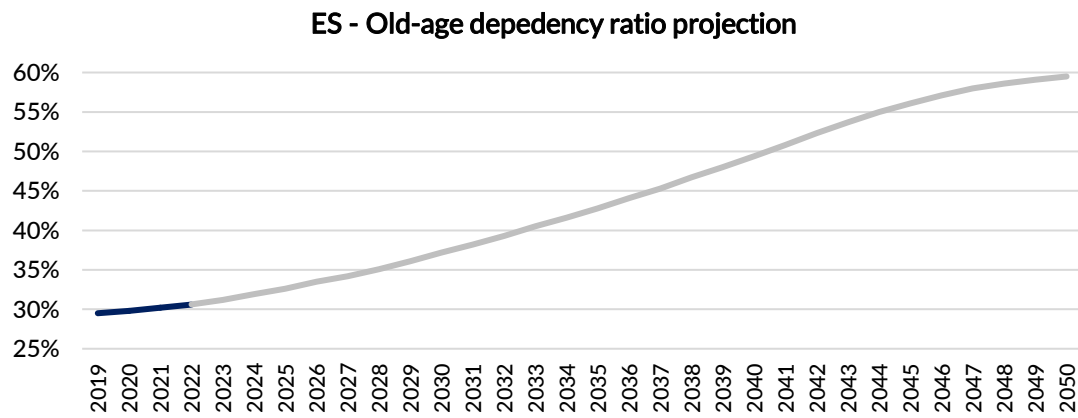
Slovakia

Net equity of households in pension funds reserves (in € bn), 2020	13	Net equity of households in pension funds reserves as % of GDP	14.1%
Net equity of households in life insurance reserves (in € bn), 2020	5	Net equity of households in life insurance reserves as % of GDP	5.3%
Active population (mil.) 2021	2.8	Old-Age dependency ratio, old (% of working population), 2021	25.6%
Population ageing trend (2021-2050)	101%	Projected old-age dependency ratio by 2050	51.4%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			53%



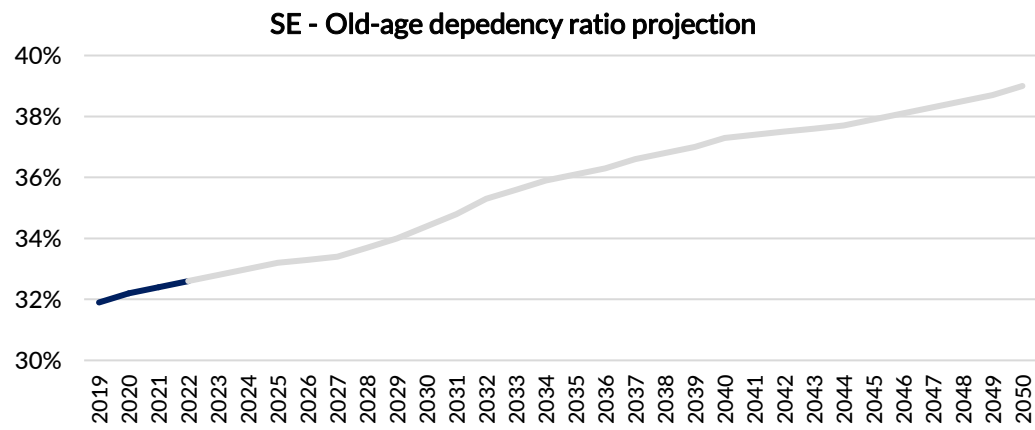
Spain

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	201	Net equity of households in life insurance reserves as % of GDP	17.9%
Active population (mil.) 2021	23.3	Old-Age dependency ratio, old (% of working population), 2021	31.0%
Population ageing trend (2021-2050)	92%	Projected old-age dependency ratio by 2050	59.5%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			79%



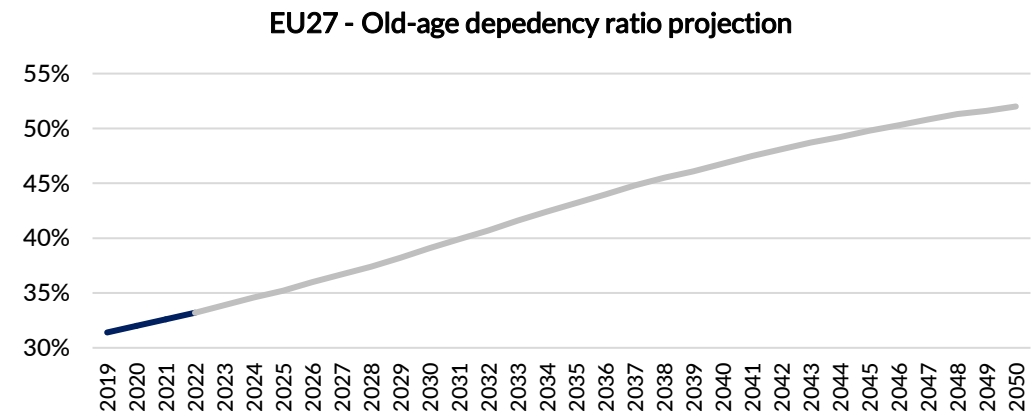
Sweden

Net equity of households in pension funds reserves (in € bn), 2020	515	Net equity of households in pension funds reserves as % of GDP	102.6%
Net equity of households in life insurance reserves (in € bn), 2020	115	Net equity of households in life insurance reserves as % of GDP	22.9%
Active population (mil.) 2021	5.6	Old-Age dependency ratio, old (% of working population), 2021	33.1%
Population ageing trend (2021-2050)	17.9%	Projected old-age dependency ratio by 2050	39%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2021			56%



European Union (EU27)

Net equity of households in pension funds reserves (in € bn), 2020	N/A	Net equity of households in pension funds reserves as % of GDP	N/A
Net equity of households in life insurance reserves (in € bn), 2020	5,449	Net equity of households in life insurance reserves as % of GDP	40.6%
Active population (mil.) 2021	216.8	Old-Age dependency ratio, old (% of working population), 2021	33.1%
Population ageing trend (2021-2050)	57%	Projected old-age dependency ratio by 2050	52%
Aggregate replacement ratio for pensions (excl. social benefits), total, 2020			54%



Source: All country cards' data and graphs are own composition/calculations based on Eurostat/OECD/World Bank data

Looking at the wider picture of the 17 jurisdictions presented above:

- the country with the highest level of accumulated capital in pension funds remains the Netherlands (240% of GDP), while on life insurance reserves are Denmark and France (102% and 93% of their corresponding GDP);
- in terms of the current old-age dependency ratio (2021), the least pressure on the public pension system (PAYG) is in Slovakia (26%, or roughly 4 workers to 1 pensioner) and the most stressed is Italy (37%, or approx. 3 workers to 1 pensioner);
- looking at old-age dependency projections, the ratios will increase by at least 40% in all jurisdictions analysed by 2050, except for Sweden; the most distressed systems could be in Italy and Spain (62% and 60%) and the most relaxed in Sweden (38%).

The following table shows the level of accumulated assets in pension funds and all retirement vehicles (depending on data availability) in 2021.

Table GR9. Funding level of private pension systems

	Pension Funds' assets (2021)		All retirement vehicles' assets (2021)	
	% of GDP	in € mil	% of GDP	in € mil
Austria	7%	26,975	n.a	
Belgium	9%	46,479	37%	185,732
Bulgaria	15%	10,030	15%	10,030
Croatia	33%	18,969	33%	18,969
Denmark	50%	168,107	211%	354,389
Estonia	15%	4,482	17%	5,152
France	3%	68,201	11%	274,876
Germany	8%	277,060	n.a.	
Italy	10%	171,805	13%	224,314
Latvia	2%	730	21%	6,743
Lithuania	11%	6,131	11%	6,131
Netherlands	210%	1,803,444	n.a.	
Poland	7%	41,042	n.a.	
Romania	8%	18,689	8%	18,689
Slovak Republic	16%	15,424	16%	15,424
Spain	10%	126,202	14%	171,523
Sweden	4%	20,993	102%	535,259
United Kingdom	117%	3,154,269	n.a.	

Source: Own calculations based on OECD and ECB data

In some countries the level of accumulated assets in pension funds is almost the same as the total value of pension vehicles (such as Slovakia, Bulgaria or Romania), in others it can be seen that the total funded retirement products are even four times higher than pension funds (Denmark – 211% of GDP).

III. RETURN ATTRIBUTION

Pension returns drivers

This report seeks to explain the (often poor) performance of pension vehicles, especially when compared to capital market returns. The underperformance (compared to a benchmark) of most pension vehicles can be explained by several return *drivers*:

- **inflation**, which over a full contribution period (40 years) at a modest rate can erode even more than 50% of nominal returns.
- pension portfolios' **asset allocation** and **performance**,
- the **asset managers' skills** in terms of picking securities and market timing,
- the **investment charges** deducted by asset managers and other financial intermediaries, to a great extent on net real returns of private pensions,
- ultimately by the **tax** burden.

These return drivers are analysed separately in the following sections.

Inflation

As explained in the previous section, inflation is a measurement for the *purchasing power of money* in time: positive inflation rate means that the ***real value*** of our money decreases in time; negative inflation rate means that the ***real value*** of our money increases.

For several of the countries analysed in this research report, inflation rates were significant and consequently had a severe impact on returns in real terms over the periods in review. One has to keep in mind that even for those countries with moderate inflation, the compound effect over long periods, as applicable for the case of retirement savings, can lead to considerable losses in purchasing power.

Table GR10(A). Inflation in Eurozone Member States (in %)											
Year	AUSTRIA	BELGIUM	ESTONIA	FRANCE	GERMANY	ITALY	LATVIA	LITHUANIA	NL	SLOVAKIA	SPAIN
2000	1.8%	3.0%	5.0%	1.8%	2.2%	2.7%	1.7%	1.7%	2.9%	8.4%	4.0%
2001	1.8%	1.9%	4.2%	1.5%	1.4%	2.3%	3.2%	2.0%	5.1%	6.7%	2.5%
2002	1.7%	1.3%	2.7%	2.2%	1.1%	3.0%	1.5%	-0.9%	3.2%	3.2%	4.0%
2003	1.3%	1.6%	1.2%	2.4%	1.1%	2.5%	3.6%	-1.3%	1.6%	9.4%	2.7%
2004	2.5%	2.0%	4.8%	2.2%	2.3%	2.3%	7.3%	2.8%	1.3%	5.9%	3.3%
2005	1.5%	2.8%	3.7%	1.8%	2.1%	2.0%	7.1%	3.0%	2.0%	3.8%	3.7%
2006	1.6%	2.1%	5.1%	1.7%	1.4%	2.1%	6.7%	4.6%	1.7%	3.7%	2.7%
2007	3.5%	3.1%	9.7%	2.8%	3.1%	2.8%	14.0%	8.2%	1.6%	2.5%	4.3%
2008	1.5%	2.7%	7.5%	1.2%	1.1%	2.4%	10.4%	8.5%	1.7%	3.5%	1.4%
2009	1.1%	0.3%	-1.9%	1.0%	0.9%	1.1%	-1.4%	1.2%	0.7%	0.0%	0.9%
2010	2.2%	3.4%	5.4%	2.0%	1.8%	2.1%	2.4%	3.6%	1.8%	1.3%	2.9%
2011	3.4%	3.2%	4.1%	2.7%	2.2%	3.7%	3.9%	3.5%	2.5%	4.6%	2.3%
2012	2.9%	2.1%	3.6%	1.5%	2.1%	2.6%	1.6%	2.9%	3.4%	3.4%	3.0%
2013	2.0%	1.2%	2.0%	0.8%	1.2%	0.6%	-0.4%	0.5%	1.4%	0.4%	0.3%
2014	0.8%	-0.4%	0.1%	0.1%	0.1%	0.0%	0.3%	-0.1%	-0.1%	-0.1%	-1.1%
2015	1.1%	1.5%	-0.2%	0.3%	0.2%	0.1%	0.4%	-0.2%	0.5%	-0.5%	-0.1%
2016	1.6%	2.2%	2.4%	0.8%	1.6%	0.5%	2.1%	2.0%	0.7%	0.2%	1.4%
2017	2.3%	2.1%	3.8%	1.2%	1.5%	1.0%	2.2%	3.8%	1.2%	2.0%	1.2%
2018	1.7%	2.2%	3.3%	1.9%	1.7%	1.2%	2.5%	1.8%	1.8%	1.9%	1.2%
2019	1.8%	0.9%	1.8%	1.6%	1.5%	0.5%	2.1%	2.7%	2.8%	3.2%	0.8%
2020	1.0%	0.4%	-0.9%	0.03%	-0.7%	-0.3%	-0.5%	-0.1%	0.9%	1.8%	-0.6%
2021	3.8%	6.6%	12.0%	3.4%	5.7%	4.2%	7.9%	10.7%	6.4%	6.7%	6.6%
AVG	1.9%	2.1%	3.6%	1.6%	1.6%	1.8%	3.5%	2.7%	2.0%	3.2%	2.1%
CPD	52.8%	57.4%	116.3%	41.2%	42.1%	47.5%	113.6%	80.4%	56.2%	101.4%	59.5%

Source: BETTER FINANCE own composition based on Eurostat data; CPD = compounded (inflation on inflation)

Table GR10(B). Inflation in non-Eurozone Member States (in %)							
Year	BULGARIA	CROATIA	DENMARK	POLAND	ROMANIA	SWEDEN	UK
2000	11.3%	5.9%	2.4%	8.4%	40.7%	1.3%	0.8%
2001	4.8%	2.4%	2.0%	3.5%	30.3%	3.2%	1.1%
2002	3.8%	2.8%	2.6%	0.8%	17.8%	1.7%	1.6%
2003	5.6%	2.2%	1.2%	1.7%	14.2%	1.8%	1.3%
2004	4.0%	2.0%	1.0%	4.3%	9.3%	0.9%	1.6%
2005	7.4%	4.0%	2.3%	0.8%	8.7%	1.2%	1.9%
2006	6.1%	2.1%	1.6%	1.4%	4.9%	1.5%	3.0%
2007	11.6%	5.4%	2.4%	4.3%	6.7%	2.5%	2.1%
2008	7.2%	2.8%	2.5%	3.3%	6.4%	2.1%	3.0%
2009	1.6%	1.8%	1.1%	3.9%	4.7%	2.8%	2.9%
2010	4.4%	1.7%	2.8%	2.9%	7.9%	2.1%	3.6%
2011	2.0%	2.1%	2.4%	4.6%	3.2%	0.4%	4.3%
2012	2.8%	4.4%	1.9%	2.1%	4.6%	1.0%	2.6%
2013	-0.9%	0.5%	0.5%	0.6%	1.3%	0.4%	2.0%
2014	-2.0%	-0.1%	0.1%	-0.7%	1.0%	0.3%	0.5%
2015	-0.9%	-0.3%	0.3%	-0.4%	-0.7%	0.7%	0.2%
2016	-0.5%	0.7%	0.3%	0.9%	-0.1%	1.7%	1.6%
2017	1.8%	1.3%	0.8%	1.7%	2.6%	1.7%	2.9%
2018	2.3%	1.0%	0.7%	0.9%	3.0%	2.2%	2.1%
2019	3.1%	1.3%	0.8%	3.0%	4.0%	1.7%	1.3%
2020	0.02%	-0.3%	0.4%	3.4%	1.8%	0.6%	-
2021	6.59%	5.2%	3.4%	8.0%	6.7%	4.5%	-
AVG	3.7%	2.2%	1.5%	2.7%	7.7%	1.7%	
CPD	121.3%	61.7%	39.3%	78.6%	415.9%	43.5%	

Source: BETTER FINANCE own composition based on Eurostat data; CPD = compounded (inflation on inflation)

Table GR10(C). EU27 inflation					
2000	2001	2002	2003	2004	2005
4.0%	3.0%	2.5%	2.2%	2.6%	2.4%
2006	2007	2008	2009	2010	2011
2.1%	3.4%	2.0%	1.3%	2.5%	2.8%
2012	2013	2014	2015	2016	2017
2.3%	0.8%	-0.2%	0.2%	1.1%	1.4%
2018	2019	2020	2021	AVG	CPD
1.6%	1.6%	0.2%	5.3%	2.04%	55.9%

Source: Eurostat HICP monthly index (2015=100, prc_hicp_aind), annual averages (AAVG) are calculated by BETTER FINANCE; CPD = compounded (inflation on inflation)

Why is inflation calculated per country/region?

Inflation is a relative term and depends on the "area" where one lives.

e.g.: €10 earned in 2010 will be worth more in 2020 in Germany than in Austria.

In 2021, the effects of financial repression started to manifest, and continued at a stronger rate in the course of 2022 (August at the time of writing): after a very low inflation (or deflation) in 2020 due to forced savings due to health restrictions, most jurisdictions analysed recorded an annual inflation rate twice that of the 21-year average, pushing up the compounded effect by a large margin.

What is important is to consider the cumulative (compounded) effect all these inflation rates had: ranging from 41.4% in Denmark to 124% in Estonia (ex. Romania), it means that the purchasing power of the local currencies decreased between 30% and 55%.

Aiming to maintain inflation rates below, but close to 2%, the European Central Bank undertook considerable monetary policy efforts to bring the rates back to the desired levels.

Table GR11(A). Public sector deficit in % of GDP

	2015	2016	2017	2018	2019	2020	2021
EU	-1.9	-1.4	-0.8	-0.4	-0.5	-6.9	-4.7
Austria	-1.0	-1.5	-0.8	0.2	0.6	-8.9	-5.9
Belgium	-2.4	-2.4	-0.7	-0.8	-1.9	-9.4	-5.5
Bulgaria	-1.7	0.2	1.2	2.0	2.1	-3.4	-4.1
Croatia	-3.5	-0.9	0.8	0.2	0.3	-7.4	-2.9
Denmark	-1.2	0.1	1.8	0.7	3.8	-1.1	2.3
Estonia	0.1	-0.4	-0.7	-0.6	0.1	-4.9	-2.4
France	-3.6	-3.6	-3.0	-2.3	-3.1	-9.2	-6.5
Germany	1.0	1.2	1.4	1.8	1.5	-4.2	-3.7
Italy	-2.6	-2.4	-2.4	-2.2	-1.6	-9.5	-7.2
Latvia	-1.4	0.2	-0.8	-0.8	-0.6	-4.5	-7.3
Lithuania	-0.3	0.2	0.5	0.6	0.5	-7.4	-1.0
Netherlands	-2.1	0.0	1.3	1.4	1.8	-4.3	-2.5
Poland	-2.6	-2.4	-1.5	-0.2	-0.7	-7	-1.9
Romania	-0.6	-2.6	-2.6	-2.9	-4.4	-9.2	-7.1
Slovakia	-2.7	-2.6	-1.0	-1.0	-1.3	-6.2	-6.2
Spain	-5.2	-4.3	-3.0	-2.5	-2.9	-11	-6.9
Sweden	0.0	1.0	1.4	0.8	0.6	-3.1	-0.2
UK	-4.6	-3.3	-2.5	-2.2	-2.1	-	-

Source: Own composition based on Eurostat data

Table GR11(B). Public sector debt in % of GDP							
	2015	2016	2017	2018	2019	2020	2021
EU	84.8	84.0	81.5	79.5	77.5	90.7	88.1
Austria	84.9	82.8	78.5	74	70.5	83.9	82.8
Belgium	105.2	105.0	102.0	99.8	98.1	114.1	108.2
Bulgaria	26.0	29.3	25.3	22.3	20.2	25	25.1
Croatia	84.3	80.8	77.6	74.3	72.8	88.7	79.8
Denmark	39.8	37.2	35.9	34	33.3	42.2	36.7
Estonia	10.0	9.9	9.1	8.2	8.4	18.2	18.1
France	95.6	98.0	98.3	98	97.6	115.7	112.9
Germany	72.3	69.3	65.1	61.8	59.7	69.8	69.3
Italy	135.3	134.8	134.1	134.4	134.6	155.8	150.8
Latvia	37.1	40.4	39.0	37.1	37	43.5	44.8
Lithuania	42.5	39.7	39.1	33.7	35.9	47.3	44.3
Netherlands	64.7	61.9	56.9	52.4	48.7	54.5	52.1
Poland	51.3	54.2	50.6	48.8	45.6	57.5	53.8
Romania	37.8	37.3	35.1	34.7	35.3	47.3	48.8
Slovakia	51.9	52.4	51.5	49.6	48.2	60.6	63.1
Spain	99.3	99.2	98.6	97.4	95.5	120	118.4
Sweden	43.7	42.3	40.7	38.9	35	39.9	36.7
UK	86.9	86.8	86.2	85.7	85.4	-	-

Source: Own composition based on Eurostat data

In 2020, public spending on healthcare and economic support (due to the COVID-lockdowns) have put strains on state coffers. All countries analysed have recorded deficit, ranging from 1.1% of GDP (Denmark) to 11% of GDP (Spain). As such, public debt has increased everywhere: at EU27 level, public debt increased by 13.2 p.p., and in the countries analysed the public debt increase ranges between 4.8 p.p. (Bulgaria) to 24.5 p.p. (Spain). In 2021, most countries did not increase their debt, most probably due to the effects of inflation; in terms of deficit, all jurisdictions analysed in this report recorded deficit, but at a slower rate than in the previous year.

We recall the two criteria concerning public deficit and debt deriving the Maastricht Treaty, i.e., EU countries should not exceed:

- *"-3% ratio of the planned or actual government deficit to gross domestic product at market prices"*;[23]
- *"60% for the ratio of government debt to gross domestic product at market prices"*.[24]

In this light, more than half of the countries analysed are still under the 60% threshold and 16 out of the 17 have exceeded the 3% deficit threshold. Data for UK is no longer available from Eurostat, so it was excluded from the analysis.

[23] Article 1 of the Protocol No. 12 on the excessive deficit procedure of the Treaty on European Union, OJ C 115, 9.5.2008, p. 279–280.
[24] Ibid.

Asset Allocation

There are striking differences between the asset allocation of pension funds across countries and products.

Equities dominate only in Poland, Lithuania, and Estonia, being the only three jurisdictions where pension funds are more than 50% invested in shares. Bonds are the main portfolio component in 8 out of 10 countries. In the UK, Germany, Spain and Slovakia, almost a half of the capital is invested in collective investment scheme units or other instruments; cash and deposits are marginally used, mostly for short-term liquidity purposes.

The average portfolio composition has remained almost constant, with a constant shift from liquidity and bonds to collective investment schemes (11% in 2015 to 18% in 2021) and equities (34% in 2021) on average.

The decrease in government bond interest rates since 1999 have had a positive impact on outstanding assets, especially in countries where this asset class dominates, but it reduces the capacity to offer a good remuneration on new investment flows. The downside, starting with 2021, is that yields for sovereign bonds have started to turn negative.

This edition as well we continue to observe striking differences between pension funds' asset allocations across European countries as shown by the following table:[25]

Table GR12(A). Pension funds' asset allocation, [2021, in % of total assets]

Country	Year	Cash and deposits	Bills and bonds	Equities	Other
Austria	2005	3%	53%	37%	4%
	2016	9%	46%	33%	12%
	2017	7%	44%	35%	13%
	2018	8%	45%	33%	14%
	2019	7%	43%	34%	16%
	2020	2%	32%	29%	37%
	2021	2%	27%	33%	38%
Belgium	2005	2%	6%	9%	78%
	2010	7%	43%	38%	13%
	2015	4%	44%	42%	10%
	2016	*N/A*	*N/A*	*N/A*	*N/A*
	2017	5%	45%	43%	7%
	2018	6%	47%	41%	5%
	2019	2%	40%	42%	15%
	2020	3%	46%	38%	13%
	2021	2%	48%	45%	5%
Bulgaria	2015	12%	65%	19%	4%
	2016	16%	63%	17%	4%
	2017	6%	61%	17%	16%
	2018	9%	57%	17%	17%

[25] We could not find any available data for France.

	2019	8%	66%	12%	14%
	2020	8%	61%	12%	19%
	2021	9%	55%	17%	19%
Croatia	2015	3%	73%	24%	0%
	2016	5%	72%	22%	1%
	2017	4%	73%	22%	0%
	2018	6%	72%	21%	1%
	2019	2%	72%	25%	1%
	2020	4%	69%	26%	1%
	2021	4%	66%	30%	1%
Denmark	2005	1%	50%	26%	21%
	2010	3%	42%	5%	50%
	2015	0%	63%	18%	19%
	2016	0%	62%	17%	21%
	2017	1%	59%	19%	21%
	2018	0%	59%	21%	19%
	2019	0%	59%	21%	19%
	2020	0%	52%	21%	27%
	2021	1%	56%	24%	20%
Estonia	2010	9%	17%	4%	69%
	2015	20%	48%	31%	0%
	2016	23%	43%	34%	0%
	2017	4%	59%	36%	0%
	2018	3%	62%	34%	1%
	2019	4%	56%	40%	0%
	2020	3%	48%	49%	0%
	2021	5%	34%	60%	1%
France	2020	2%	68%	12%	18%
	2021	n/a	n/a	n/a	n/a
Germany	2005	3%	31%	35%	2%
	2010	2%	46%	5%	46%
	2015	4%	54%	5%	38%
	2016	4%	51%	6%	39%
	2017	4%	50%	6%	40%
	2018	4%	49%	5%	41%
	2019	4%	47%	6%	43%
	2020	3%	46%	7%	44%
	2021	3%	42%	8%	47%
Italy	2005	5%	37%	10%	17%
	2010	6%	47%	11%	36%
	2015	4%	50%	20%	27%
	2016	4%	49%	20%	26%
	2017	6%	45%	21%	28%
	2018	6%	45%	19%	30%
	2019	6%	45%	21%	28%

	2020	6%	44%	23%	28%
	2021	6%	43%	25%	26%
Latvia	2015	19%	46%	35%	1%
	2016	12%	61%	23%	4%
	2017	10%	57%	29%	4%
	2018	6%	42%	51%	1%
	2019	8%	59%	31%	2%
	2020	10%	56%	31%	3%
	2021	5%	56%	36%	2%
Lithuania	2015	9%	51%	38%	2%
	2016	9%	46%	41%	1%
	2017	5%	46%	46%	2%
	2018	7%	47%	44%	2%
	2019	2%	20%	75%	3%
	2020	2%	21%	74%	3%
	2021	3%	19%	75%	3%
NL*	2005	2%	41%	46%	4%
	2010	4%	56%	20%	20%
	2015	3%	46%	38%	13%
	2016	2%	45%	39%	14%
	2017	3%	48%	46%	2%
	2018	3%	51%	44%	2%
	2019	3%	50%	46%	0%
	2020	3%	52%	45%	0%
	2021	2%	48%	48%	1%
Poland	2005	4%	63%	32%	0%
	2010	3%	59%	36%	1%
	2015	7%	10%	82%	0%
	2016	7%	9%	83%	1%
	2017	6%	9%	85%	0%
	2018	6%	9%	85%	0%
	2019	7%	10%	82%	0%
	2020	4%	11%	85%	0%
	2021	2%	6%	82%	10%
Romania	2010	7%	80%	12%	0%
	2015	5%	73%	22%	0%
	2016	7%	71%	22%	0%
	2017	9%	68%	23%	0%
	2018	8%	72%	20%	0%
	2019	4%	71%	25%	0%
	2020	1%	74%	25%	0%

	2021	2%	69%	29%	0%
Slovakia	2005	78%	11%	7%	4%
	2010	27%	71%	1%	0%
	2015	17%	78%	2%	2%
	2016	12%	80%	3%	5%
	2017	12%	58%	2%	28%
	2018	11%	58%	2%	28%
	2019	11%	57%	3%	30%
	2020	5%	59%	3%	33%
	2021	3%	52%	4%	42%
Spain	2005	5%	58%	19%	18%
	2010	19%	58%	12%	11%
	2015	17%	62%	11%	9%
	2016	15%	64%	14%	7%
	2017	11%	47%	13%	28%
	2018	10%	48%	13%	29%
	2019	8%	44%	14%	33%
	2020	9%	44%	14%	34%
	2021	9%	39%	15%	37%
Sweden	2005	1%	58%	34%	7%
	2010	N/A	N/A	N/A	N/A
	2015	2%	67%	18%	13%
	2016	N/A	N/A	N/A	N/A
	2017	N/A	N/A	N/A	N/A
	2018	N/A	N/A	N/A	N/A
	2019	2%	45%	24%	29%
	2020	2%	42%	26%	30%
	2021	2%	44%	27%	27%
UK	2005	3%	19%	39%	27%
	2010	N/A	N/A	N/A	N/A
	2015	2%	34%	20%	43%
	2016	4%	43%	22%	31%
	2017	2%	28%	13%	57%
	2018	2%	30%	9%	59%
	2019	2%	30%	9%	59%
	2020	2%	45%	26%	27%
	2021	2%	42%	27%	29%
AVG 2021		**4%**	**44%**	**34%**	**18%**

Source: Own composition based on OECD Pension Funds in Figures, 2022;

The asset allocation data in this table include both direct investments in cash and deposits, bills and bonds (both sovereign and corporate), equities and indirect investments through collective investment schemes (investment funds such as UCITS[26] or AIF[27]) and other assets, such as loans, land and buildings, real estate investment trusts (REITS), hedge funds, derivatives, commodities and precious metals, insurance contracts, money market instruments, private equity funds and other structured (unallocated) products. Data for the asset allocation in collective investment schemes is not available for all jurisdictions and all years.

On average in 2021 as well, most pension funds employed a conservative/defensive investment strategy, investing almost a half (44%) of the capital in debt securities (bills and bonds). Equities are the second largest position with an average of 34%, followed by a growing allocation to investment funds (*other* category).

Table GR12(B). Evolution of average asset allocation in pension funds				
	Cash & Deposits	Bonds	Equity	Other
2015	8%	54%	27%	11%
2016	9%	54%	26%	11%
2017	6%	50%	29%	15%
2018	6%	50%	29%	16%
2019	5%	48%	30%	17%
2020	4%	48%	30%	18%
2021	4%	44%	34%	18%
2015-2021	**6%**	**50%**	**29%**	**15%**

Source: own computations based on Table GR13(A).

So far, we were not able to obtain information on ESG-factored investments to correspond the current reporting standards.

Asset performance

Concerning the recent ***positive capital markets returns (1999 – 2020)***, this trend ended for both equities and bonds in February 2020. Since the beginning of the 21st century, capital market returns have been positive (moderately for equities while strongly for bonds):

- By 2021, on a nominal basis (before taking inflation into account), world stock markets have grown in value (in €) by 221%,[28] where the US stock market has grown by 275%[29] and the European ones by 117%;[30]

[26] "UCITS" stands for Undertakings for Collective Investment in Transferable Securities, which is the most common legal form mutual funds in the EU take, in particular because of the *passporting rights*.
[27] "AIFs" stand for Alternative Investment Funds, which are all the non-UCITS funds.
[28] As measured by the MSCI All Country World Index (ACWI) Net Returns denominated in €, data for 21 years.
[29] As measured by the MSCI USA Net Returns Index, calculated in €.
[30] As measured by the MSCI Europe Net Returns Index, denominated in €.

- On a real basis (net of inflation), European stock markets (MSCI Europe NR) returned to positive cumulated performances by 2013, and once again reached significant levels by 2017 (+32%) and reached in 2021 +139%.

Equity markets

Equity returns are more volatile in the short-term and hence need to be observed with a long-term perspective in mind. The real return calculations in this report date back to 31/12/1999 at the earliest, so we take a look at how equity markets performed over that same period. Overall, the 21st century began with one of the most severe bear markets in history and faced, in conjunction with the downward cycle of 2007-2008, two longer-lasting upward cycles from 2003-2006 and 2009-2021. Data in the table below is calculated based on gross performances (***nominal return***), then adjusted by inflation (***real return***).

Table GR13. Historical Returns on Equity Markets, yearly average

Country	Period	Nominal Return	Real return	Source
Austria	(2000-2021)	5.5%	3.45%	AT TR (WB)
Belgium	(2000-2021)	2.3%	0.26%	MSCI BE GR EUR
Bulgaria*	(2006-2021)	-7.14%	-9.65%	MSCI BG GR EUR
Croatia	(2003-2021)	5.40%	3.36%	MSCI HR GR EUR
Denmark	(2000-2021)	11.53%	9.86%	MSCI DK GR EUR
Estonia	(2003-2021)	8.3%	4.59%	MSCI EE GR EUR
Europe	(2000-2021)	4.50%	2.42%	STOXX AETM
France	(2000-2021)	4.44%	2.81%	MSCI FR GR EUR
Germany	(2000-2021)	3.77%	2.13%	MSCI DE GR EUR
Italy	(2000-2021)	1.52%	-0.26%	MSCI ITALY GR EUR
Latvia	(2001-2021)	10.53%	6.79%	OMX Riga Index (OMXRGI)
Lithuania**	(2001-2021)	11.8%	8.8%	Vilnius SE General
Netherlands	(2000-2021)	6.39%	4.3%	MSCI NL GR EUR
Poland	(2001-2021)	6.30%	3.91%	WIG (GPW)
Romania	(2000-2021)	11.59%	9.09%	BET (BVB)
Slovakia	(2000-2021)	7.54%	4.17%	SAX
Spain	(2000-2021)	2.78%	0.62%	MSCI ES GR EUR
Sweden	(2000-2021)	6.08%	4.35%	MSCI SE GR EUR

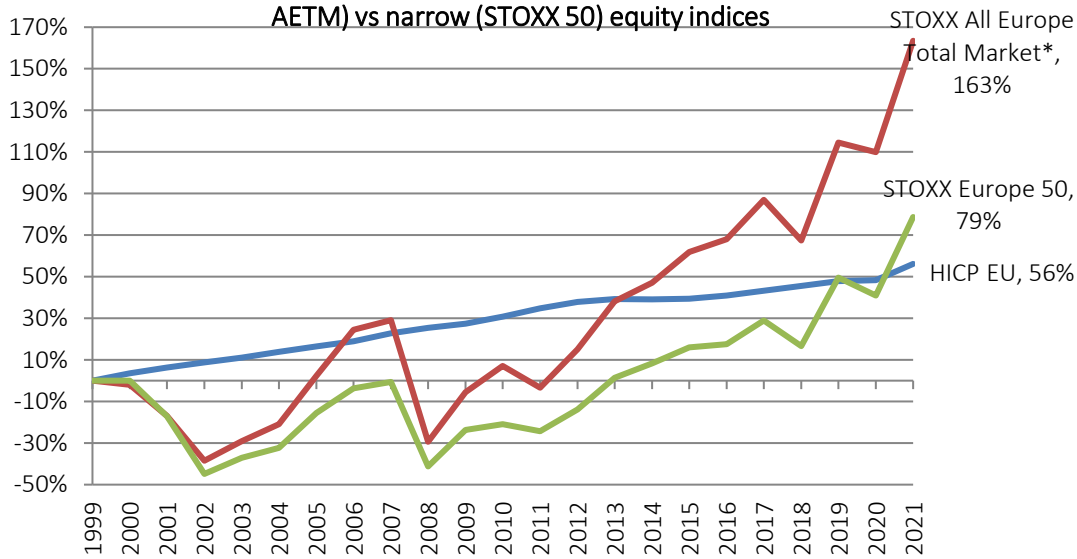
Sources: MSCI Indices (Gross Returns), Eurostat, Morningstar, Finance Yahoo, Investing.com, Bucharest Stock Exchange; Bratislava Stock Exchange; NASDAQ Nordic OMX Vilnius, Tallinn, Riga, Eurostat HICP annual average

Since not all equity indexes have the same coverage or data availability, it is difficult to perfectly compare the performances of between the national equity markets. Most of the equity indices recorded negative nominal returns in 2020, ranging between -14.67% to -3.19%; the rest delivered positive nominal returns ranging between 0.03% and 32.44%. In real net terms, due to predominant deflation, 2020 returns improved slightly.

When looking at the cumulated results at European level, as well as in the individual countries where we developed this analysis (see French, German, Spanish and UK country cases), broad stock market indices performed much better than the better known and much narrower large cap or "blue chip" indices (Stoxx Europe 50, FTSE 100, DAX 30, IBEX 35, CAC 40).

The following graph shows a comparison of the broad STOXX All Europe Total Market index which includes 2,257 European stocks (as of 9 September 2022)[31] and the much narrower Stoxx Europe 50.

Graph GR14. Cumulative performance of the European wide (STOXX AETM) vs narrow (STOXX 50) equity indices



Source: BETTER FINANCE; Eurostat; STOXX

At European level, the difference at the end of our 22-year period is an astonishing 84% in favour of the broader stock market index in nominal terms. And whereas the performance of the narrow index (79% nominal) was heavily outmatched by inflation (56%) over the last 22 years, the broader European stock market recorded a positive real performance with a cumulated gain of 68%.

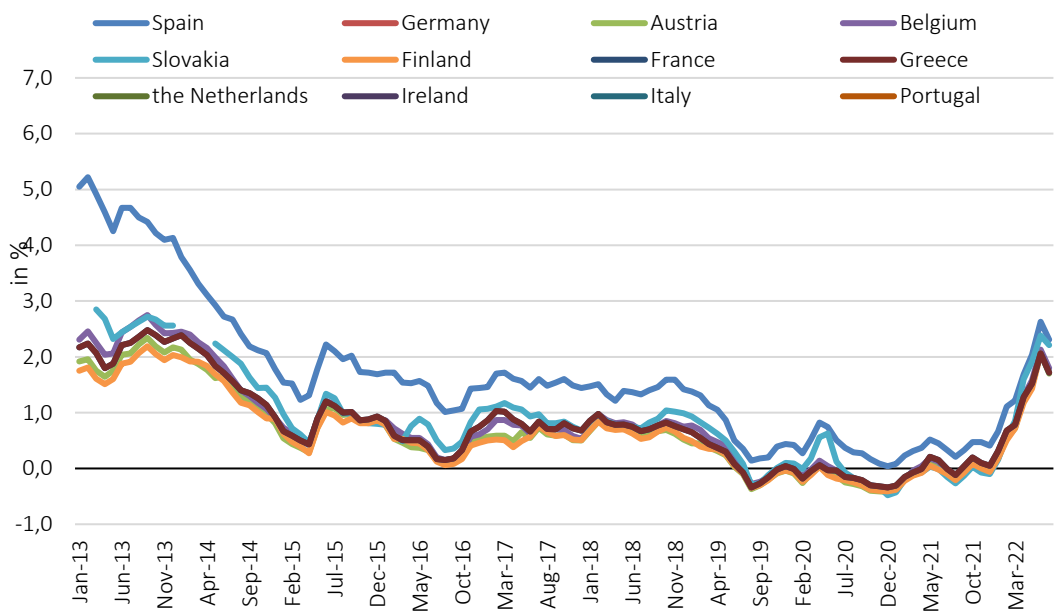
Government bond markets

As already mentioned above, it is important to note that a decrease in interest rates translates into an increase in the mark-to-market value of bonds which had a positive impact on outstanding debt assets of pension funds. On the other hand, the capacity to provide good remuneration through new bond issuances is hereby reduced.

The following table indicates the returns of twelve major European bond markets for the period 2013-2022 (YTD).

[31] https://www.stoxx.com/index-details?symbol=TE1P. There was no data available for year of 2000. The performance of the narrower MSCI Europe TR (Net) index (435 components as of 02 September 2020) for that year was taken as a proxy instead.

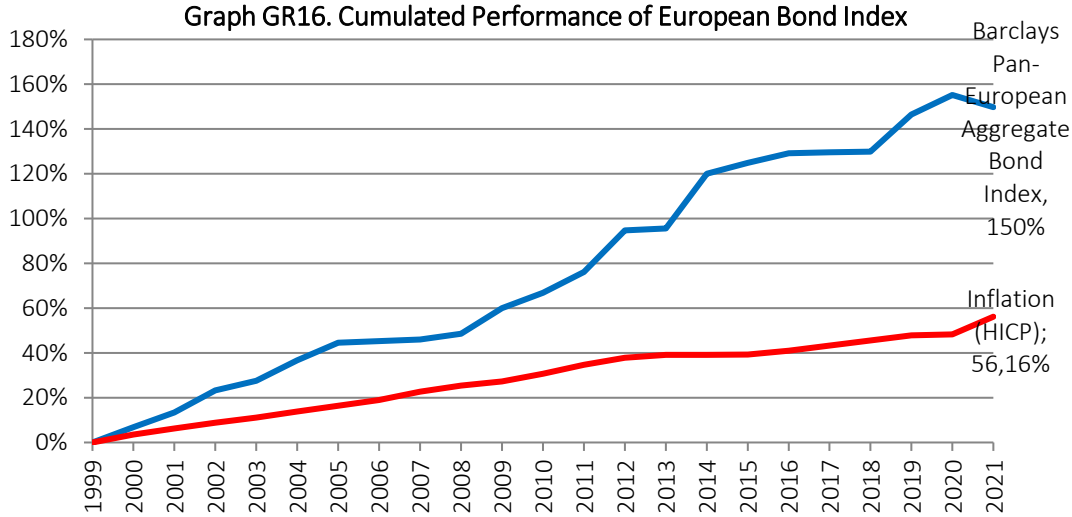
Graph GR15. Government bond yields



Source: Own composition based on BdE data

The following graph shows the long-term cumulated returns of European bonds as a whole - that is both government and corporate bonds - as measured by the Barclays Pan-European TR index:

Graph GR16. Cumulated Performance of European Bond Index



Source: Eurostat; Bloomberg website; own computations

Over the last 22 years, European bonds as a whole enjoyed a very positive nominal return which was significantly higher than the return of European equities. It is difficult to foresee a

continuation of this past trend given the negative interest rates reached today. However, in 2019 this index grew from 129.86% to 146% in nominal terms. Overall, the real cumulative growth of the broad bond index was 160%.

What are "***equities***"?

Equities, also referred to as *shares* or *stocks*, represent a certificate of ownership over a certain part of a company or undertaking.

Equity gives the *shareholder* the right to benefit of profits (through dividends) and the obligation to support loses, proportionally to his "ownership share" over the company. At the same time, it allows the *shareholder* to take part in the decision-making process of the company.

The value of a share is primarily determined by its growth potential, coupled with the amount and frequency of *dividend* payments: see here the BETTER FINANCE video about *Investing in Shares*.[32]

If the company is going well, the ***share price goes up***.

What are "***bonds***"?

Bonds, commonly referred to as *debt* or *fixed income securities*, represent a very liquid, easily fungible, and transferable **loan**.

The borrower issues the *bond*, which has a *principal* amount (sum to be repaid), a maturity (repayment date) and *coupon* (interest rate).

Bonds are used because they facilitate a very fast financing channel for borrowers (instead of making a loan contract with each lender) and a less risky source of investment return for lenders.

The price of a bond is primarily determined by the *credit rating* of the issuer, the *principal amount* and the *maturity*.

If the issuer is doing good, then the ***bond price goes down***.

Graph GR15 shows that this period has indeed been particularly favourable to bonds as an asset class as illustrated by the considerable outperformance of European inflation over time.

Portfolio Manager / Advisor Competence

The initial BETTER FINANCE study highlighted that, in almost all categories of investment funds, a majority of funds under-performed their benchmarks. Investment funds play an important role in today's asset allocation of pension vehicles, thus it is interesting to compare investment fund performances to benchmarks.

The Standard & Poor's annual "SPIVA" report measures the proportion of active funds that have beaten their benchmark. The results from the latest SPIVA Europe Scorecard for year-end 2021 are shown in the following table:

[32] Link also here: https://www.youtube.com/watch?v=bhYW-YnbEmc.

Table GR17. Percentage of European Equity Funds Beating their Benchmarks					
Fund Category	Comparison Index	1-year (2021)	3-year (2019-2021)	5-year (2017-2021)	10-year (2012-2021)
Funds denominated in Euro (€)					
Europe Equity	S&P Europe 350	25	38	27	18
Eurozone Equity	S&P Eurozone BMI	35	28	17	7
France Equity	S&P France BMI	17	28	7	7
Germany Equity	S&P Germany BMI	60	51	37	24
Italy Equity	S&P Italy BMI	67	24	23	22
Spain Equity	S&P Spain BMI	54	24	23	17
Netherlands Equity	S&P Netherlands BMI	20	17	0	0
Funds denominated in local currencies					
U.K. Equity	S&P United Kingdom BMI	18	32	26	5
Denmark Equity	S&P Denmark BMI	94	68	39	37
Poland Equity	S&P Poland BMI	60	16	39	16
Sweden Equity	S&P Sweden BMI	52	35	31	19

Source: BETTER FINANCE own computation based on S&P SPIVA Scorecard Year-End 2021 (*https://www.spglobal.com/spdji/en/documents/spiva/spiva-europe-year-end-2020.pdf); Outperformance is based on equal-weighted fund counts. Index performance based on total return.*

The latest findings for 2021 once again (6th year in a row) reveal that the large majority of funds do not outperform their respective benchmarks over the past 10 years. For funds investing in European equities, only 18% were able to outperform their benchmark, the S&P Europe 350. The worst results on a country basis were recorded for funds investing in the Netherlands equity where already since 2012 funds haven't overperformed the Dutch broad market index (S&P Netherlands BMI), as well Eurozone and France where only 7% of the equity funds delivered a cumulative profit over the past 10 years above that of their benchmark.

For retirement savings products, consistent positive long-term returns are of particular importance. However definitive conclusions cannot be drawn from these calculations because they relate to a period that is too short, including no more than two cyclical periods: equity markets fell sharply in 2008 and 2009, then they recovered progressively until the end of 2019, with short sub-periods of decline in most countries, as it happened again in 2020. Prior research found that investment funds tend to outperform their benchmarks in a bearish market while they underperform in a bullish market.[33]

For a longer time horizon and especially in the case of retirement savings, a study[34] provides relevant results for UK personal pension funds operated by 35 providers over a 30-year period (1980-2009). Big personal pension fund providers performed better than their prospectus benchmarks, but underperformed treasury bills over the period of a fund's lifespan. Similarly, specialisation of portfolio managers in the investment universe is shown to deliver superior average annual returns but does not show superior long-term performances. More generally,

[33] IODS (2014): Study on the Performance and Efficiency of the EU Asset Management Industry, a study for the European Commission (Internal Market and Services DG) and the Financial Services User Group (FSUG), August 2014
[34] Anastasia Petraki and Anna Zalewska (April 2014), "With whom and in what is it better to save? Personal pensions in the UK", working paper of the Centre for Market and Public Organisation, University of Bristol.

they found that short-term performances based on arithmetic annual averages are not relevant indicators of the long-term performance calculated as geometric compounded returns similar to the methodology used in the present study. The authors also showed that younger funds perform better than older ones, which are under lower competitive pressure given the cost of leaving a fund to join a better performing one.

A research report published by BETTER FINANCE in 2019 analysed the drivers of over- or underperformance of the comparison or benchmark index of EU Equity Retail Investment funds domiciled in France, Belgium and Luxemburg. While only 2 funds out of 2,086 managed to consistently deliver overperformance on a period between 2008-2017 (10 years), the rest that managed to beat their market seem to have did it by coincidence or luck. [35]

In attempting to give an explanation to the latter, the analysis deployed showed that fees are the most negative factor for fund (over)performance or – in other words – "*the more you pay, the less you get*".[36] More information on fees and charges is given in the following section.

IV. INVESTMENT CHARGES

Fees and commissions substantially reduce the performances of pension products, especially for personal "packaged" pension products, and for unit-linked life-insurance. Charges are often complex, opaque, and far from being harmonised between different pension providers and products. Some countries have started to impose overall caps on fees for some pension products (UK, Romania, Latvia).

Findings of the initial study by BETTER FINANCE on the opacity and weight of charges did not change dramatically over the successive research reports. The expert contributors of the country cases in this report, in most of cases, do not have a clear overview of costs, neither by category, neither total.

In general, the return data the contributors use to calculate inflation-adjusted returns are disclosed directly in ***net*** (nominal) terms. BETTER FINANCE attempts each year to make a comparison between the level of costs across pension vehicles in the 17 jurisdictions, but only in 10 out of the 17 there is quantifiable data at product/pillar level. Even so, the available data cannot be aggregated as total costs/total expense ratios, rendering comparisons very difficult. For instance, as it happens with voluntary pension funds in Latvia or the occupational pension funds in the Netherlands, the expert contributors must collect "by hand" total cost data and compute it as it is not always reported the same.

[35] BETTER FINANCE, *Study on the Correlation between Cost and Performance of EU Equity Retail Funds* (June 2019) https://betterfinance.eu/wp-content/uploads/BETTER1.pdf.
[36] Press Release, "New research by BETTER FINANCE on the Correlation between Costs and Performance of EU Retail Equity Funds without a doubt establishes a negative correlation between returns and fees" https://betterfinance.eu/publication/the-more-you-pay-the-less-you-are-likely-to-get/.

While most reporting obligations concern *nominal net* returns for pension savers, the reality is that very often fees are either not publicly disclosed or computed in certain ways that concern only the individual saver (e.g., "*costs per client*").

Generally speaking, charges are heavier on personal pension products than on occupational pension funds, as employers are in better position to negotiate with competing providers than individuals are, but also due to economies of scale. In addition, based on the scarce data we could obtain, it seems that recent years have seen slight improvements in terms of costs of a range of pension vehicles – improvement calculated against the historical average of costs.

V. Taxation

Finally, taxes also reduce the performance of investments. The general model applied to pension products is deferred taxation, with contributions being deducted from taxable income and instead taxed as pension pay outs. The accumulated capital can be withdrawn at least partially at retirement as a lump-sum, which is often not taxable. Our calculations of net returns are based on the most favourable case, i.e., assuming that the saver withdraws the maximum lump-sum possible.

One of the key elements of a pension system, as designed by the World Bank's conceptual framework of 1994,[37] is to incentivise savings and private investments by giving fiscal advantages, either as deferred taxation, exemptions, or tax reductions.

Pension taxation concerns three stages: contributions, investment returns and payments (benefit drawdowns).

The general model applied to pension products is usually deferred taxation: contributions are deducted from the taxable income and pensions (pay-outs) are taxed within the framework of income tax or, usually, at a more favourable rate. Some countries are currently in the middle of a transitional phase comprising proportionate deferred taxation which will lead to entire deferred taxation in the future.

The so-called EET regime, "*a form of taxation of pension plans, whereby contributions are exempt, investment income and capital gains of the pension fund are also exempt, and benefits are taxed from personal income taxation*"[38], is predominant in the countries covered by this research report. There are only a few exceptions, like in Poland, where the reverse rule is applied: contributions are paid from the taxable income while pensions are tax-free (the only exception from the TEE regime are IKZEs – individual pension savings accounts). Pensions in Denmark are taxed at all three stages with contributions to occupational pensions being partially deductible as the only exception. Furthermore, in Bulgaria and for the funded pensions in Slovakia, one can even observe EEE regimes with no pension taxation at all within

[37] World Bank, 'Averting the Old Age Crisis: Policies to Protect the Old and Promote Growth' (1994) 10, http://documents.worldbank.org/curated/en/973571468174557899/pdf/multi-page.pdf.
[38] OECD definition: https://stats.oecd.org/glossary/detail.asp?ID=5225

defined tax exemption limits. In other countries, such as France or Poland, specific conditions apply in order to be tax-exempt or not.

Usually, the accumulated capital can be withdrawn by the saver as a lump sum at retirement age, at least partially. Our calculations of returns net of taxation (where available) are based on the most favourable taxation case and assume that the saver withdraws the maximum lump sum possible.

Savings products used as retirement provision, but which are not strictly pension products, might benefit from a favourable tax treatment. This is the case of life insurance in France but successive increases of the rate of "social contributions" on the nominal income tend to diminish the returns of the investment.

An overview of the main taxation rules applied on a country basis can be found in the following table:

Table GR19. Overview of Main Taxation Rules Applied in the Country Reports

Austria	● **EET regime** – generally, only payments are taxed; o direct commitments, occupational pension funds and group insurance have tax-exempt contributions, tax-exempt capital accumulation, and (income) taxed benefits; o life insurance contributions are subject to insurance tax (4%), investment returns are exempt and payments are taxed ("TET" regime); o premium subsidised products carry a premium based on the contribution, the capital accumulation phase is tax-exempt, and benefits are also tax free if they are converted into an annuity ("TEE" regime).
Belgium	● **EET regime** - only withdrawals/payments are taxed; o Contributions are tax deductible up to prescribed limits; o Employees pay generally 2% solidarity tax and 3.55% INAMI tax on benefits; o Pillar II: Taxation in pay-out phase depending on origin of contribution, local taxes to be added; o Pillar III: Taxation in pay-out phase at the age of 60, local taxes to be added.
Bulgaria	● ***EEE regime**;* *o Annual contributions of up to 10% of annual taxable income is tax free;*
Croatia	● **EET regime** Contributions and investment income are tax-exempt, whereas benefits are taxed. The tax allowance for pensioners is 1.7 times higher than for employees, meaning that pensions are only modestly taxed.
Denmark	● **TTT regime** (combination of ETT and TTE); o Annuities, periodic instalments, and lump-sum pensions under the form of *kapitalpension* are income tax deferred and follow an ETT regime; o Lump-sum pensions under the form of *alderopsparing* are taxed TTE;
Estonia	● **EET regime for taxation**: o Contributions paid towards the pension schemes are tax-exempt. o Returns achieved by respective pension funds are tax-exempt. o Benefits paid out during the retirement are subject to the income tax taxation.

France	● **ETT regime**; o PERP, Prefon, Corem, CRH contributions are income tax deductible; o Contributions to some DC pension plans (PERCO and PERP) are income tax deductible but no deductibility from social levies. No tax deductibility for life insurance contracts; o taxation of employers' contributions to corporate savings plans (PEE and PERCO) and defined contribution plans ("Article 83") increased from 8% to 20%. o the minimum tax rate on life insurance income is now 23% o pay-outs are taxed in the retirement phase (sometimes with tax reductions).
Germany	● **EET regime**, taxation divides retirement savings into three groups: o Statutory pension insurance and the Rürup pension: deferred taxation; contributions up to a deduction cap are exempted from taxation and generally subject to tax in its entirety during the pay-out phase. o Standard pension insurance or life insurance products: contributions to the products come from taxed income; benefits are taxed at the personal income tax rate on the corresponding earnings in the retirement phase o Occupational pensions and the Riester pension: deferred taxation; contributions up to a deduction cap are exempted from taxation and generally subject to tax in its entirety during the pay-out phase.
Italy	● **ETT regime**, contributions are tax deductible up to prescribed limits; o Accruals are taxed at 20% (12.5% on income derived from public bonds) in the capital accumulation phase; o Taxation in the pay-out phase varies from 9-15%.
Latvia	● **EET regime;** o Pillar II – Contributions are personal income tax deductible item and therefore the contributions are not subject to additional personal taxation; Income or profits of the fund are not subject to Latvian corporate income tax at the fund level; a general principle for all investment and savings-based schemes to levy the income taxation on the final beneficiary. o Pillar III – Voluntary private pensions are generally taxed as Pillar II, however there are deduction limits in the contribution phase: payments (contributions) made to funds shall be deducted from the sum amount of annual taxable income, provided that such payments do not exceed 10 % of the person's annual taxable income.
Lithuania	● **EEE regime**; o Employee contributions are tax-deductible even if they are higher than required; for pillar III, there is a tax-refund policy during the contribution phase, which means that the contributions of up to 25% of gross earnings, the income tax (15%) is returned;
Poland	● **TEE regime** for Employees Pension Programs (PPE) and Individual Retirement Accounts (IKE); **EET** for Individual Retirement Savings Accounts (IKZE); o benefits are taxed with a reduced flat-rate income tax (10%)
Romania	● **EET regime** applies for both mandatory and voluntary pensions; o for funded pensions (Pillar II), pension benefits paid out during retirement will be subject to a personal income tax (10% tax rate) above a certain level (€460 in 2018); the social security contributions have been removed as of 2018 and are supported completely from the consolidated state budget.

	o for voluntary private pensions (Pillar III), contributions are tax deductible up to a deduction limit, investment income is tax exempted, and benefits are subject to the personal income tax.
Slovakia	● Funded pensions are usually not taxed (EEE regime); ● Supplementary pensions follow the EET regime with several exceptions and specifications.
Spain	● EET regime, contributions are tax deductible up to prescribed limits; ● No taxation in the capital accumulation phase; ● Pay-outs are taxed differently depending on whether they take the form of an annuity or the form of a lump sum payment.
Sweden	● **EET regime** for public pensions; **ETT regime** for private pensions; o Employers can partially deduct contributions to the second pillar; returns are subject to an annual standard rate tax based on the value of the account and the government-borrowing rate o Investment return is subject to tax rate on standard earnings at 15%; o in Pillar III, until 2016 there was a tax deduction of SEK 1,800 per year available; returns are subject to an annual standard rate tax based on the value of the account and the government-borrowing rate
Netherlands	● EET regime; ● Contributions paid into pension funds are tax deductible; ● Taxation is applied in the pay-out phase at the personal income tax rate.
UK	● *EET regime;* ● *Allowances and tax relief on contributions with test against lifetime allowance* ● *Pay-outs are taxed as income, there are three marginal rates in the UK at the moment.*

Source: BETTER FINANCE own composition

VI. RETURNS OVERVIEW

The BETTER FINANCE report now reaches 22 years (or maximum available, but shorter periods) of performance disclosure for retirement provision products for which the expert contributors could obtain data in our analysis. Unfortunately, over the long run, real returns were on average quite low and below those of capital markets (equities and bonds). In the context of negative interest rates and decreasing yields on capital markets, the pensions outlook looks grim.

One has to keep in mind that the diversity of the European pension landscape and the lack of available data complicate the drawing of straightforward conclusions. Although the aim of comparability would be to present all results in a harmonised manner (either Pillar II vs Pillar III or on product categories - investment funds vs insurance products), complete data for all is not reported, neither the maximum periods available, nor are the concepts (Pillars, occupational vs supplementary plans) so common in all EU Member States. Therefore, for ease of reference, the names of the pension vehicles have been used in Graphs 20 (A, B, C, D) and Table 20(E) as presented in each individual country case.

Out of the 15 pension vehicles on which we report performances over at least 22 years (Graph 20(A)):

- only one so far remains on the negative side (-0.49%, French unit-linked life insurances, although slightly improved towards the positive side of the scale);
- the majority (8) reported less than 1.5% real net return per year, equalling to less than 39% pre-tax profits over the past 22 years.

Considering that an EU capital markets-representative benchmark (50% European Equities – 50% European bonds) recorded 85% real ***gross*** profits before taxes (2.83% p.a.), the 2021 data update shows no retirement provision vehicles overperforming this benchmark on the period 1999 – 2021 or 1999-2020. It is important to note, in light of this comparison, that a capital market index return carries no fees but, it could be easily replicated (with a very small tracking error) by a passively managed, index-tracking Exchange Traded Fund, reason for which we maintain that the comparison is still relevant.

On shorter reporting time frames (Graphs 20(B) and (C)) performances were much higher, but this is also due to the fact that some products did not pass through the same crises or economic cycles as the long-term ones (Graph 20(A)) did.

Note: The Bulgarian country case could not be updated due to data unavailability at the moment of publication. As soon as the necessary data will be made available, the expert contributors will update the case.

In general, we could observe significant performance differences in each country case either between pillars or between types of pension vehicles:

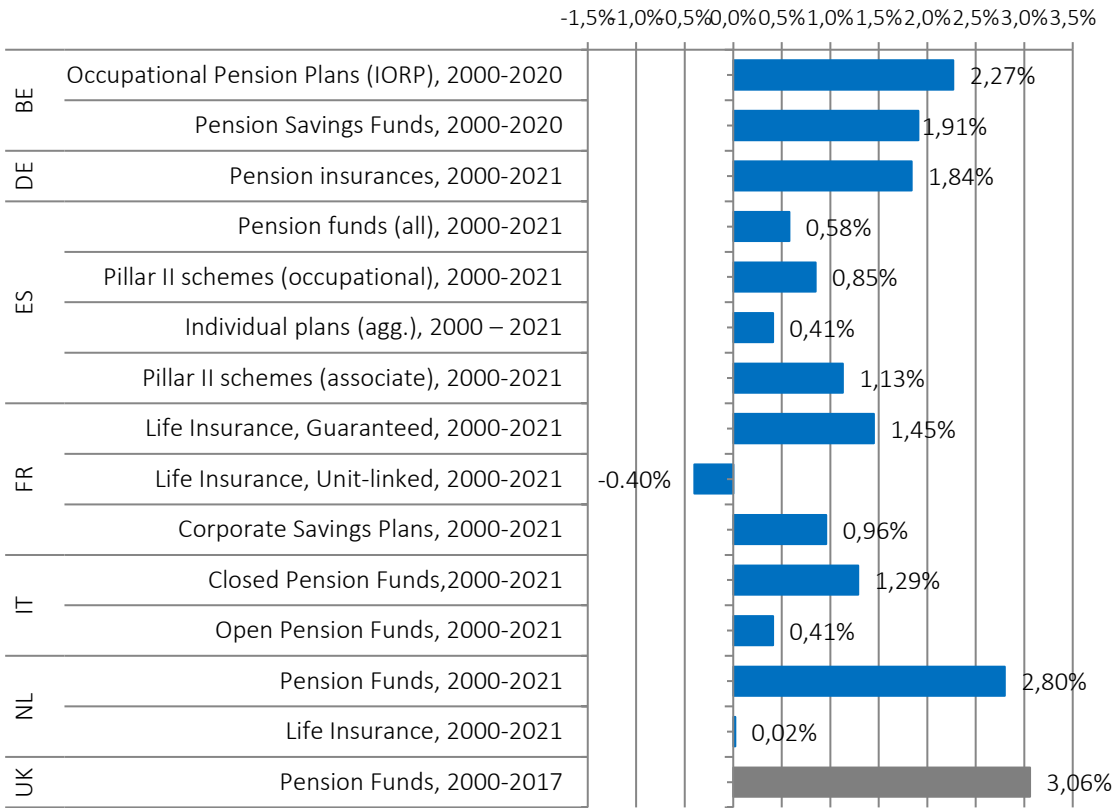
- in Romania, Pillar II mandatory pension funds massively overperformed Pillar III pensions; however, it is important to note that voluntary (Pillar III) funds were launched in September 2007, whereas occupational (Pillar II) funds in May 2008;
- in Austria, pension insurances overperformed pension funds by almost 13 percentage points;
- in Italy, both PIP-products have turned positive: PIP with profits had positive returns over the past 14 years (2.54%) unit-linked PIP recorded an average gain of 1.06%; and
- in France, where capital guaranteed insurance products gained 1.45% p.a. and unit-linked insurance lost -0.49% p.a., which is still a considerable improvement compared to last year's report.

These poor or even negative real returns have led public authorities in some Member States to take measures in order to ensure transparency and cap the fees charged by certain pension providers (in countries such as the UK, Romania and Latvia). The issue is crucial, especially in countries like the United Kingdom where the standard of living of retirees is heavily dependent on pre-funded pension schemes. The following tables detail the long-term real returns of the main long-term and pension saving product categories in the 17 European countries analysed. The categorisation in Graphs GR20(A), (B), (C) and (D) is by the starting reporting year available in this report.

Italy and the United Kingdom are two opposite examples of policy options chosen by governments to tackle the imbalances of pension systems. In Italy, an ambitious reform was implemented (as of 2011) by Minister Elsa Fornero under the Monti government in order to secure the public PAYG system, despite very unfavourable demographic trends. As such, the poor returns of the personal pension plans will have a limited impact on the replacement rates of retirees' income, the downside being the heavier reliance on the public pension scheme.

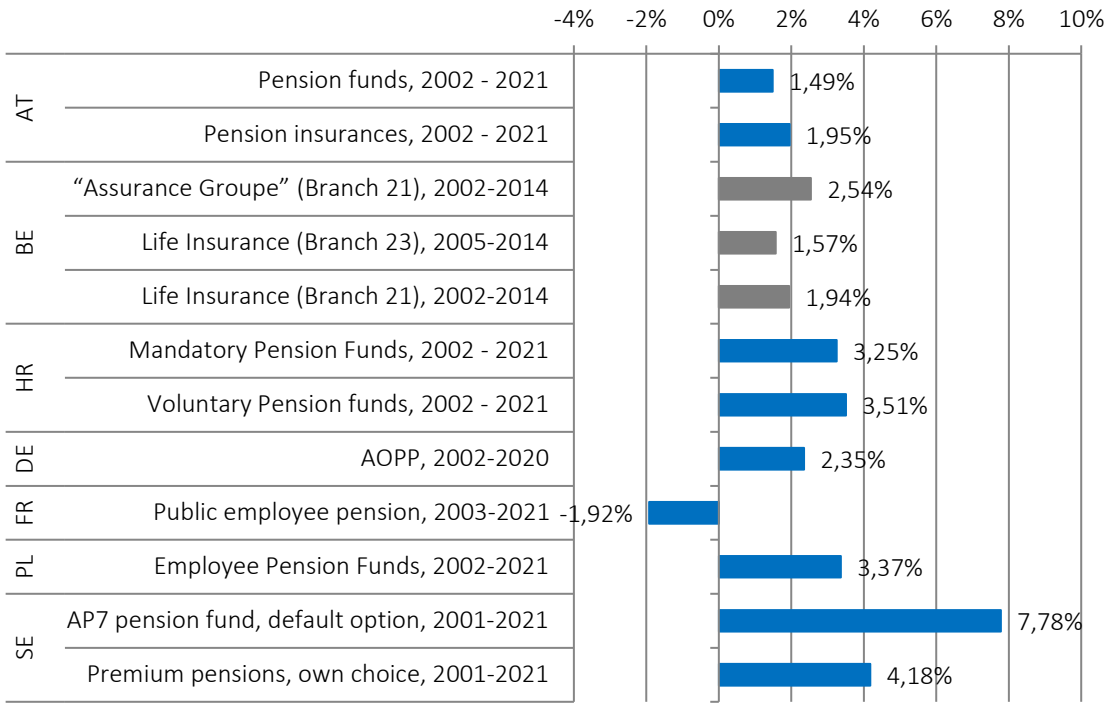
By contrast, pensions in the UK are more heavily dependent on pre-funded schemes. As such, the total value of pension assets as % of the 2018 GDP reached 105%, which is modest compared to the Netherlands or Denmark, but four times higher than the average (pension fund assets 25% of GDP) in the 18 countries in scope of this Report. The Government has implemented "auto-enrolment" to extend the benefits of pension funds to most employees. There, the excessive charges borne by pension fund members have led public authorities to take measures in order to improve transparency and to limit the fees charged by pension providers.

Graph GR20(A). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - FROM 2000/01



Source: BETTER FINANCE own research and composition

Graph GR20(B). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - FROM 2002



Source: BETTER FINANCE own research and composition

Best-in-class: The Swedish AP7 Såfa

By far the best performing retirement provision vehicle in our report, and in most of the editions we published so far, is the default fund in the Swedish occupational pillar (premium pension). With a cumulative nominal net return of 683% (+9.58% annually) over the past 21 years and real net of 482% (+7.78% annually) over the same period, the AP7 Såfa deserves a special section in our report in an attempt to understand the drivers behind this success story.

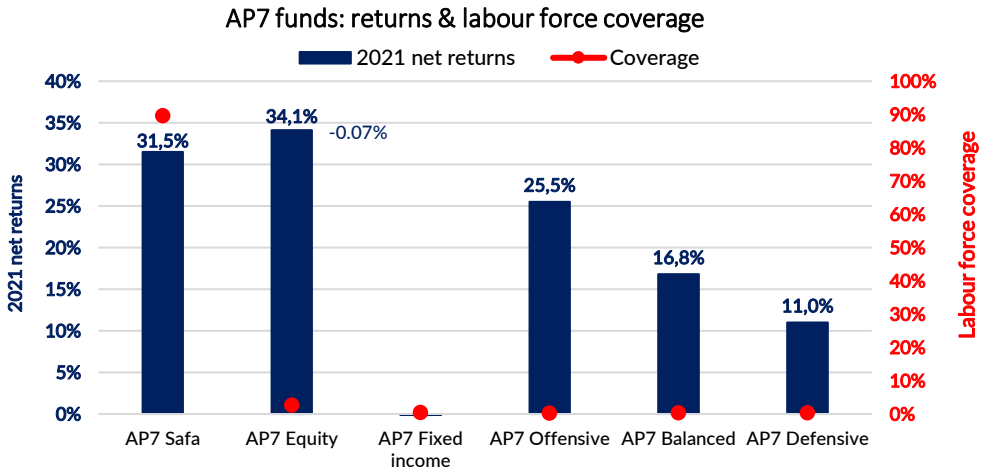
The fund is managed by a public authority (government agency), established in July 1998, with asset management activities starting in September 2000.[39] The ideology at AP7 is very simple: two basic funds are established – the AP7 Equity and the AP7 Fixed Income fund – and on this basis six options are offered:

- active choice allocations, ranging from 100% in the AP7 Equity fund through the AP7 Offensive product (75% AP7 Equity + 25% AP7 Fixed income), the AP7 Balanced (50%-50% between the two funds), the AP7 Defensive (25% equity, 75% bonds), to 100% AP7 Fixed income fund; or
- passive allocation: the AP7 Såfa.

[39] According to the AP7 webpage, available here: https://www.ap7.se/om-oss/.

The seven AP7 funds cover altogether 93.6% of the labour force in Sweden (5,202,184 out of 5,559,530), with the vast majority (89.7%) being automatically assigned to the AP7 Såfa fund. In 2021, the nominal net returns generated by the AP7 were very high, with the exception of the AP7 fixed income fund which was entirely exposed to corporate and sovereign bonds.

The performances, on an annual basis but also cumulatively, very well reflect the asset allocation between the AP7 equity and fixed income funds: the strongest were those exposed most to world equities, decreasing gradually as the risk exposure decreases.

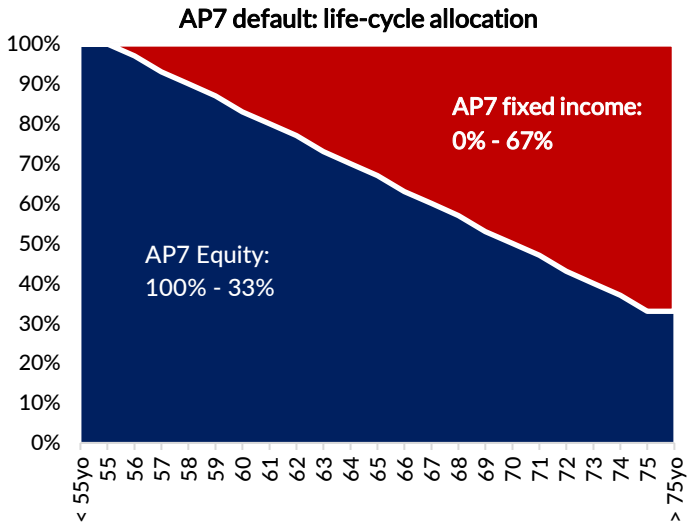


Source: own composition based on the AP7 Annual & Sustainability Report 2021

According to the information sheet of the AP7 Såfa, the product is designed for those savers who do not (want to) or cannot make an active choice between the other AP7 options or the privately managed funds in the premium pension system. Thus, it is designed to accommodate the profile of a general, inactive saver, essentially represented by a combination of all other risk profiles. To do so, the AP7 chose a life-cycle approach, which is suitable for long-term investment horizons.

In essence, a life-cycle approach starts with a high-risk profile and ends with a defensive allocation. Life-cycle funds are analysed in more details in the BETTER FINANCE *Study on the Dispersion of Risk-Mitigation Techniques in Life-Cycle Pensions* (2018).[40]

[40] BETTER FINANCE, *Dispersion of Risk Mitigation Techniques in Life-Cycle Pensions* (2018) https://betterfinance.eu/wp-content/uploads/The_Dispersion_of_Risk_Mitigation_Techniques_in_Life_Cycle_Pensions_-_Final_Report_-_130618.pdf.



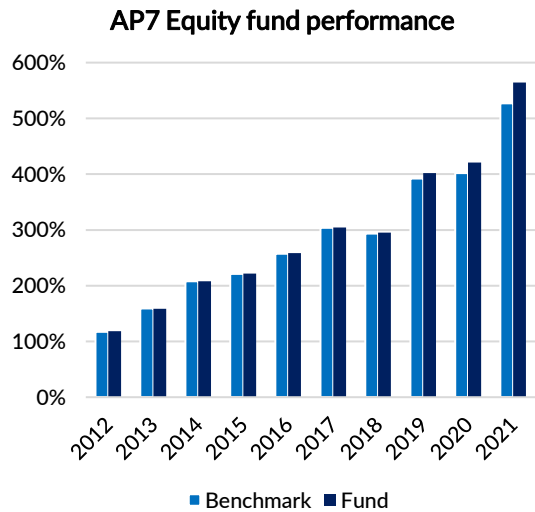
The AP7 Såfa starts with a 100% allocation in the AP7 Equity fund for any saver under the age of 55 and continues as such to that age. After reaching 55 years old, the allocation in the AP7 Såfa decreases constantly – at a rate between 3% and 4% - in favour of the AP7 Fixed Income fund until it reaches 33% - 67% at the age of 75 years old.

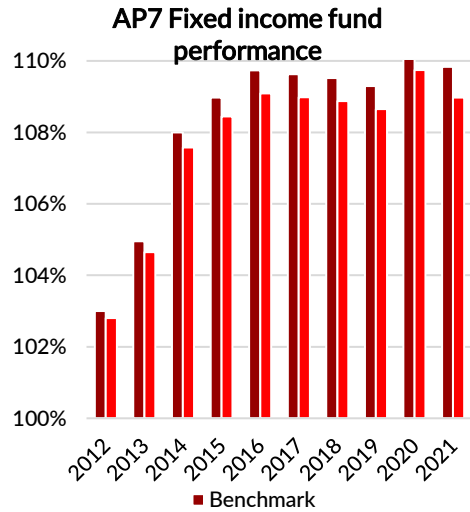
Afterwards, it continues throughout decumulation as such.

Source: Own composition based on the Information sheet of the AP7 Safa fund

Thus, the AP7 Såfa performance is a combination of the returns between the AP7 Equity and AP7 fixed income funds, whose benchmarks are the MSCI All Country World Index fund and a corporate and sovereign bond composite benchmark, respectively.

The performances of these two funds are also outstanding: the equity fund delivered, in **nominal** net terms, only over the last 10 years a cumulative performance of 564% and has **overperformed** its benchmark every year. The fixed income fund delivered much less – due to the low yields of bond indices – but the annual performance was the same or very marginally lesser than that of its benchmark.





Source: AP7 Safa Annual & Sustainability Report 2021

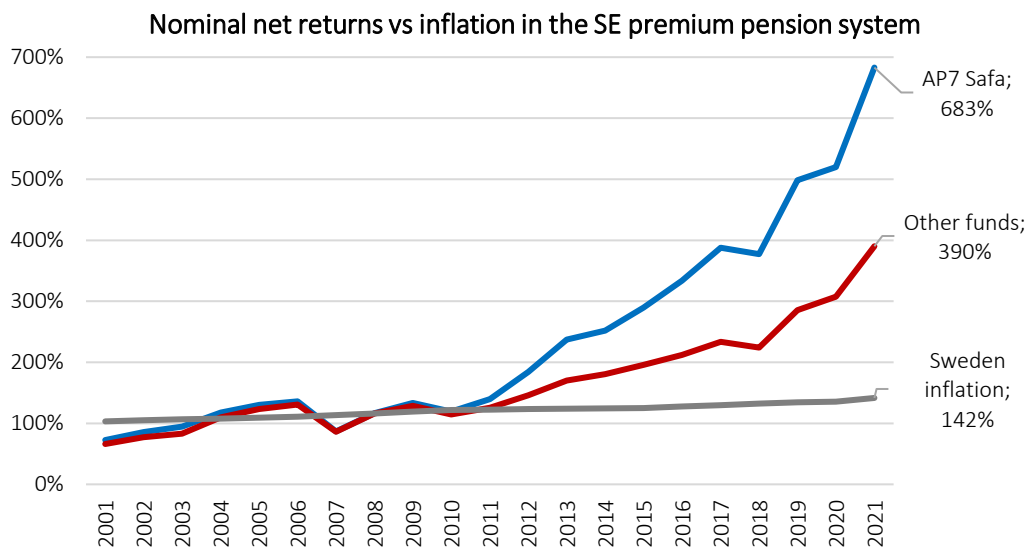
Outstanding is also the stated target for the AP7 Såfa, i.e., to deliver annually at least 2% more in returns that the privately managed funds in the premium pension system. This target, by itself, stimulates strong competition and growth over time.

In fairness, and with reference to the *financial repression* section at the beginning of this report, most occupational and individual pension vehicles in EU Member States have prescribed minimums or maximum asset allocations to ensure the "safety" of the investment strategy. In other words, the bias towards low-yielding securities is strong. For instance, in Romania, mandatory occupational pension funds have limits (as % of the total portfolio) for financial instruments, the most "generous" limit being sovereign fixed income securities. Moreover, there are strict limits on the use of derivatives, whereas the AP7 Equity fund multiplied by 1.25 times its returns through an 19.1% and 20.6% derivative exposure over 2021 and 2020.

When it comes to fees, the Key Investor Information Documents (KIIDs) of the AP7 Såfa, the total ongoing charges range between 0.06% and 0.09% (varying on the allocation between the two AP7 funds) which, in BETTER FINANCE's research, is considerably lower than many index-tracking exchange-traded funds.

In terms of risk, as mentioned above, the average risk class – synthetic risk and return indicator (SRRI) – of the AP7 Såfa starts with 6 – which is considered high risk - and decreases gradually to 3 or 4.

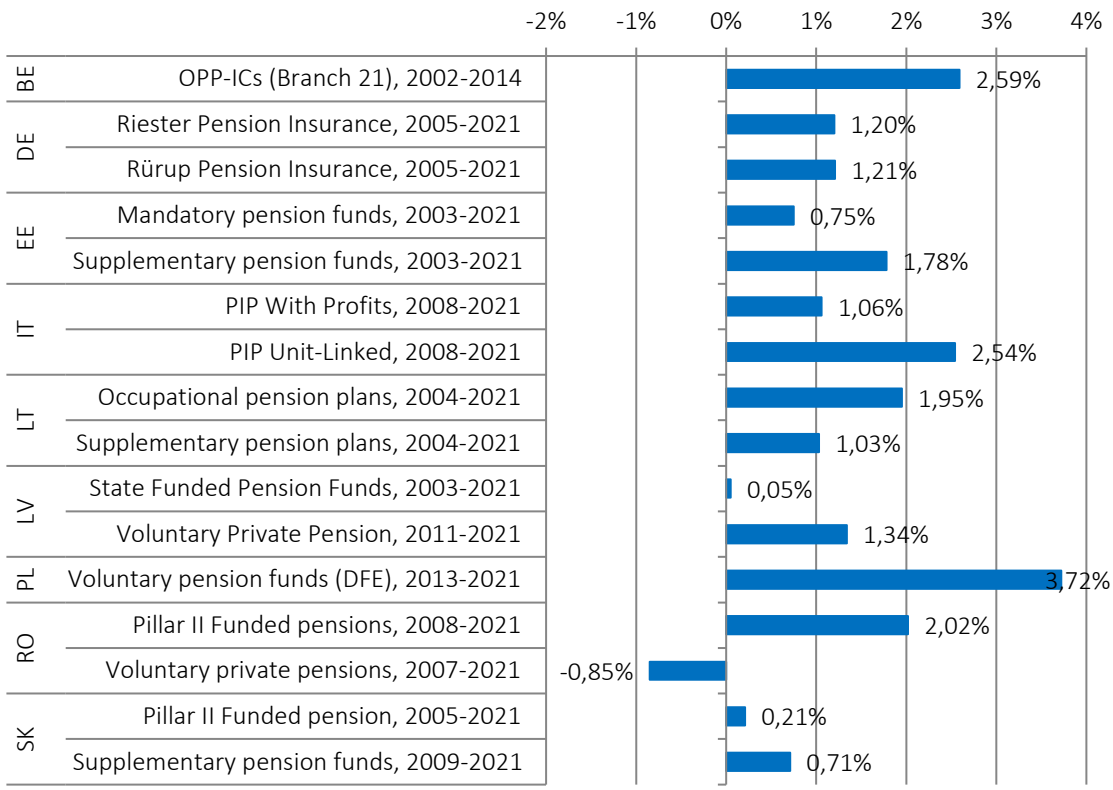
Although analysed in the Swedish chapter, we find it useful to also include below a chart showing the cumulative evolution of the gross nominal, net nominal, and real net returns of the AP7 and the competitors in the privately managed premium pension system in Sweden.



Source: Table SE11 in the Swedish Chapter

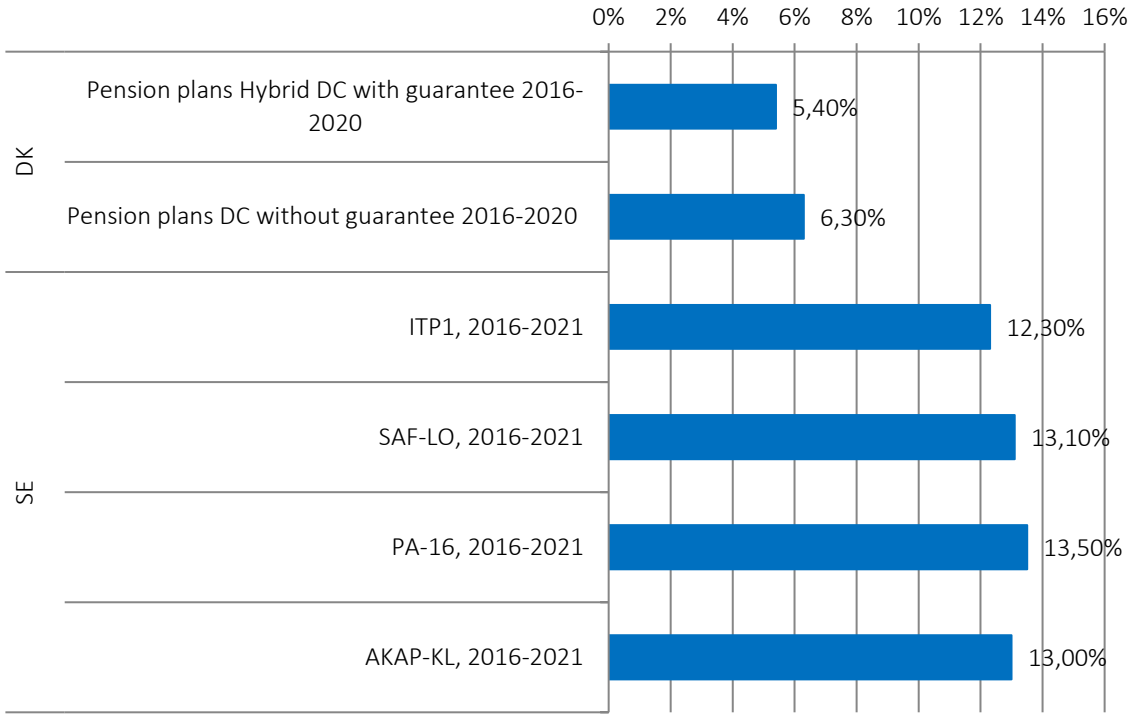
In fairness towards the other funds in the premium pension system, the nominal net and real net returns also exceed expectations: on average, the privately administered funds delivered 6.70% annually (421% cumulatively) and 4.95% (+390%), which is by a wide margin an overperformance in comparison with the other pension vehicles analysed.

Graph GR20(C). ANNUALISED REAL RETURNS OF PENSION SAVINGS - AFTER CHARGES & INFLATION - BEFORE TAX - LATER STARTING DATES



Source: BETTER FINANCE own research and composition

Graph GR20(D). ANNUALISED REAL RETURNS OF PENSION SAVINGS - SPECIFIC CASES



Source: BETTER FINANCE own research and composition

The following table groups the pension vehicles available and reported on by country and presents the average returns on the whole available reporting period.

Table GR20(E). Yearly Real Returns of Private Pension Products	
Austria	Pension funds, 2002- 2021: +1.49%
	Life-insurances, 2002-2021: +1.95%
Belgium	Pension Funds (IORP [1]), 2000-2021: +2.24%
	"Assurance Groupe" (Branch 23), 2002-2014: +2.54%
	Pension Savings Funds, 2000-2021: +1.91%
	Individual contracts (Branch 23), 2005-2014: +1.57%
	OPP-ICs (Branch 21), 2002 – 2014: +1.94%
Croatia	Mandatory Pension Funds, 2002–2019: +3.25%
	Voluntary Pension funds, 2002-2019: +3.51%
Denmark	Pension plans hybrid w/ guarantee 2016-2020: +5.40%
	Pension plans hybrid w/o guarantee 2016-2020: +6.30%
Estonia	Mandatory Pension Funds, 2003-2021: +0.75%
	Supplementary Pension Funds, 2003-2021: +1.78%
France	Life Insurance, Capital guaranteed, 2000-2021: +1.45%
	Life Insurance, Unit-linked, 2000-2021: -0.40%

	Corporate savings plans, 2000-2021: +0.96% Public Employee PS, 2003-2021: -1.92%
Germany	A.O.P.P.[1], 2002-2020: +2.35% Riester Pension Insurance, 2005-2021: +1.20% Rürup Pension Insurance, 2005-2021: +1.21% Pension Insurances, 2000-2021: +1.84%
Italy	Closed Pension Funds, 2000-2021: +1.29% Open Pension Funds, 2000-2021: +0.41% PIP with Profits, 2008-2021: +1.06% PIP Unit-Linked, 2008-2021: +2.54%
Latvia	State Funded Pension Funds, 2003-2021: 0.05% Voluntary Private Pension, 2011-2021: +1.34%
Lithuania	Occupational pensions 2004-2021: +1.95% Supplementary pensions 2004-2021: +1.03%
Poland	Employee Pension Funds, 2002-2021: +3.37% Voluntary Pension Funds, 2013-2021: +3.72%
Romania	Pillar II Funded Pensions, 2008-2021: +2.04% Voluntary Pension Funds, 2007-2021: -1.00%
Slovakia	Pillar II Pension Funds, 2005-2021: +0.21% Supplementary Pension Funds, 2009-2021: +0.71%
Spain	Pension Funds (agg.), 2000-2021: +0.58% Individual plans (agg.), 2000 – 2021: +0.41% Occupational Plans, 2000-2021: +0.85% Associate plans, 2000-2021: +1.13%
Sweden	AP7 fund, default option: 2001-2021: +7.78% Premium pension, other funds: 2001-2021: +4.18%
The Netherlands	Pension Funds, 2000 - 2021: +2.80% Life Insurance, 2000 - 2021: +0.02%
UK	*Pension Funds, 2000-2017: +3.06%*

**After tax*

Source: Own Research, Better Finance Research

Occupational pension funds as per the definition and scope of the EU "Institutions for Occupational Retirement Provision Directive" (IORP); [1] A.O.P.P. stands for Autonomous Occupational Pension Funds.

[1] The returns on private pension products in Denmark cannot be calculated on average since the Danish Supervisory Authority started to report the returns for two categories: hybrid defined-contribution (DC) with guarantee and defined-contribution (DC) with no guarantee. Therefore, averages as of 2016 cannot be calculated.

Pension Savings: The Real Return

2022 Edition

Country Case: Austria

Summarisch

Rund 90% des durchschnittlichen Alterseinkommens in Österreich stammen aus dem öffentlichen Pensionssystem. Damit ist die Altersvorsorge sehr stark auf die erste Säule konzentriert. Die betriebliche Altersvorsorge wird in erster Linie von Pensionskassen und Versicherungsunternehmen getragen. Direktzusagen sind ein alternatives Instrument deren Nutzung seit Jahren stagniert. Die Möglichkeit für beitragsorientierte Pensionspläne in Pensionskassen und über Versicherungen hat die Verbreitung der betrieblichen Altersversorgung in Österreich gestärkt. Während betriebliche Formen der Altersvorsorge im Laufe der Zeit beliebter wurden, dämpften niedrige Zinssätze und die hohe Liquiditätspräferenz die Nachfrage nach individuellen Lebensversicherungsverträgen. In den Jahren 2002 bis 2021 war die Performance der Pensionskassen real und nach Abzug der Verwaltungskosten positiv. Die annualisierte Durchschnittsrendite lag bei 1,5% vor Steuern. Die Lebensversicherungsbranche verfolgt eine deutlich konservativere Anlagepolitik und erzielte eine durchschnittliche reale Nettorendite vor Steuern von 1,9% pro Jahr.

Summary

With around 90% of the average retirement income received from public pension entitlements, the Austrian pension system is very reliant on the first pillar. Occupational pensions are primarily offered through pension funds and insurance companies. Direct commitments are an alternative vehicle, but their usage stagnates. The option for defined contribution (DC) plans with favourable tax treatment offered either by pension funds or insurance companies boosted the prevalence of occupational pensions in Austria. While occupational pensions have become more popular over time, low interest rates and a high liquidity preference dampened demand for individual life insurance contracts. Over the years 2002 through 2021, the performance of pension funds in real net terms has been positive, with an annualised average return of 1.5% before tax. The life insurance industry followed a distinctly more conservative investment policy and achieved an average annual net real return before tax of 1.9%.

Introduction

The Austrian pension system consists of three pillars:

- Pillar I: Mandatory Public Pension Insurance
- Pillar II: Voluntary Occupational Pensions
- Pillar III: Voluntary Individual Pensions

The mandatory public pension insurance covers most of private sector employees (Pillar I). Civil servants have their own pension system which will gradually converge towards the public pension insurance system. The self-employed belong to a separate mandatory system. The public pension system works as a PAYG scheme (Pay-As-You-Go) and was founded in 1945. The system covers 4.2 million people or 97% of the gainfully employed (2021). In 2021, all employees – except civil servants – were subject to a contribution payment of 22.8% of their income before taxes, with contributions shared between the employer (12.55%) and the employee (10.25%). If insured persons continue to work after their 65th birthday, the contribution rates will be halved. Civil servants pay a contribution of 12.55% of their gross wage and the self-employed pay 18.5% of their profit before taxes into the pension system. The Austrian pension system will be fully harmonized across all insured persons by 2050. The public pension system has an income ceiling (maximum contribution basis) up to which contributions apply, income above this level is exempted from contributions but the ceiling also limits the pension benefit level. In 2021 the ceiling was between 5,550 € and 6,475 €, depending on the employment status. About 6% of the gainfully employed achieve an income above these ceilings. The theoretical gross pension replacement rate at the median income level for persons entering the labour market at age 22 corresponds to 74.1% of the average lifetime income while the net pension replacement rate is at 87.1% (OECD, 2021). Both theoretical replacement rates will be reached after 43 years of uninterrupted employment with earnings always at the average income level. Effective replacement rates are likely to be lower because careers are not continuous and life-time income profiles are not flat. Due to pension reforms gradually taking effect, the effective replacement rates are expected to fall for future pensioners. Nevertheless, high replacement rates for many of the gainfully employed limit the demand for occupational as well as private pension plans.

Accompanying a series of public pension reforms between 2003 and 2006 which implemented reductions in the expected benefit level, the Austrian government introduced the premium subsidised pension plan to make private old-age provision more attractive. This scheme became very popular until 2012 with 1.64 million contracts signed but it lost attraction after the government halved the premium subsidy in 2012 (to 4.25% of the premium paid) and after investment yields collapsed during the financial crisis of 2007. By 2021, only 1 million contracts were still active.

Introductory Table – Austrian Pension System overview

Pillar I	Pillar II	Pillar III
Mandatory Public Pension Insurance	Voluntary Occupational Pensions	Voluntary Personal Pensions
Practically all gainfully employed persons are subject to pension contributions of 22.8% of income before taxes	Employers can establish an occupational pension system of their preference	Supplement particularly for high earners
Means tested minimum pension	Direct commitments, pension funds, occupational life insurance. About 50% of employees are entitled	Life insurance with a coverage of about 40% of private households. The state-aided old-age insurance features 1.05 mil. contracts
Pension level depends on lifetime income (various kinds of supplementary insurance months are accounted, cf. motherhood, unemployment, military service		
Mandatory	Voluntary	Voluntary
PAYG	DB or DC	DC
Quick facts		
Statutory retirement age is 60 (women) and 65 (men)		
The average effective age of retirement was 59.9 for women and 61.9 for men (2021, including invalidity pensions and early retirement schemes but excluding rehabilitation benefits)		
At 87.1% the theoretical net replacement rate in 2021 was considerably higher than the OECD average (62.4%).		
The mandatory public pension system covers 4.18 mil. insured persons and pays pensions to 2.47 mil. Beneficiaries	The voluntary occupational pension system covers 1.7 mil. entitled persons and pays pensions to 0.25 mil. beneficiaries[1]	Voluntary personal pension plans cover 3.26 mil. entitled persons and pays pensions to 0.22 mil. beneficiaries
The average pensioneer receives 88% of his retirement income from public pensions	The average pensioneer receives 4% of his retirement income from an occupational pension	The average pensioneer receives 8% of his retirement income from a personal pension
S: BETTER FINANCE own composition.		

The annualised nominal, net and real net rates of returns for the Austrian retirement provision vehicles are summarised in the table below based on different holding periods: 1 year, 3 years, 7 years, 10 years and since inception (2002).

Summary Table Austria. Annualised Performance for Various Holding Periods (in %)

	Holding period	Nominal return before charges, inflation, and tax	Nominal return after charges, before inflation and tax	Real return after charges and inflation before tax
Pension funds	In years	In %		
	1	7.62	7.51	3.71
	3	7.21	7.10	4.91
	5	4.41	4.26	2.15
	7	4.07	3.92	2.03
	10	4.98	4.81	2.92
	Since 2002	3.70	3.47	1.49
Pension insurance				
	1	4.62	4.24	0.44
	3	3.53	3.16	0.96
	5	3.44	3.07	0.95
	7	3.55	3.19	1.29
	10	3.75	3.40	1.50
	Since 2002	4.28	3.91	1.95
S: Compare Tables AT4 and AT5. Annualised performance corresponds to geometric mean over the holding period.				

Occupational and voluntary personal pension vehicles

Private pensions are divided into voluntary occupational and voluntary personal pensions. About 6.5% of today's retirees receive regular benefits from an occupational or personal pension. This figure is made up by 4% of retirees receiving benefits from an occupational pension and 2.5% of retirees receiving annuities from a personal pension plan (Pekanov - Url, 2017). Given today's numbers of active plan members these shares can be expected to increase substantially over time.

Occupational pension vehicles (Pillar II)

At the beginning of 2003, the system of severance payments has been replaced by mandatory contributions towards occupational severance and retirement funds (Betriebliche Vorsorgekassen). While the old severance payment regulations continue to apply to existing employment relations, employment contracts established after the end of 2002 feature mandatory contributions of 1.53% of gross wages to these funds. The main characteristics of severance payments have been transferred to the new system, i.e., in case of dismissal the fund will pay out the accumulated amount. Beneficiaries, however, may voluntarily opt to use this instrument as a tax-preferred vehicle for old-age provision. Less than one percent of the beneficiaries use this option. We therefore do not count occupational severance and retirement funds as pension vehicles in the following.

Voluntary Occupational Pensions (Pillar III)

Occupational pension plans are typically provided on a voluntary basis by firms, only a few collective bargaining agreements include an obligation for member firms of the respective sector. Employers can also choose the coverage and the vehicle of their pension plan. There are three types of occupational retirement schemes:

- direct commitments funded by book reserves,
- pension funds and
- several types of life insurance schemes.

Each of these schemes has advantages and drawbacks. While direct commitments create a stronger link between employees and the firm, the future pension payments are subject to bankruptcy risk and, during the accumulation phase, the firm must either manage the assets backing the book reserves or seek some sort of reinsurance. External vehicles like pension funds or life insurance contracts imply less bonding because the vesting period is much shorter, but they also outsource the effort of investment choice and annuity payments to a financial intermediary. The design of a voluntary pension plan is at the full discretion of the employer, but usually an arrangement with the firm's workers council is necessary.

Over the last decades many firms switched from direct commitment schemes to pension funds. On the one hand, this was a strategy to reduce the cost of existing defined benefit pension schemes by switching to defined contribution plans, and on the other hand, these efforts shortened balanced sheets and cleaned them from items unknown to international investors.

Direct commitments ("Direktzusage")

Direct commitments are pension promises by the employer to the employee that are administrated within a firm. These types of arrangements dominated until the 1980s, when several large bankruptcies or near bankruptcies revealed their fragility. The main two characteristics of this arrangement are direct administration of the pension obligation within the firm and a defined benefit type of the pension plan: the pension level is related to the wage level of employees. The plan administration comprises the computation of individual pension obligations and the respective book reserves, their coverage by invested assets, as well as the annuity payment. Nevertheless, many activities can be outsourced to actuaries, investment funds, and insurance companies. Pension claims based on direct commitments are not subject to any reinsurance requirement, but the reserve funds dedicated to back book reserves are protected from creditors. Besides outsourcing, the Insolvenz-Entgelt-Fonds provides a further safeguard for entitled employees and pensioners to bankruptcy risk. This fund is a public fund covering wage entitlements by employees in case of bankruptcy. Currently, the Insolvenz-Entgelt-Fonds covers a maximum of 2 years of benefit payments or accrued entitlements (Insolvenz-Entgeltsicherungsgesetz § 3d). Due to their voluntary

character and a lack of supervision the incidence of direct commitments is hardly documented.

Pensions funds ("Pensionskassen")

Pension funds are specialised financial intermediaries providing only services related to occupational pensions, i.e., they collect contributions, manage individual accounts, invest the accumulated capital, and they pay out an annuity to beneficiaries. Pension funds were introduced in 1990 with the Occupational Pension Law and the Pension Fund Law (Betriebspensions- und Pensionskassengesetz) which established a general legal basis for occupational pension schemes including pension funds. These laws facilitated the outsourcing of asset management and accounts administration from direct commitment systems into pension funds. This made individual pension entitlements transferable between companies, it made possible additional contributions by employees, but it also enabled firms to switch from defined benefit to defined contribution pension plans. By now, most pension plans are of the defined contribution type and beneficiaries are directly exposed to investment risk as well as to changes in mortality risk. For example, plan members whose entitlement was converted from a direct commitment into an entitlement vis-a-vis a pension fund still suffer from investment losses shortly after transferring the assets into pension funds around the year 2000 because the imputed interest rates used at that time were overly optimistic (Url, 2003B).

Pension funds may be either multi-employer pension funds, i. e. they are open to other firms, or alternatively, they may be firm specific pension funds (single-employer pension funds) administrating the pension plan for a single firm or a holding group. Over the last couple of years, many firm specific pension funds have been merged into multi-employer pension funds building independent risk and investment pools like UCITS. Pension funds are subject to supervision by the Austrian Financial Market Authority, and they feature investment advisory boards, where representatives of workers and employers can advance their opinion on the investment strategy. Nevertheless, the results from asset-liability management strategies dominate the portfolio choice of pension funds.

Pension funds offer primarily annuities because lump-sum payments are restricted to accounts with very small, accumulated assets. Pension funds have to offer accounts with guaranteed long-term yields on investment linked to the market yield of Austrian government bonds, although this option lost attractiveness due to the high costs of guarantees and a substantial weakening of the guaranteed type. The guarantee is backed by the own capital of the pension fund and by a minimum return reserve fund financed by contributions from beneficiaries (Mindestertragsrücklage). In case of bankruptcy of the pension fund, all entitlements are protected by separate ownership of the assets associated to each account (Deckungsstock).

Direct insurance

Firms can alternatively sign a contract with a life insurance company. This contract is either subject to the regulation covering occupational pensions (Betriebliche Kollektivversicherung) or it is designed as a life insurance policy and is subject to the regulation for life insurance products. Insurance companies also underwrite risks embedded in direct commitments. Direct insurance of occupational pension plans implies that the sponsoring firm will pay contributions into a life insurance contract with employees as beneficiaries. In this case, the firm outsources the management of personal accounts and assets, as well as the annuity payments to an insurance company.

The number of working and retired persons holding a life insurance policy is almost double the number of members in occupational pension plans. Despite high public pension levels and the voluntary character of occupational pensions, their use is comparatively widespread in Austria. There are two reasons for this: (1) the public sector offers an occupational pension scheme, and (2) occupational life insurance policies benefit from a tax loophole. Contributions up to € 300 annually (§ 3/1/15 EStG) are tax exempt and as a result around 635,000 contracts have been signed until 2021. Given the small pension wealth accumulated in these accounts one cannot expect reasonable annuity payments resulting from this vehicle.

The Betriebliche Kollektivversicherung, on the other hand, provides occupational pensions with a favourable tax treatment up to 10% of individual gross wages. It is regulated according to the Occupational Pension Law, but this vehicle allows for more substantial long-term guarantees usually offered by classic life insurance contracts. Insurers also freeze mortality tables at the date of joining the pension plan.

Table AT1. Entitlements to active occupational pensions (in million persons)

	Direct commitments	Pension funds	Life insurance	Total
2001	-	0.32	0.12	-
2002	0.13	0.34	0.12	0.59
2003	-	0.37	0.22	-
2004	0.14	0.4	0.29	0.82
2005	-	0.43	-0.5	-
2006	-	0.48	0.33	-
2007	0.13	0.49	0.38	1.00
2008	-	0.51	0.4	-
2009	-	0.74	0.41	-
2010	0.14	0.76	0.44	1.34
2011	-	0.79	0.5	-
2012	-	0.82	0.55	-
2013	-	0.84	0.62	-
2014	-	0.86	0.71	-
2015	0.14	0.88	0.78	1.80
2016	-	0.90	0.74	-
2017	-	0.92	0.75	-
2018	-	0.95	0.76	-
2019	-	0.98	0.78	-
2020	-	1.00	0.78	-
2021	-	1.01	0.77	-

S: Fachverband der Pensionskassen, Austrian Insurance Association, Url (2003A), Url(2009), Url(2012), Pekanov - Url (2017). - Includes working and retired beneficiaries.

Life insurance and pension insurance contracts

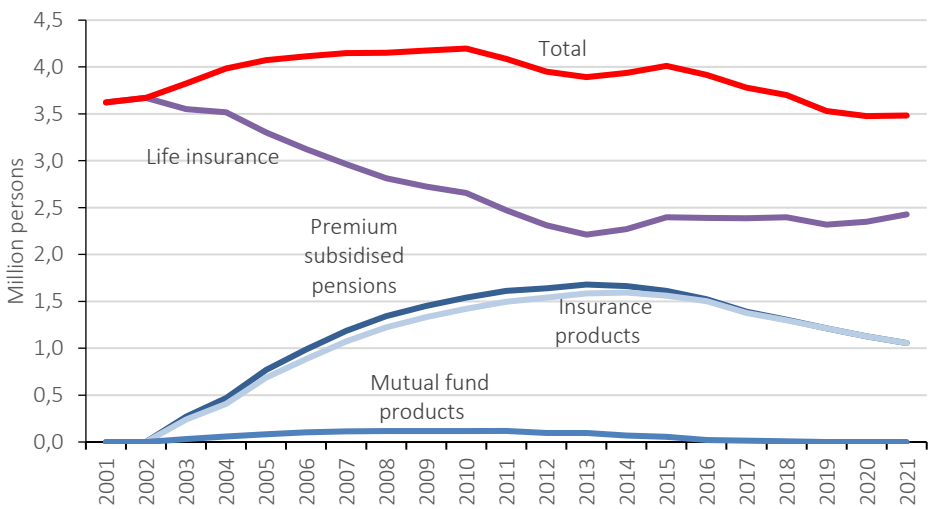
Life insurance policies are signed by private persons who pay contributions over an agreed period into their own pension account. The insurance company administrates the account and manages the accumulated assets. At the end of the contribution period, either a lump-sum amount is paid out to the insured person or alternatively the insurer converts the accumulated capital into an annuity.

There are two types of insurance contracts available which can be distinguished according to who is the bearer of investment risks. Insured persons with a unit-linked policy assume the investment risk and must choose their investment portfolio. Classic life insurance products, on the other hand, offer a minimum return guarantee but investment decisions are delegated to the insurance company. The maximum possible guaranteed rate of return is regulated by the Austrian supervisory authority; currently this rate is fixed at 0.5% per annum (since 1.1.2017; BGBl. II Nr. 266/2016). For contracts signed after 30 June 2022 the maximum guaranteed rate of return will be lowered to 0%. Investment returns in excess of the guaranteed level are distributed across insured persons as variable profit participation.

The major public pension reforms between 2003 and 2006 left many private employees, employers, and civil servants with a lower expected public pension payment. As a

compensation the Austrian government introduced the premium subsidised pension plan (Prämienbegünstigte Zukunftsvorsorge). Originally the premium was fixed at 9.5% of the annual contribution, but in 2012, fiscal consolidation measures resulted in a halving of the subsidy rate; it is currently fixed at 4.25%. Additionally, the yield on investment is fully tax exempt. Premium subsidised pension plans have a minimum contract length of 10 years. Currently, about half of the contracts feature a length of more than 30 years and more than two thirds of the contracts have a minimum duration of 20 years. The portfolio choice for the assets of subsidised pension plans is restricted by law. A minimum share of the assets must be held in equities noted on underdeveloped stock exchanges. This measure was targeted to foster the Vienna stock exchange, but it resulted in highly concentrated investment risk. The strict regulation of investments has been weakened over the past years allowing for example life cycle portfolios with a reduction in the equity exposure when the retirement of entitled persons comes closer.

Chart AT1. Entitlements to active personal pensions



S: Austrian Insurance Association (AIA), WIFO. - Includes contributing and retired policy holders. The AIA adjusted its definitions of insurance products from 2020 onwards. This required a new approach to estimate the number of entitlements to active personal pension plans. Consequently, the numbers deviate from previous publications.

The halving of the subsidy premium and considerably negative returns on stock exchanges during the year 2008 reduced the interest in this new pension saving vehicle. The number of contracts is falling and contracts with the shortest possible duration of ten years have been mostly terminated with a lump-sum payment. This triggers an exit from the annuity phase with a mandatory repayment of the subsidy.

Charges

Information on all types of charges for occupational and private pension products are hard to obtain. Within direct commitment systems, pensions are of the defined benefit type and firms cover all expenses. The remaining vehicles for occupational pensions are subject to some degree of competition between financial intermediaries, although most pension funds are owned by alliances of banks and insurance companies. Because occupational pension plans are always group products, i.e., the individual entitled person has only limited or even no choice during the savings and annuity phases, these products have a cost advantage over individual pension plans. Large firms also receive quantity discounts or customised tariffs with lower administrative charges. In Table AT2 administrative charges and investment expenses for pension funds are expressed as a percentage of the funds' total invested assets. There are no data published on acquisition costs. For the year 2019, a substantial reduction in charges has been recorded by the OECD.

Table AT2. Operating expenses as % of total assets for pension funds

	Administrative charges	Investment expenses
2003	0.23	0.18
2004	0.23	0.12
2005	0.38	0.14
2006	0.39	0.15
2007	0.26	0.16
2008	0.32	0.16
2009	0.35	0.17
2010	0.28	0.17
2011	-	-
2012	-	-
2013	0.30	0.16
2014	0.00	0.17
2015	0.18	0.18
2016	0.19	0.18
2017	0.19	0.18
2018	0.20	0.19
2019	0.11	0.12
2020	0.12	0.11
S: OECD Pension indicators.		

Table AT3. Life Insurance expense ratios

	Acquisition charges	Administrative charges
	In % of total premiums	In % of mean capital investments
2005	11.28	0.43
2006	11.49	0.38
2007	11.10	0.38
2008	10.66	0.38
2009	9.97	0.37
2010	10.75	0.36
2011	11.01	0.39
2012	11.68	0.33
2013	11.37	0.32
2014	10.67	0.33
2015	10.80	0.33
2016	11.49	0.35
2017	10.44	0.36
2018	10.27	0.37
2019	10.57	0.37
2020	10.85	0.38
S: Financial Market Authority, Austrian Insurance Association.		

The costs of acquisition and administration for life insurance products are published by the Financial Market Authority. Acquisition costs amount to roughly one tenth of total premium income. Since 1 January 2007 the Insurance Contract Law includes a provision that acquisition fees have to be distributed over at least the first five years of the contract length. Before 2017 it was possible to charge the full acquisition fee in the first year, making the cancellation of a life insurance contract extremely costly. Administration costs are presented as a ratio to the mean of the invested assets.

Since 1 January 2017, every consumer receives a short product information (Key Information Document) before signing an insurance contract. These information sheets are standardised and contain details of individual charges and investment fees allowing a better comparison of offers.

Taxation

The taxation of old-age provision varies over different vehicles and depends mainly on the history associated to the vehicle. For example, the taxation of occupational pensions is very much oriented towards the treatment of direct commitments, which were the first vehicle used for occupational pensions. Direct commitments work like a deferred compensation and therefore they are only taxed in the year of the payment. This corresponds to a system with tax-exempt contributions, tax-exempt capital accumulation, and (income) taxed benefits (EET system). This philosophy carries over to contributions paid by the employer into a pension fund or a group insurance product following the pension fund regulation (Betriebliche Kollektivversicherung). Contributions to pension funds and group insurance products (Betriebliche Kollektivversicherung) are subject to a reduced insurance tax of 2.5%.

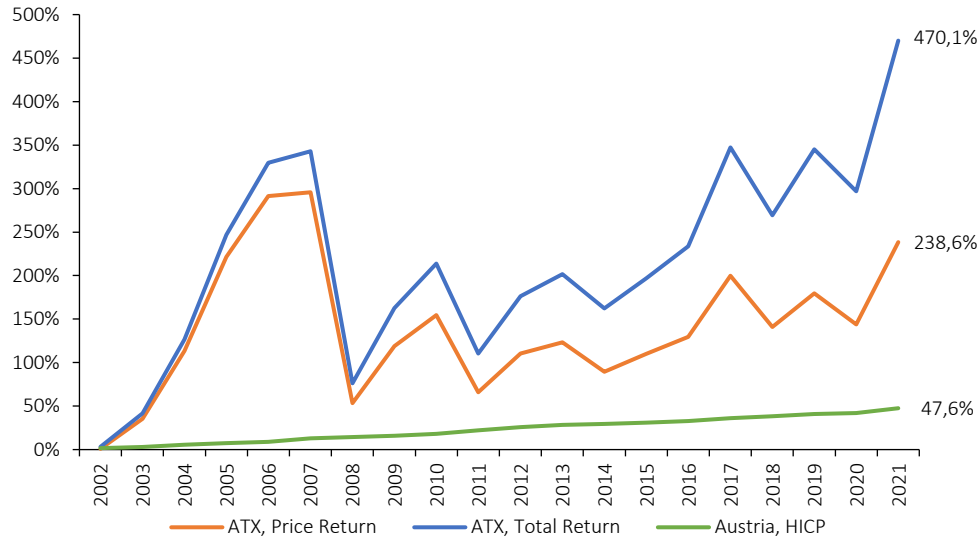
Contributions by employees are fully taxed but the resulting annuity is subject to reduced income taxation.

Contributions to classic life insurance products are not tax deductible and are subject to an insurance tax of 4%. During the capital accumulation phase all investment returns are tax exempt, and the taxation of benefits depends on the pay-out mode. Lump-sum payments are tax-free while annuities are subject to (reduced) income taxation. Additionally, premium subsidised products carry a premium based on the contribution, the capital accumulation phase is tax-exempt, and benefits are also tax free if they are converted into an annuity. Pekanov – Url (2017) provide a survey of the tax treatment of all vehicles for old-age provision using the present value approach as suggested by the OECD (2015, 2016). This approach compares the tax treatment of each vehicle to the tax treatment of a standard savings account. Expressed as a ratio to the present value of contributions, the tax advantage of employer payments into pension funds amount to 20%, i.e., the value of the tax subsidy corresponds to one fifth of life-time contributions. The lowest tax advantage results for life insurance products with an annuity payment. In this case, the tax subsidy makes up for 7% of life-time contributions. The maximum tax preference is associated with occupational life insurance policies subject to § 3/1/15 EStG. In this case, the subsidy amounts to 60% of life-time contributions, however, payments into this vehicle are restricted to a negligible € 300 per year.

Austrian Capital market returns

The performance of the Vienna stock exchange is shown in Chart AT2, where we distinguish between the price development of shares and the total return to equity investments in Austria including reinvested dividend payments. It is not surprising to observe that both indices have a positive long-term real return and are well above the cumulated inflation rate in 2021. Because the Austrian equity market is small, financial intermediaries spread their equity investment throughout Europe and the rest of the world. Therefore, equity returns of the Vienna stock exchange provide no guidance for the investment performance of Austrian pension products, except premium subsidised pension plans carrying an obligation to invest in under-developed equity markets.

Chart AT2. Cumulated Austrian Equity Market Performance, 2002-2021



S: Macrobond, Statistik Austria. Year-end values.

Pension Returns

Due to the defined benefit character of pensions derived from direct commitments and because accumulated assets for direct commitments have the narrow purpose of protecting individual pension claims in case of a firm bankruptcy, we do not compute pension returns for this vehicle. Furthermore, the asset class in which firms can invest are restricted to government bonds issued by OECD member countries.

The way of taxing contributions, investment returns, and pension payments varies according to the vehicle chosen, the party paying the contribution, i. e. employers or employees, and the personal income tax break of the retiree (cf. chapter on taxation). For this reason, we cannot compute a general after-tax return for Austria. Instead, we present the:

- nominal returns before charges, inflation, and tax,
- nominal returns after charges but before inflation and tax
- real returns after charges and inflation but before tax

for the two most important vehicles, i.e., pension funds and classic life insurance policies. The returns on classic life insurance policies are also representative for occupational pension plans using life insurance products under the occupational pension law (Betriebliche Kollektivversicherung).

Pension funds

Table AT4 shows the returns on assets held by pension funds. In the case of a defined benefit pension plan, investment returns are important for the sponsoring firm because if the return falls short of the imputed interest rate used for the computation of the expected pension level, the firm will have to provide additional contributions covering the shortfall. On the other hand, if a defined contribution pension plan has been established, the beneficiaries bear the risk of a shortfall in the realised return on investment, and consequently the realised pension level falls below its expected value.

Information on the performance of pension funds is published continuously by an independent third party, the Oesterreichische Kontrollbank[41], following a standardised procedure. The returns are available for all pension funds and separately for multi- and single-employer pension funds. The long-term performance of firm specific pension funds is about 0.5 percentage points higher as compared to multi-employer pension funds. The difference results probably from a less risk-oriented investment style followed by multi-employer pension funds, due to the wider usage of return guarantees in multi-employer pension funds. Nominal investment returns after charges but before inflation and taxes result from the subtraction of administrative charges of pension funds as presented in the chapter on charges. Real returns are computed by subtracting the HICP-inflation rate for Austria.

The Financial Market Authority publishes the asset allocation of pension funds as of yearend (FMA, 2022). The portfolio in 2021 was for the first time dominated by equity investments (40.6%) with debt securities ranking second (32.9%). The good performance of equity markets throughout 2021 led to a further reduction in the share of bank balances (6.4%). Real estate investments accounted for 5.9% of assets while the remainder was mixed throughout smaller asset categories (Chart AT3, upper panel). Given the strong exposure to equity, we find several years with negative returns, i.e., investment losses. Specifically, during the years after the bursting of the dotcom bubble (2000), the international financial market crisis (2007), and the public debt crisis in the euro area (2011), but also in 2018, when both bond and equity markets turned downwards. Nevertheless, pension funds achieved between 2002 and 2021 an annual average net real yield on investment of 1.5%. This corresponds to an average excess return over Austrian government bonds of 1.8%.

[41] https://www.oekb.at/kapitalmarkt-services/unser-datenangebot/veranlagungsentwicklung-der-pensionskassen.html.

Table AT4. Pension funds' average annual rate of investment returns (in %)

	Nominal return before charges, inflation, and tax	Nominal return after charges, before inflation and tax	Real return after charges and inflation before tax
2002	-6.31	-6.56	-8.26
2003	7.60	7.37	6.07
2004	7.34	7.11	4.61
2005	11.37	10.99	9.39
2006	5.55	5.16	3.56
2007	1.95	1.69	-1.81
2008	-12.93	-13.25	-14.75
2009	9.00	8.65	7.60
2010	6.45	6.17	3.97
2011	-2.96	-3.19	-6.59
2012	8.40	8.17	5.27
2013	5.14	4.84	2.84
2014	7.82	7.82	7.02
2015	2.32	2.14	1.04
2016	4.18	3.99	2.39
2017	6.13	5.94	3.64
2018	-5.14	-5.34	-7.04
2019	11.66	11.56	9.76
2020	2.55	2.44	1.44
2021	7.62	7.51	3.71
Annual	3.70	3.47	1.49

S: Fachverband Pensionskassen, OECD Pension indicators, Statistik Austria. - Charges estimated by mean value for the years 2002, 2011, 2012, and 2021, cf. Table AT2. Annual average corresponds to geometric mean.

Life insurance contracts

The return on investment in the classic life insurance industry is regularly computed by the Austrian Institute of Economic Research (WIFO). This computation excludes unit-linked contracts because the investment risk is borne by the insured and returns are usually retained within mutual funds and reinvested. The calculation of investment returns is based on investment revenues of the insurance industry and the related stock of invested assets in classic life insurance as provided by the Financial Market Authority. The method uses the mean amount of invested capital over the year as the basis for the computation and is documented in Url (1996). The charges used to correct the yield for administrative expenses are based on Table AT3. Real returns result from subtracting the HICP-inflation rate for Austria from the nominal return.

Obviously, nominal gross returns in the insurance industry are less volatile than in the pension fund industry (Table AT5). The main reason for this divergence is the more conservative asset allocation of insurance companies, i.e., they invest more heavily in bonds (42%) and their collective investments of 20% of the portfolio are also concentrated in bonds-oriented investment funds, creating a high exposure to fixed interest securities (FMA, 2022). Another important asset class in the insurance industry are shareholdings in related undertakings (22%), which are usually not listed at a stock exchange. Property investments sum up to 8% of

the assets, while equity holdings form just 1% of the portfolio (Chart AT3, lower panel). This gives insurance companies small exposure to volatile asset categories and consequently their investment performance is steadier. Nevertheless, 2021 turned out a nominal return not seen throughout last decade. The resulting average net real rate of return of 1.9% was thus mainly due to the avoidance of losses after the year 2000. The insurance industry achieved an average excess return over Austrian government bonds (benchmark) of 2.4% over this period, and their investment return was above the one delivered by pension funds.

The particular way of distributing investment returns in classic insurance policies makes their performance even more steady. Insurance companies separate their investment income into two parts. The first part serves to cover underwritten minimum return guarantees and it is immediately booked towards the individual account. Any excess return will be distributed over a couple of years through the build-up and reduction of profit reserves. By transferring accumulated profit reserves smoothly into individual accounts, insurance companies make the individual accrual of investments returns less dependent on current capital market developments although asset values are marked to market.

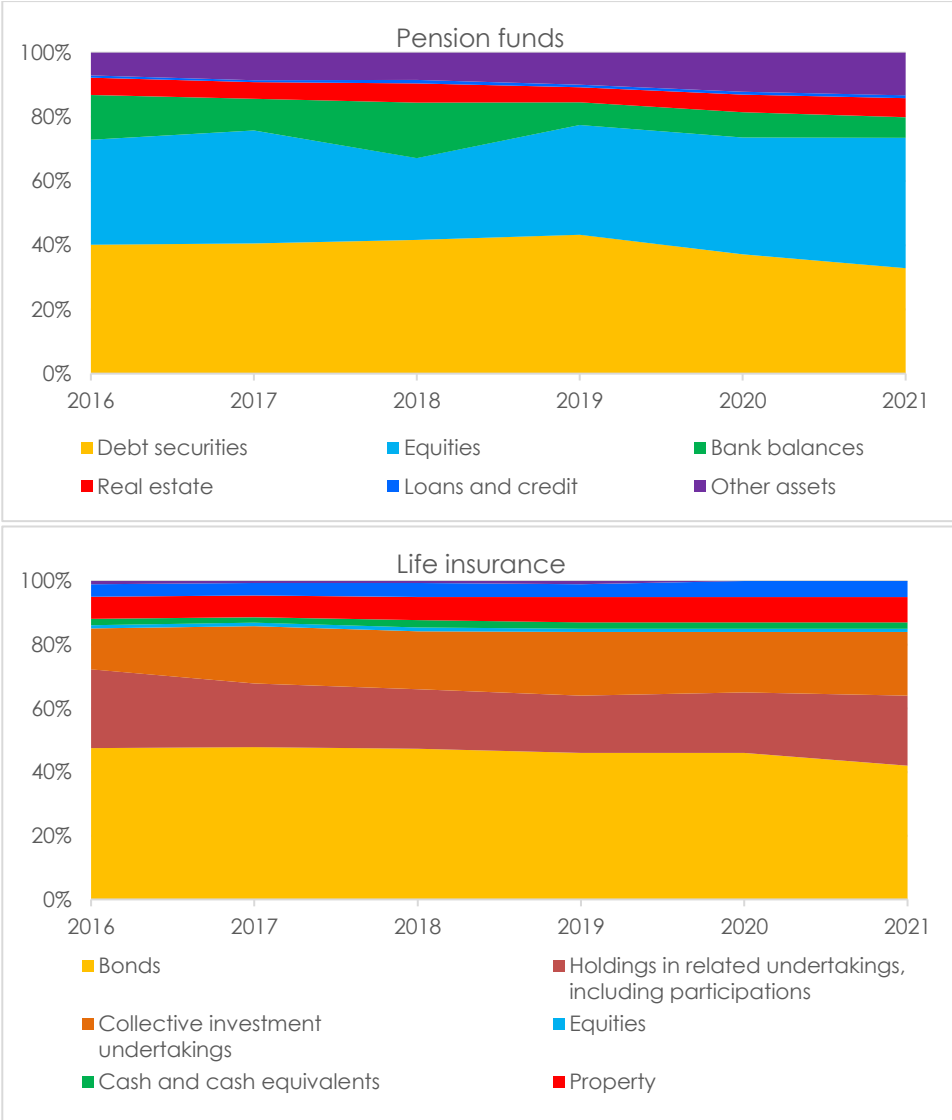
Yields on fixed interest securities from highly rated debtors started to rise in the first half of 2022. This development provides opportunities for insurance companies to reinvest their maturing high-yield securities at more favourable returns, eventually stopping the prolonged decline recorded over the last years. The nominal return for the year 2021 is still based on preliminary numbers published by the financial market authority.

Table AT5. Pension insurances' average annual rate of investment returns (in %)

	Nominal return	Nominal return after	Real return after
2002	3.96	3.60	1.90
2003	5.60	5.24	3.94
2004	5.93	5.57	3.07
2005	6.32	5.88	4.28
2006	5.86	5.48	3.88
2007	5.18	4.80	1.30
2008	3.35	2.97	1.47
2009	3.80	3.43	2.37
2010	4.47	4.11	1.91
2011	3.70	3.31	-0.09
2012	4.42	4.09	1.19
2013	4.31	3.99	1.99
2014	3.90	3.58	2.78
2015	3.94	3.61	2.51
2016	3.73	3.38	1.78
2017	3.49	3.14	0.84
2018	3.10	2.73	1.03
2019	3.34	2.97	1.17
2020	2.65	2.27	1.27
2021	4.62	4.24	0.44
Annual average	4.28	3.91	1.95

S: Financial Market Authority, Statistik Austria. – Annual average corresponds to geometric mean.

Chart AT3. Asset allocation of pension funds and life insurance 2016 to 2021



S: Financial Market Authority.

Conclusions

The performance of pension funds in real terms has been positive over the whole period from 2002-2021, with an annualised average real return of 1.5% after service charges and before taxation. Especially the difficult years after 2000, in 2008, 2011, and recently 2018 dampened the investment performance considerably. The consequences are either additional payments by sponsoring firms (defined benefit plans) or reduced expected and realised pension levels (defined contribution plans). A mediocre investment performance will be more intensively felt

in risk and investment pools with a high imputed interest rate used for the computation of the expected pension level. For example, plan members whose entitlement was transferred from a direct commitment to a pension fund around the year 2000 still suffer from cuts in pensions levels due to investment losses after the dotcom bubble and the use of overly optimistic imputed interest rates.

The average real rate of return on investments by insurance companies benefits from a conservative asset allocation with strong government bonds holdings. This allowed insurers to avoid large losses in years with a financial market crisis and reach an average real rate of return of 1.9% annually after service charges and before taxation. Declining nominal interest rates and higher inflation increased the pressure on net real rates of return after 2015 and particularly in 2021. Insurance companies benefit from the long duration of their investment portfolio, i.e., they still own bonds featuring high interest coupons. With the ECB ending its Asset Purchase Program (APP) and the Pandemic Emergency Purchasing Program (PEPP) in 2022, new investments can be expected to yield higher returns. But high liquidity preferences and inflation rates will depress demand for classic life insurance by individual households. Premium subsidised pension insurance is also in low demand because subsidies were halved in 2012 and investment losses, due to the concentrated investment in small and under-developed markets, affected this vehicle disproportionally.

The opportunity to offer defined contribution plans has certainly boosted the spread of occupational pensions in Austria. Within pension funds around three quarters of the entitlements are now defined contributions plans, while occupational pensions based on insurance contracts are all of the defined contribution type.

The COVID-19 crisis left a significant mark on Austria's economy, and the Ukraine war – together with unexpectedly high inflation rates – substantially dampens consumer confidence. Within this setting the spread of occupational pensions contracts is likely to stagnate in 2022, and private demand for life insurance products will remain low. The surprisingly buoyant labour market situation, on the other hand, and large holdings of cash in bank accounts may induce private households to reshuffle their portfolios towards unit linked products. Firms may consider introducing or extending occupational pension plans to retain existing staff and attract new employees. Losses on all major stock exchanges and sharply rising bond yields throughout the first half of 2022 will impair the financial results of pension funds and life insurers.

Several proposals to promote occupational and individual pensions plans are discussed at the moment. Measures include the option to transfer lump-sum payments from the occupational severance and retirement funds (Betriebliche Vorsorgekassen) into tax favoured annuities provided by pensions funds and occupational life insurance. This so called Generalpensionskassenvertrag would give employees, who are working for firms not offering occuptational pensions plans, the opportunity for second pillar annuities. Furthermore, the implementation of Environmental, Social, and Governance (ESG) criteria as guidelines for asset

allocation also opens the question whether to transform the mandatory capital guarantees in the occupational severance and retirement funds (Betriebliche Vorsorgekassen) into optional guarantees, and to establish minimum investment periods for claims towards the fund. A longer investment horizon would clearly broaden the class of assets available for investments by these funds. An additional vehicle currently suggested for the third pillar are tax favoured accounts for private persons – along the lines given by US-401k schemes – with a longer mandatory holding period. Such accounts may revive the role of the mutual funds industry during the accumulation phase of individual pensions plans.

Note: The addition of the Austrian Country Case was possible also thanks to our partners from Pekabe (the Austrian Association for the Protection of Pension Fund Investors), who reviewed the Country Case and co-funded it with BETTER FINANCE.

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Pension Savings: The Real Return

2022 Edition

Country Case: Belgium

Sommaire

En Belgique, le système de retraite est constitué de trois piliers. Le premier pilier par répartition reste le plus important des trois piliers. Les retraités bénéficient d'un taux de remplacement moyen de 61.9% en 2020. Les piliers 2 et 3 représentent les pensions complémentaires professionnelles et individuelles basées sur les cotisations volontaires des individus. Le nombre d'individus couverts par les véhicules de placements dans ces deux piliers continue de croître rapidement. Respectivement 80% et 68% de la population active est couverte par ces deux piliers. Dans chacun de ces piliers, les véhicules de placements peuvent être soit un fonds géré par une IRP dans le pilier 2 ou une banque dans le pilier 3 ou soit un contrat d'assurance groupe dans le pilier 2 ou un contrat d'assurance vie individuelle dans le pilier 3.

Sur une période de 22 ans (2000-2022), les fonds de pension gérés par les IRP (pilier 2) et les fonds d'épargne retraite (pilier 3) ont eu un rendement réel annuel moyen après charges de 2,27% et 1,9% respectivement. Au sein du pilier 2, tous les fonds à contributions définies gérés par les IRP et tous les contrats d'assurance groupe Branche 21 doivent verser un rendement minimum garanti de 1,75% sur les cotisations des employeurs et des employées. Avec la baisse des rendements des obligations d'Etat à 10 ans, les sociétés d'assurance ont revu à la baisse le rendement minimum garanti offert sur les nouvelles cotisations versées sur les contrats d'assurance groupe Branche 21. Cependant, les sociétés d'assurance continuent de garantir les anciens rendements sur les cotisations passées jusqu'au départ à la retraite. Les provisions passées sont toujours rémunérées avec des rendements garantis oscillant entre 3.25% et 4.75%. En 2018, le rendement garanti moyen était légèrement inférieur à 3%. En raison, du manque d'informations publiques, il est plus difficile de fournir des informations sur les rendements des contrats d'assurance-vie individuels souscrits dans le cadre du pilier 3.

Summary

The Belgian pension system is divided into three pillars. The first PAYG pillar is still important among the three pillar and provides on average a replacement rate of 61.9% in 2020. Pillar II and Pillar III are both based on voluntary contributions. Numbers of individuals covered by pillar II and pillar III pension schemes continue to grow rapidly. Respectively 80% and 68% of the active population is covered by these pillars. In both pillar II and pillar III, pension scheme

can take the form of a pension fund (managed by an IORP in pillar II and by a bank in pillar III) or can be an insurance contract ("Assurance Groupe" contracts in pillar II and individual life-insurance contracts in pillar III).

Over a 22-year period (2000-2022), occupational pension funds managed by IORPs (pillar II) and pension savings funds (pillar III) had annualized real performance after charges of 2.27% and 1.9% respectively. Within the pillar II, all Defined Contributions plans managed either by IORP and "Assurance Groupe "Branch 21 contracts are required to provide an annual minimum guaranteed return of 1.75% on both employee and employer contributions. With the decline in the return on the Belgian 10-year government bonds, insurance companies were forced to decrease the minimum guaranteed return offered to new contributions on "Assurance Groupe" Branch 21 contracts. However, insurance companies continue to guarantee the previous returns on the past contributions until the retirement. Past reserves continue to have guaranteed returns range from 3.25% to 4.75%. In 2018, the average guaranteed return was slightly under 3%. Due to a lack of information, it is more difficult to provide return information on individual life-insurance contracts subscribed in the framework of pillar III.

Introduction

The Belgian pension system is divided into three pillars:

Table BE1.1 Multi-pillar pension system in Belgium		
PILLAR I	**PILLAR II**	**PILLAR III**
State Pension	Funded pension *The Supplementary Pension Law (the Vandenbroucke Law) implemented in 2003*	Voluntary pension
Federal Pension Service (SFP)	IORP and Insurance companies	Banks (pension savings fund) and Insurance companies (pension savings insurance and long-term savings plans)
Mandatory	Voluntary	Voluntary
Publicly managed	Privately managed pension funds and "Assurance Groupe contracts"	Privately managed pension funds and life-insurance contracts
PAYG	Funded	Funded
Earnings-related public scheme with a minimum pension	DB (Defined Benefits scheme) / DC (Defined Contribution scheme) Individual retirement accounts	
	Quick facts	
Number of old-age pensioners (as of 1st January 2021): 2,267,868	IORP: 184 Insurance Companies:27	Pension savings funds: 21 life insurance retirement savings product
Average old-age pension: €1,214€	AuM: €125.5 bn (in 2020)	AuM: €53.29 bn (in 2021)
Average income (gross): €3,758 (in 2019)	Participants: 4. 030 million	Participants: 3.4 million
Men and women's average replacement ratio: 61.9% (2020)	Coverage ratio: 80% of active population is affiliated to a pension product, being active or dormant	Coverage ratio: 68%

First Pillar

The Belgian Pillar I is organised as a Pay-As-You-Go (PAYG) pension system consisting of three regimes: one for employees in the private sector, one for the self-employed individuals and

one for civil servants. The legal retirement age is 65 for both women and men. It used to be 60 for women until 1993 but was progressively increased to reach 65 in 2010. The Act of 10 August 2015 increases the retirement age imposed by law to the age of 66 by 2025 and 67 by 2030. Pillar I pensions are PAYG systems based on career duration and income earned. A complete career equals to 45 working-years. The calculation of the retirement pension depends on the individual's status, his/her career and his/her salary earned throughout his/her career. The amounts can therefore vary greatly from person to person. In 2020, the net replacement rate from the PAYG system for both men and women (with an average working wage) was 61.9%. A guaranteed minimum pension and a maximum pension have been fixed. A retiree with a complete career will receive at least a guaranteed minimum pension of €1,690.01 if he/she lives within a household or € 1,352.44 if he/she lives alone[42].

Second Pillar

Occupational pension plans are private and voluntary. This pillar exists for both employees and self-employed individuals. Employees can subscribe to occupational pension plans provided either by their employer (company pension plans) or by their sector of activity (sector pension plans). Company pension plans are traditionally dominant in the second pillar in comparison to sector pension plans. Self-employed individuals can decide for themselves to take part in supplementary pension plans.

An employer can set up a company pension plan for all its employees, for a group of employees or even for a single employee. In the case of sector pension plans, collective bargaining agreements (CBAs) set up the terms and conditions of pension coverage. Employers must join sector pension plans, unless labour agreements allow them to opt out. Employers who decide to opt out have the obligation to implement another plan providing benefits at least equal to those offered by the sector.

Company and sector pension plans can be considered as "social pension plans" when they offer a clause with solidarity benefits that provides employees with additional coverage for periods of inactivity (e.g., unemployment, maternity leave, illness). "Social pension plans" are becoming less and less prevalent, possibly as a result of the relatively high charges associated with these plans in comparison to pension plans without a solidarity clause.

Occupational pension plans are managed either by an Institution for Occupational Retirement Provision (IORP) or by an insurance company. Insurance companies predominantly manage them.

The Supplementary Pensions Act reform entered into force as of 1 January 2016. It amended the Act of 28 April 2003 by introducing the alignment of the supplementary pension age and the legal pension age (respectively 65, 66 in 2025 and 67 in 2030). Supplementary pension benefits will be paid at the same time as the legal pension's effective start. Previously, some

[42] These amounts apply starting from the 1st of July 2021

occupational pension plans allowed early liquidation: lump sum payments or annuities from supplementary pension could be paid from the age of 60. Conversely, employees who decide to postpone their effective retirement when having reached the legal pension age, have the possibility to claim their supplementary pension or to continue to be affiliated to the pension scheme until their effective retirement.

Moreover, many supplementary pension plans provided financial compensations to offset the income loss employees may encounter when they end prematurely their career. As of January 1st, 2016, all these existing beneficial anticipation measures were abolished. Affiliates who reached the age of 55 years on or before 31 December 2016 can still benefit from these existing measures. On the 1st of January 2021, approximatively 4.030 million Belgians (80% of the active population) were covered by occupational pension plans:

- 3.430 million employees were covered either by their company or by their sector of activity;
- 355,660 self-employed individuals were covered by supplementary pension plans;
- 244,858 individuals were covered both by their company or by their sector of activity and by a supplementary pension plan dedicated to self-employed.[43]

The number of Belgian covers by occupational pension plans increased by 2% between 2020 and 2021.

Third Pillar

The third pillar's purpose is to provide Belgians with individual private and voluntary pension products, which allow them to have tax reliefs from their contributions. There are two types of available products for subscription: pension savings products managed either by asset management companies or by life insurance companies and long-term savings products managed by insurance companies. This pillar is significant in Belgium when compared to other EU member states. The tax rate applied to accrued benefits from pension savings products (funds or insurance) was lowered from 10% to 8% in 2015, in order to encourage savings in the framework of the third pillar.44 The third pillar covered more than two thirds of the active population of Belgium, with 34% of workers subscribing to a life insurance retirement savings product (1.7 million Belgians) and 34% being covered by pension savings funds (1.7 million Belgians).

The real net returns (before taxes) of the main retirement provision vehicles in Belgium are presented in the table below based on 5 recommended holding periods: 1 year (2021), 3

[43] Source: FSMA's publication: Le deuxième pilier de pension en images. Les pensions complémentaires expliquées. Situation au premier janvier 2021.
https://www.fsma.be/sites/default/files/media/files/2021-11/apercusectoriel_2021.pdf
Data presented in this publication were provided by the DB2P who manages the supplementary pensions database. It collects data related to supplementary pension plans such as individualised acquired pension rights of employees, self-employed individuals and civil servants.

[44] The lowering of the tax rate does not apply to long-term savings products.

years (2019-2021), 7 years (2015-2021), 10 years (2012-2021), and since the earliest data available.

Summary Table BE1 – Real net returns of Belgian pension vehicles					
	Pillar II			Pillar III	
	IORP	"Assurance Groupe Branch 21"	Pension savings funds	Life Insurance Branch 21 contracts	Life Insurance Branch 23 contracts
2021	3.07%	na	4.8%	na	na
2019-2021	7.05%	na	6.7%	na	na
2015-2021s	3.48%	na	3.0%	na	na
2012-2021	5.07%	na	4.8%	na	na
Since the earliest data available	Since 1985 (source Pensio Plus): 4.63%	2002-2014: 2.54%	1996-2021 (source BeAma): 5.9%	2002-2014: 1.94%	2005-2014: 1.57%

Source: Tables BE13-BE19

Pension Vehicles

Pillar II: Occupational pension plans

The second pillar refers to occupational pension plans designed to raise the replacement rate. Savings in these plans are encouraged by tax incentives. The second pillar is based on the capitalisation principle: pension amounts result from the capitalisation of contributions paid by the employer and/or employee in the plan or by self-employed individuals. There are three types of occupational pension plans in place:

- Company pension plans;
- Sector pension plans (CBAs);
- Supplementary pension plans for self-employed individuals, company directors and an additional pension agreement for self-employed as individuals (PLCI, PLCDE, PLCIPP).
- Supplementary pension plan for employees (PLCS)

In the following section devoted to occupational pension plans, the available data reported in Tables BE2 to BE5 were provided by the Financial Services and Markets Authority (FSMA), Assuralia and the National Bank of Belgium (NBB).

The FSMA annually reports detailed information on Institutions for Occupational Retirement Provision (IORP, the EU law term for non-insurance regulated occupational pension products

provider[45]). Every two years, the FSMA also reports detailed information on sector pension plans and supplementary pension plans for self-employed individuals. Information on "Assurance Groupe" contracts was reported by Assuralia (for Branch 21 contracts) and by the National Bank of Belgium (for Branch 23 contracts).

Management of occupational pension plans

The management of occupational pension plans can be entrusted to an Institution for Occupational Retirement Provision (IORP) or to an insurance company.

Institutions for Occupational Retirement Provision (IORP)

IORPs are asset management companies set up with the sole purpose of providing occupational retirement savings products under the form of investment funds, which can either be directly invested, through tailor-made portfolios, or which can be linked to other funds' units (unit-linked).

FSMA reported the following data on IORP in 2020.

- 184 occupational pension plans were managed by an IORP and the number of affiliates to IORPs decreased to 2,041,739 against 2,055,434 in 2019.
- the number of affiliates to sector pension plans managed by IORPs stabilised to 1,539,570. It still represented the largest part in the total number of affiliates (75.4%), whereas their reserves (€5.8 billion) represented only 14.6% of the total reserves.
- Three supplementary pension plans for self-employed individuals (€2.2 billion of reserves) were managed by IORPs.

Based on the amount of reserves managed out of the total in Pillar II, IORPs had a market share of 31.6%, the rest being managed by insurance companies through Branch 21 and Branch 23 contracts, described below.

"Assurance Groupe" (Branch 21 and Branch 23 contracts)

Occupational pension plans are predominantly managed by insurance companies. Such pension plans are called "*Assurance Groupe*" contracts and can be divided into two different types of contracts:

- "Branch 21 contracts" are occupational plans, offering a guaranteed return on contributions made by employers and employees (1.75% since January 1st, 2016). The insurance companies who provide these contracts bear the risk and pay the guaranteed return in addition to a profit-sharing. All sector pension plans and all supplementary pension plans for self-employed individuals managed by insurance

[45] Article 6(1) of Directive (EU) 2016/2341 of the European Parliament and of the Council of 14 December 2016 on the activities and supervision of institutions for occupational retirement provision (IORPs) (recast), O.J. L354/37.

companies take the form of "Branch 21 contracts". Most of company pension plans are also managed through "Branch 21 contracts" rather than "Branch 23 contracts".

- "Branch 23 contracts" are unit-linked contracts and are invested mainly in investment funds and equity markets. Insurance companies do not offer a guaranteed return on contributions made into the plan. Their total returns depend on their portfolio composition. However, affiliates to "Branch 23 contracts" benefits from the legal minimum guaranteed return which is 1.75% since January 1st, 2016. In case of a shortfall on the individual account when paying a benefit or a transfer of reserves, the employer has to pay the difference. This kind of occupational plans are riskier for employers who bear the risk and are generally costlier.

In the second pillar, company pension plans and some PLCI are managed through Branch 23 contracts. All Branch 23 contracts accumulated €5.2 billion in reserves in 2020, representing 6.0% of the total reserves managed within "Assurance Groupe" contracts (see Table BE2).

Table BE2. Total reserves managed in pillar II in (€ billion)

	IORP (1)	"Assurance Groupe": Branch 21 contracts (2)	"Assurance Groupe": Branch 23 contracts (3)	Total "Assurance Groupe"(2) +(3)	Total (1)+(2)+(3)
2004	11.7	29.9	Na	na	**41.6**
2005	13.4	30.6	1.6	32.2	**45.6**
2006	14.3	33.5	1.7	35.2	**49.5**
2007	14.9	37.3	1.7	39.0	**53.9**
2008	11.1	38.2	1.4	39.6	**50.7**
2009	11.2	41.2	1.8	43.0	**54.2**
2010	13.9	44.7	1.8	46.5	**60.4**
2011	14.0	48.6	1.6	50.2	**64.2**
2012	16.4	52.3	1.7	54.0	**70.4**
2013	18.0	56.7	1.9	58.6	**76.6**
2014	20.7	60.1	2.1	62.2	**82.9**
2015	21.9	64.2	2.1	66.3	**88.2**
2016	26.8	67.4	2.4	69.8	**96.6**
2017	32.0	70.3	3.2	73.5	**105.5**
2018	31.4	72.6	3.7	76.3	**107.7**
2019	36.9	76.6	4.7	81.3	**118.2**
2020	39.7	80.6	5.2	85.8	**125.5**

Sources: Assuralia, BNB, BETTER FINANCE research, FSMA

Description of occupational pension plans

The following section provides information and figures for the different occupational pension plans within Pillar II in Belgium: sector pension plans, private supplementary pensions for self-employed individuals (PLCI) and company pension plans.

Sector pension plans[46]

Sector pension plans are supplementary pension commitments set up on the basis of collective bargaining agreements and concluded by a joint committee or joint sub-committee. In the joint committee/sub-committee, a sectorial organiser responsible for the pension commitment is appointed. On January 1st, 2021, 55 sectors offered occupational pension plans to the employees. There are 78 sector pension plans available for subscription. 2.203.060 individuals are covered by a sector pension plan.

Reserves of sector pension plans are mainly managed by IORPs. They increased in 2020 and amounted to €5.8 billion. This amount represents 14.6% of total reserves managed by IORPs within the second pillar in 2020. Reserves of sector pension plans managed by insurance companies through Branch 21 contracts are less important. In 2019, they represented €2.1 billion of reserves, represented 2.7% of the total reserves managed through "Branch 21 contracts" within the second pillar in 2019.

Table BE3. Total reserves in sector pension plans (€ billion) [47]			
	IORP	"Assurance Groupe" (Branch 21)	Total
2005	0.4	0.1	0.6
2007	1.4	0.7	2.1
2009	1.5	0.8	2.3
2010	1.6	0.9	2.6
2011	2.0	1.1	3.1
2012	2.5	1.3	3.8
2013	2.7	1.5	4.3
2014	3.1	1.7	4.8
2015	3.4	1.9	5.3
2016	4.0	1.8	5.8
2017	4.4	2.1	6.5
2018	4.1	2.6	6.7
2019	5.3	2.3	7.6
2020	5.8	na	na
Source: FSMA, BETTER FINANCE calculations			

[46] All data provided comes from plans for which information is available.
[47] Data for 2006 and 2008 was not available.

Private Supplementary Pensions for self-employed individuals (PLCI)

In 2004, *Pension Libre Complémentaire pour Indépendants* (PLCI) – Private Supplementary Pensions for self-employed individuals – were integrated into the Supplementary Pensions Act. PLCI enable self-employed individuals to get a supplementary and/or a survival pension at their retirement.

Since 2004, self-employed individuals have the choice to contribute to supplementary pension plans. Moreover, they can henceforth choose the pension provider, either an IORP or an insurance company. They can switch from one provider to another during the accumulation period. On January 1st, 2021, self-employed individuals had the choice between PLCI conventions managed by 3 IORPs and 19 insurance companies.

On January 1st, 2021, 355,660 self-employed individuals were covered by supplementary pension plans and 244,858 individuals were covered both by their company or by their sector of activity and by a PLCI convention. 56% of self-employed individuals were covered by a PLCI convention.

Self-employed individuals can also supplement their PLCI with several solidarity benefits, called social conventions (INAMI convention). 72,653 self-employed individuals were affiliated to PLCI with a social convention on January 1st, 2020. These conventions offer benefits such as the funding of the PLCI in the case of inactivity and/or the payment of an annuity in the case of income loss.

Self-employed individuals can save up to 8.17% of their income, without exceeding a maximum annually indexed amount (€3,302.77 in 2021). These ceilings can be increased up to 9.40% and €3,800.01 when a social convention is subscribed.

Contrary to sector pension plans, private supplementary pensions for self-employed individuals are predominantly managed by insurance companies trough Branch 21 contracts.

Most of insurance companies offer contracts with social convention. In 2020, the contributions to PLCI convention reached €764 million[48].

[48] Source Assuralia

Table BE4. Total reserves managed in PLCI conventions (€ billion)			
	IORP	"Assurance Groupe" (Branch 21 & Branch 23)	Total
2006	na	Na	2.9
2007	na	Na	3.3
2008	na	Na	3.5
2009	1.6	2.4	4.0
2010	1.7	2.8	4.5
2011	1.4	3.7	5.1
2012	1.6	4.1	5.7
2013	1.6	4.6	6.2
2014	1.7	5.1	6.8
2015	2.0	5.7	7.7
2016	2.1	6.3	8.4
2017	2.1	6.8	7.5
2018	2.0	6.0	8.0
2019	2.2	7.9	10.1
2020	2.2	na	na
Sources: FSMA, BETTER FINANCE calculations			

Private Supplementary Pensions for Company Director (PLCDE)

The Private Supplementary Pension for Company Director is a tripartite relation between the company (the organizer), who can implement a pension commitment for the benefit of its director(s) and the commitment is managed by a pension organisation (either insurance companies or IORP).

FSMA publishes every two years since 2019, a bi-annual report on Private Supplementary Pensions for Company Director (PLCDE). The last report published in May, provides the following information on January 1st ,2020:

- The total number of organisers who implemented an individual or collective pension commitment for the benefit of its director(s) was 208,641. This represented an increase of 8% compared to January 1, 2018.
- The total number of commitments dedicated to Director increased and reached 319,052. Most of commitments were DC (94%) and were dedicated for only one affiliate (97%).
- The management of the pension commitments were managed quasi-exclusively by insurances companies (99% of reserves).
- The total reserves amounted to 19.6 billion euros and the contributions amounted to 1.66 billion euros (+3% since 2017).

232,593 directors were affiliated to a PLCDE. This is an increase of 6.4% from January 1, 2018. 1,835,064 employees (85%) were affiliated to "Assurance Group" contracts, while 326,806 employees (15%) were affiliated to IORP.

Table BE5. Total reserves managed in PLCDE (€ billion)						
	IORP	"Assurance Groupe": Branch 21 contracts	"Assurance Groupe": Branch 23 contracts	"Assurance Groupe": Brach 21 + Branch 23 contracts	Total "Assurance Groupe"	Total
2015	**0.11**	11.85	0.06	3.02	**14.92**	**15.04**
2016	**0.14**	12.65	0.08	3.39	**16.11**	**16.25**
2017	**0.15**	13.29	0.13	3.90	**17.32**	**17.47**
2018	**0.18**	13.79	0.18	4.30	**18.27**	**18.45**
2019	**0.20**	14.38	0.19	4.80	**19.37**	**19.57**

Source: FSMA

Convention for self-employed as individuals (PLCIPP or CPTI)

Since July 1st, 2018, self-employed individuals without a company, can subscribe a pension agreement for self-employed individuals (CPTI), whether or not combined with a PLCI. FSMA provides information on this new type of pension agreement on January 1st, 2020:

- There were 5,135 pension agreements which covered 5,027 self-employed individuals.
- The total reserves amounted to 70.4 million euros. 57.3% of reserves are managed by Branch 21 contracts, 33.6% by combined Branch 21 / Branch 23 contracts, 4.6% by Branch 23 contracts and 4.5% by IORP.
- The total amount of contributions amounted to 38.7 million euros in 2019

Company pension plans

Company pension plans are prevalent within the second pillar. For the first time, FSMA published a bi-annual report on company pension funds in May 2021. This report provides information on January 1st, 2020:

- The total number of employers who implemented a collective pension commitment for the benefit of their workers was 57,800. This is an increase of 6.5% compared to January 1, 2018, when 54,287 employers set up a pension scheme.
- The number of company pension plans were 116,595. It increased from 109,587 on January 1, 2018, to 113,099 on January 1, 2019. It represented an increase of 6.4%.
- More than half of company pension plans have commitment for 1 to 5 employees: 36% have 1 member, while 26% of them have 2 to 5 members. They are 11% to have 6 to

10 affiliates and 18% to have 11 to 50 affiliates. A minority of the schemes (9%) have more than 50 members.

- The total reserves amounted to 52.8 billion euros. 40.3 billion euros were managed by 20 insurance companies through "Assurance Groupe" Branch 21 or 23 contracts and 12.5 billion euros were managed by 144 IORP.
- 1,994,196 employees were affiliated to a company pension plan. This is an increase of 11% from January 1, 2018. 1,835,064 employees (85%) were affiliated to "Assurance Groupe" contracts, while 326,806 employees (15%) were affiliated to IORP.

Table BE6. Total reserves managed in company pension schemes (€ billion)						
	IORP	"Assurance Groupe": Branch 21 contracts	"Assurance Groupe": Branch 23 contracts	"Assurance Groupe": Brach 21 + Branch 23 contracts	Total "Assurance Groupe"	Total
2015	**8.6**	31.4	0.13	0.69	**32.3**	**40.8**
2016	**9.9**	33.2	0.20	0.75	**34.2**	**44.1**
2017	**10.9**	35.0	0.21	0.81	**36.0**	**46.8**
2018	**11.4**	36.9	0.24	0.86	**38.0**	**49.5**
2019	**12.5**	39.0	0.32	0.96	**40.3**	**52.8**

Source: FSMA

Supplementary pension for employees (PLCS)

Until March 2019, an employee could constitute an additional pension only if there is a pension plan within the company or the sector of activity which employs him / her. The legislator introduced a new form of pension constitution for employees on March 27, 2019. If the employee does not constitute a supplementary pension with his / her employer or within his /her sector of activity, or if it is low, the employee can take the initiative to constitute an additional pension (PLCS). For the first time, FSMA published a bi-annual report on company pension funds in May 2021. This report provides information on January 1st, 2020:

- There were 319 pension agreements which covered 310 employees. This means that each employee constituting pension rights under the PLCS has signed only one agreement.
- The total reserves amounted to 149.797.
- These pension agreements are managed by two insurance companies. 94% of reserves are managed by combined Branch 21 / Branch 23 contracts and 6% by Branch 21 contracts.

Pillar III: Description of personal pension savings products

Pillar III refers to private pension plans contracted on an individual and voluntary basis. The Belgian market for personal pension plans is divided into two types of products:

1. Pension savings products, which can take two different statuses:

a. A pension savings fund;
b. A pension savings insurance (through individual Branch 21 contracts).

2. Long-term savings products, which consist mainly of a combination of Branch 21 and Branch 23 contracts.

Belgians can benefit from tax relief based on their contributions made to pension savings products or long-term savings products. Upon retirement, individuals are free to choose how to liquidate the products: lump sum payment, periodic annuities or life annuity from invested benefits.

In 2020, 1,739,507-million Belgians saved through pension savings funds[49]. This number increased by 3.9% over a year. When adding up pension savings insurance contracts and long-term savings products, 2 out of 3 Belgians in the active population is covered by pension plans within the third pillar.

Pension savings funds

The Belgian pension savings funds market remains relatively concentrated since the launch of the first funds in 1987. The market has grown significantly in the past few years. 21 products (18 UCITS and 3 AIFs) were available for subscription at end-2021. The net assets under management reached €25.6 billion (+14.8% over a year). The net sales amounted to €339 million in 2021.

Table BE.7 Net assets under management in pension savings funds (€ billion)	
2003	7.4
2004	8.7
2005	10.3
2006	11.5
2007	11.8
2008	9.0
2009	11.1
2010	12.0
2011	11.2
2012	12.6
2013	14.4
2014	15.6
2015	16.9
2016	18.0
2017	19.6
2018	18.2
2019	21.3
2020	22.3
2021	**25.6**

Source: BeAMA

[49] Chiffres secteur OPC 4ème trimestre 2020, BEAMA, June 9th, 2021. There is no information for 2021.

Pension savings funds are constrained by quantitative limits applied to their investments:

- A maximum of 75% in equity;
- A maximum of 75% in bonds;
- A maximum of 10% in euros or any currency of a country of the European Economic Area cash deposits;
- A maximum of 20% in foreign currency deposits;
- A maximum of 30% in equities from companies whose Market Capitalisation is less than or equal to €3 billion euros.

In practice, the majority of funds are predominantly exposed to the equity market. Their return is entirely variable and depends on the returns of the underlying assets and fee policy applied.

Pension savings insurance / Long-term savings products

Belgians can save for their retirement through life insurance products within two different frameworks: a pension savings insurance product (Branch 21 contracts) or a long-term savings product (Branch 21 and Branch 23 contracts combined). Assuralia reports annual statistics on contributions and reserves managed in individual life insurance products. Data for the whole year 2021 are unfortunately missing and will be published only by the end of 2022.

Assuralia also reports data on contributions and reserves managed through pension savings insurance and long-term savings products within the third pillar. In 2020, reserves managed within the framework of the third pillar represented 23.1% of total individual life-insurance reserves. For long-term savings products, there is no available information on the breakdown between Branch 21 and Branch 23 contracts (see Table BE7).

Table BE8 Contributions and reserves in individual life-insurance products within the third pillar in 2019 (€ billion)

	Contributions	Reserves	Pillar III reserves in % of total individual life insurance reserves
Pension savings insurance (Branch 21 contracts)	1.17	16.602	12.13%
Long-term savings products (Branch 21 and Branch 23 contracts combined)	1.09	14.928	10.91%
Total	**2.26**	**31.95**	**23.04%**

Source: Assuralia

Charges

Pillar II: Occupational pension plans

Charges in IORPs

There is no general data or available information on IORP charges. The only available information was for sector pension funds managed by IORPs[50]: operating expenses ranged from 0.002% to 1.6% of reserves, with an average of 0.14% in 2019 (0.15% in 2018, 0.13% in 2017 and 0.15% in 2015).

Charges in "Assurance Groupe" (Branch 21 contracts)

The only historical information on administration and management costs as well as commissions on a yearly basis was for "Assurance Groupe" contracts (Branch 21), reported by "Assuralia".

Table BE9. Charges in % of reserves in "Assurance Groupe" Branch 21 contracts

	Administrative & management costs (% of reserves)	Commissions (% of premiums)
2002	1.2	1.2
2003	1.0	1.3
2004	0.8	1.2
2005	0.9	1.4
2006	0.9	1.2
2007	0.8	1.4
2008	0.8	1.5
2009	0.8	1.3
2010	0.7	1.5
2011	0.7	1.5
2012	0.7	1.5
2013	0.7	1.5
2014	0.7	1.6
2015	0.6	1.6
2016	0.6	1.6
2017	0.6	1.8
2018	0.6	1.4
2019	0.6	1.5
2020	0.6	1.5

Source: Assuralia, own calculations

[50]Source: FSMA, Report on sector pensions plans, company pension funds and PLCLS, May 2021

Many insurance companies apply fees on premiums. In the case of sector pension plans, the level of fees varies considerably, ranging from 0.5% to 13.8% of premiums in 2019. Half of the plans managed by insurance companies levied charges lower than 2% of premiums in 2019 (as in 2017 and 2015). The level of fees was below 1% for 13% of plans. Nevertheless, 18% of plans applied charges above 5% of premiums (as in 2017)[51].

In Branch 23 Group Insurances ("Assurance Groupe"), charges can be higher: in addition to contract fees other fees related to underlying "units" (typically investment funds) may apply. For more details, the reader can refer to the case analysis in the annex.

Pillar III: Personal pension savings products

Pension savings funds

Historical data on charges for pension savings funds is difficult to obtain for investors. Key Investor Information Documents (KID) must provide investors with information on all charges related to the funds on a yearly basis, but for UCITS only, not for other investment funds.

Using the prospectus of the 21 available pension savings funds for subscription in the Belgian market, the following average yearly charges were calculated in 2021:

- Entry fees: 2.29% of initial investment;
- Management fees: 0.95% of total assets under management;
- Total Expenses Ratio represented on average 1.29% of total assets under management;
- No exit fees.

The following table summarises the Total Expenses Ratio (TER) of 21 available funds for subscription in the Belgium market from 2017 to 2021. The average TER remains relatively stable in 2021 when compared to 2019 and 2018. Nevertheless, four pension funds increased their TER.

[51] Source: FSMA, Report on sector pensions plans, company pension funds and PLCLS, May 2021

Table BE10. Historical Total Expense Ratio from 2017 to 2021 (% of assets under management)					
	2017	2018	2019	2020	2021
VDK Pension Fund (Accent Pension Fund)	1.29	1.29	1.28	1.28	1.28
Argenta Pension Fund (ARPE)	1.34	1.32	1.32	1.33	1.33
Argenta Defensive Pension Fund	1.33	1.33	1.32	1.33	1.33
Belfius Pension Fund Balanced Plus	1.32	1.39	1.39	1.39	1.43
Belfius Pension Fund High Equities Cap	1.16	1.31	1.36	1.35	1.42
Belfius Pension Fund Low Equities Cap	1.61	1.17	1.19	1.19	1.20
BNP Paribas B Pension Balanced	1.24	1.24	1.24	1.24	1.24
BNP Paribas B Pension Growth	1.25	1.24	1.24	1.24	1.24
BNP Paribas B Pension Stability	1.24	1.24	1.24	1.24	1.24
Hermes Pension funds	1.06	1.06	1.04	1.24	1.24
Interbeurs Hermes Pensioenfonds	1.03	1.03	1.70	1.64	1.64
Metropolitan-Rentastro Balanced	1.24	1.23	1.24	1.24	1.24
Metropolitan-Rentastro Stability	1.25	1.25	1.25	1.25	1.25
Metropolitan-Rentastro Growth	1.25	1.25	1.25	1.25	1.25
Pricos	1.24	1.16	1.20	1.20	1.20
Pricos Defensive	1.24	1.15	1.19	1.20	1.20
Pricos SRI	-	1.37	1.31	1.33	1.36
Star Fund	1.18	1.16	1.17	1.17	1.16
Crelan pension funds Stability	1.29	1.27	1.29	1.28	1.28
Crelan pension funds Growth	1.29	1.27	1.29	1.28	1.28
Crelan pension funds Balanced	1.29	1.27	1.29	1.28	1.28
Total Expenses Ratio, Average (simple)	**1.26**	**1.24**	**1.28**	**1.28**	**1.29**

Pension savings insurance (Branch 21 contracts) / Long-term savings products (Branch 21 and Branch 23 contracts combined)

"Assuralia" provides us with historical data on administration and management costs as well as entry fees and other commissions paid for individual life insurance contracts. Data, for Branch 23 individual life insurance contracts, most likely do not include fees charged on the underlying units (investment funds).[52]

[52] The reader can refer to the case analysis in the annex.

Table BE11 Administration and management costs and commissions for individual insurance companies (%)				
	Branch 21		Branch 23	
	Administrative and management costs (% of reserves)	Commissions (% of premiums)	Administrative and management costs (% of reserves)	Commissions (% of premiums)
2002	1.2	4.8	na	2.5
2003	1.8	3.7	na	3.0
2004	1.4	3.6	na	2.7
2005	0.7	3.3	0.3	2.0
2006	0.7	4.7	0.3	3.4
2007	0.6	4.6	0.3	4.2
2008	0.7	5.4	0.4	5.4
2009	0.6	5.8	0.3	5.6
2010	0.5	5.7	0.3	4.8
2011	0.5	6.0	0.3	4.6
2012	0.5	6.6	0.3	2.9
2013	0.6	8.8	0.3	4.8
2014	0.6	7.8	0.4	5.2
2015	0.5	9.1	0.4	4.9
2016	0.5	8.0	0.4	5.7
2017	0.6	8.8	0.4	5.4
2018	0.6	8.4	0.4	5.4
2019	0.6	8.2	0.3	5.5
2020	0.6	9.3	0.3	5.7
Source: *Assuralia, BETTER FINANCE calculations*				

Taxation

Pillar II: Occupational pension plans

Regarding the second pillar in Belgium, the tax regime for the whole saving period is an EET model. Employees are not taxed during the first two phases that constitute the process of saving via a pension scheme: contribution and accrued interests are not taxed. Employees are taxed during the third phase on the benefits' payment.

Employees pay two taxes on their benefits:

- A solidarity contribution varying up to a maximum of 2% of the benefits depending on the retiree's income;
- An INAMI ("Institut National d'Assurance Maladie-Invalidité") contribution of 3.55% of the benefits.

In addition, benefits from occupational pension plans are taxed depending on how they are paid out:

- A lump sum payment;
- Periodic annuities;
- A life annuity issued from invested benefits.

Lump sum payment

In the case of a lump sum payment, the taxation of benefits depends on the beneficiary's age and who contributed to the plans (employer or employee). Since July 2013, the rules detailed in Table BE11 are applied to taxation on benefits from occupational pension plans. Before July 2013, benefits from employer's contributions were taxed at the flat rate of 16.5% regardless the beneficiary's age at the time of the payment of the benefits.

Table BE12. Taxation of benefits from occupational pension plans			
Benefits paid before the legal pension		Benefits paid at the same time as the legal pension	
Benefits from employee's contribution	Benefits from employer's contributions	Benefits from employee's contribution	Benefits from employer's contributions
16.5% for contributions made before 1993	60 years old: 20%	16.5% for contributions made before 1993	10% if the employee remains employed until legal pension age (65 years old)
10% for contributions made since 1993	61 years old: 18%	10% for contributions made since 1993	
	62-64 years old: 16.5%		
+ local tax	+ local tax	+ local tax	+ local tax

Source: "Assuralia", Wikifin.be

The local tax can vary from 0% to 10%, with an average of 7%.

Periodic annuities[53]

Periodic annuities are considered to be an income and are taxed at the applicable progressive personal income tax rate.

Converting the accumulated capital into a life annuity

An employee can convert the lump sum payment into a life annuity. In this case, the INAMI contribution and the solidarity contribution have to be paid according to the rules applied to

[53] For pillar II, employees can choose to redeem capital in a lump sum payment or in annuities. In practice, few people choose annuities, and most employees redeem their product in a lump sum payment.

the lump sum payment. Then the retiree has to pay a withholding tax of 15% on the annuity each year.

Pillar III: Personal pension savings products

Regarding the third pillar in Belgium, the tax regime for the whole saving period is an EET model with a limited ceiling on contributions during the first phase for pension savings products and with a limited ceiling on the maximum tax benefit depending on the level of the saver's yearly earnings for long-term savings products.

Pension savings products (fund or life insurance contracts)

- Tax relief on contributions during the accumulation phase

Contributions invested in pension savings products (fund or insurance) are deductible from the income tax. Individuals can make contributions into pension savings products up to a rather low annual ceiling (€990 in 2021). The tax ceiling on pension savings products was frozen from 2020 and the next indexation will take place in 2024

Since 2012 and until 2018, a tax relief rate equal to 30% of the contributions was applied, regardless of the taxpayer's income.

In 2018, in order to further promote the third pillar and contributions to pension savings products (fund or life-insurance contracts), a new tax relief system was introduced. Two tax relief systems now co-exist, and the amount of the individual contribution determines the tax relief:

- For any contribution less or equal to €990, individuals can still benefit from a 30% tax relief rate. This may result in a maximum tax relief of €297 per year.
- If the individual chooses to make a contribution above €1,270 and informs the provider of the product, he / she can benefit from a tax relief rate equal to 25%. The maximum contribution cannot exceed €1,270, with a maximum tax-relief of €317,5.

The tax relief of pension savings products is "stand-alone". Taxpayers can claim tax relief for only one contract even if they make contributions to several products.

- Final taxation on the accumulated pension rights

Since 1 January 2015, the final taxation on the accumulated capital was lowered from 10% to 8% and still depends on the beneficiary's age at the time of the subscription. From 2015 onwards, a part of the taxation is levied in advance (except in case of early retirement before the age of 60). From 2015 to 2019, the pension reserves (per 31 December 2014) are subject to a tax of 1% each year, which constitutes an advance on the final tax due.

Table BE13. Taxation of pension savings products (funds and insurance)	
Subscription to pension savings products before the age of 55	
Benefits paid before the age of 60	The accumulated capital is taxed under the personal income tax system. 8% of the accumulated capital is levied (excluding participation to annual earnings); The taxation is based on a theoretical return of 4.75%;
At the age of 60	The saver can continue investing and enjoying tax relief until the age of 64; The accumulated capital is no longer taxed after the 60th birthday of the beneficiary.
Subscription to pension savings products at the age of 55 or after	
Benefits paid before the age of 60	The accumulated capital is taxed under the personal income tax system.
Benefits paid between the age of 60 and 64	The accumulated capital is taxed at the rate of 33%.
At the age of 65 or after (i.e., when the contract reaches its 10th birthday)	8% of the accumulated capital is levied (excluding participation to annual earnings); The taxation is based on a theoretical return of 4.75%; To benefit from this lower taxation, the beneficiary has to stay at least 10 years in the fund and make at least five contributions.

Sources: Assuralia, Wikifin.be

Long-term savings products (life insurance contracts)

The maximum amount of tax relief based on contributions invested in long-term savings products depends on the level of the saver's yearly earnings, without exceeding the ceiling of €2,350 in 2021. The tax ceiling on long term savings products was frozen at the same level to that of 2018 and it will be reviewed in 2024. However, the tax relief is determined jointly for long-term savings products and mortgage deductions. If a saver already receives a tax relief for a mortgage, it may be impossible to obtain a further tax relief for life insurance products under the third pillar.

The same rules of taxation to that of pension savings products (fund or insurance) apply to long-term savings products. The taxation depends on the beneficiary's age at the time of subscription (before or after 55) (see Table BE13).

However, the taxation differs in two points:

- The pension reserves are taxed by considering the real return of the long-term savings products over the period of holdings instead of a theoretical return of 4.75%;

- The lowering of the tax rate to 8% does not apply to the capital accumulated through long-term savings products, which remain taxed at 10%.

Pension Returns

Pillar II: Occupational pension plans

The returns of occupational pension plans depend on how they are managed, either by an IORP or by an insurance company. From 2004 to 2015, all DC plans managed either by IORP or insurance companies through Branch 21 contracts were required to provide an annual minimum return of 3.75% on employees' contributions and 3.25% on employers' contributions. The Supplementary Pensions Act reform entered into force as of 1 January 2016, in order to ensure the sustainability and social character of the supplementary pensions. The level of the minimum guaranteed return for both employer and employee contribution is set each year according to economic rules considering the evolution of government bond yields in the future:

- the new guaranteed return must be within the range of 1.75% to 3.75%;
- the new guaranteed return represents 65% of the average of 10-year government bonds rates over 24 months, rounded to the nearest 25 basis points to prevent it from fluctuating too frequently.

In addition, the alignment of the supplementary pension age and the legal pension age (respectively 65, 66 in 2025 and 67 in 2030) affects the minimum guaranteed return offered to employees. When the affiliate reaches the age of 60, his/her occupational pension plan is extended until he/she reaches the age of 65. During the extension period, the minimum guaranteed return continues to be applied to reserves. Its level corresponds to the new effective minimum guaranteed return that will be recalculated and published each year by FSMA. In 2021, the legal minimum guaranteed return remained steady at 1.75%.

In the following sub-sections, the real returns after taxation of occupational pension plans were calculated under the hereunder assumptions:

- The employee claims his supplementary pension at the same time as the legal pension and remains employed until the legal age (65 years old);
- The benefits are paid as a lump sum payment;
- Solidarity contributions of 2% of benefits and the INAMI contribution of 3.55% of benefits are levied;
- Only the employer´s contributions were paid;
- In addition to an average local tax of 7%, a flat tax rate of 10% is applied to the final benefits.

Occupational pension plans managed by IORPs

In 2020, among the 184 pension plans managed by an IORP, 157 had a promise of returns (DB plans) or were hybrid plans (Cash Balance, DC + rate), 27 were DC plans. While newly opened plans are always DC plans, a large part of assets are still managed in plans offering promises of returns.

PensioPlus, the Belgium's occupational pension plans association reported an average return of 9.08% in 2021. This represents the gross average weighted returns after charges of occupational pension plans that participated in the annual financial and economic survey of PensioPlus in 2021.[54]

Table BE14 Nominal and Real Returns of occupational pension plans managed by IORPs in Belgium								
2000		0.92			-0.07			-2.96	
2001		-4.18			-5.12			-6.91	
2002		-11.05			-11.92			-13.08	
2003		10.37			9.29			7.53	
2004		9.85			8.93			6.78	
2005		16.04			14.96			11.87	
2006		10.26			9.27			7.05	
2007		2.21			1.39			-1.67	
2008		-17.06			-17.72			-19.88	
2009		16.58		Nominal return after charges, before inflation and taxes	15.69		Real return after charges and inflation and before taxes	15.31	
2010	Gross return	10.28	5.2		9.50	4.4		5.92	2.3
2011		0.01			-0.70			-3.77	
2012		12.90			12.10			9.81	
2013		7.46			6.70			5.47	
2014		11.85			11.06			11.50	
2015		5.23			4.48			2.99	
2016		5.82			5.07			2.80	
2017		6.03			5.28			3.16	
2018		-2.41			-3.07			-5.18	
2019		16.06			15.24			14.19	
2020		5.34			4.59			4.22	
2021		9.86			9.08			3.07	

[54] The participants to the annual Pensio's Plus survey represented 85% of the market share in terms of asset under management in 2021.

Table BE15 Annualized performance of occupational pension plans managed by IORPs (%)			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	9.86%	9.08%	3.07%
3-years	10.33%	9.55%	7.05%
5-years	6.81%	6.05%	3.71%
7-year	6.44%	5.69%	3.48%
10-years	7.70%	6.94%	5.07%
2000-2022	5.21%	4.37%	2.27%

Over a 22-year period (2000-2021), occupational pension plans managed by IORPs experienced negative nominal returns before charges four times: in 2001, 2002, 2008 and in 2018. Over the period 2000-2021, the annualized performance after charges, tax and inflation is positive (2.27%).

PensioPlus reported the average asset allocation of IORP at end-2021, as follows: 45% in equities, 46% in Fixed Income securities (with the half invested in corporate bonds), 3% in Real Estate, 3% in cash and 4% in other asset classes. The asset allocation remained quite steady in 2020. The proportion of fixed income assets still represented the largest part of assets. The proportion of real estate decreased significantly.

Occupational pension plans managed by insurance companies (Branch 21 contracts)

Since 2015, Assuralia no longer reports net returns after charges in percentage of the total reserves of "Assurance Groupe" Branch 21 contracts in its annual report this report[55]. Information for years after 2014 cannot be updated.

In May 2021, FSMA reported some information on returns in its bi-annual report on sector pension, company pension and PLCLS. It reported an average net return of 2.40% for sector pension funds managed through "Assurance Groupe" contracts in 2019 (against 1.66% in 108, 2.63% in 2017, 2.91% in 2016 and 3.01% in 2015)[56]. The downward trend that has been observed for several years is confirmed. One can observe the same assessment for PLCI conventions.

A self-employed individual who subscribes to a PLCI convention had on average a return of 2.5% on his /her contracts in 2019 (against 2.64% in 2017 and 2.75% in 2015).

The minimum guaranteed return of PLCI varied between 0% and 4.75%. Some conventions subscribed before July 1st, 1999, offer a guaranteed return of 4.75% on past and future

[55] In November 2021, Assuralia published its annual report including Statistics for the whole year 2020
[56] Source FSMA, Report on sector pension, company pension and PLCLS, May 2021.

premiums. The average (pondéré des reserves acquises) return decreased to 1.79% (against 2.15% in 2017) and the average participation to benefits was 0.43%, equal to that of 2017.

Assuralia provided information on "Assurance Groupe" contracts with data at the end-2018[57]. This information was not updated for years after 2018.

At the end-2018, "Assurance Groupe" contracts and individual contracts through Branch 21 contracts[58] were invested with the following assets allocation:

- 73% in fixed income assets (of which 32% in Belgian government bonds);
- 9% in equities and UCITs;
- 16% in loans and real estate;
- 2% in other assets.

With the decline in the return on the Belgian 10-year government bonds since 2011, insurance companies were forced to decrease the guaranteed return offered to new contributions on "Assurance Groupe" Branch 21 contracts. However, insurance companies continue to guarantee the previous returns on the past contributions until the retirement. Past reserves continue to have guaranteed returns range from 3.25% to 4.75%. In 2018, the average guaranteed return continued to decrease but remained at 2.74%. When including the profit share, the average guaranteed return reached 3% of the total reserves. For older pension plans the return was higher than this rate, for newer plans it was lower.

Graph BE1: Average guaranteed return on "Assurance Groupe" Branch 21 contracts

[57] http://assuralia.be/fr/infos-secteur/publications-secteur/775-l-assurance-de-groupe-un-tour-d-horizon-au-niveau-du-secteur

[58] The insurance law of March 13, 2016 (Solvency II law) requires that investments relating to "Assurance group" contracts and individual life insurance have to be managed together. In this way, the insurer benefits from economies of scale and more possibilities for diversification, which should benefit the return.

Table BE16. Returns of occupational pension plans managed by insurance companies ("Branch 21" contracts) (%)			
	Nominal return before charges, tax and inflation	Nominal return after charges, before tax and inflation	Real return after charges and inflation, before tax
2002	5.4	4.1	2.6
2003	6.3	5.3	3.7
2004	6.3	5.4	3.4
2005	6.8	5.8	3.2
2006	6.7	5.7	3.3
2007	6.6	5.7	3.8
2008	2.0	1.2	-3.2
2009	5.4	4.6	4.6
2010	5.3	4.5	2.2
2011	4.0	3.3	-0.1
2012	5.4	4.6	1.9
2013	5.4	4.7	3.5
2014	5.5	4.8	4.3
Sources: Assuralia, BETTER FINANCE's calculations			

(2002-2014), "Assurance Groupe" Branch 21 occupational pension plans experienced a positive real annual average return after charges and taxation of 2.0%.

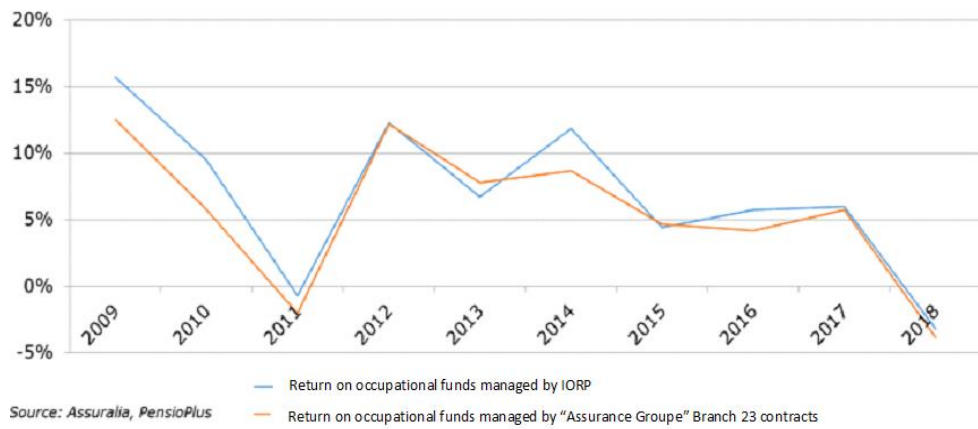
Table BE17. Annual average return of "Branch 21" occupational pension plans managed by insurance companies (2002-2014) (%)	
Nominal return before charges, tax and inflation	5.5
Nominal return after charges, before tax and inflation	4.6
Real return after charges and inflation, before tax	2.5
Real return after charges, tax and inflation	2.0
Source: Assuralia, BETTERFINANCE'S calculations	

Occupational pension plans managed by insurance companies (Branch 23 contracts)

Assuralia published information on the returns of "Assurance Groupe" Branch 23 from 2009 to 2018 (see the following graph). Returns on "Assurance Groupe" Branch 23 contracts are variable and depend on the performance of underlying assets. These contracts experienced negative returns in 2011 and 2018. Their net average returns are very close to those of occupational funds managed by IORP (around - 4% in 2018). Assuralia did not update this information for years after 2018. Since 2015, Assuralia no longer provides information on the returns of "Assurance Groupe" Branch 23 contracts.

Insurance companies do not offer guaranteed return on these contracts. However, affiliates benefit from the legal minimum guaranteed return on their contributions, which is currently equal to 1.75%. When the affiliate claim for its pension rights, if the final payment is less than the amount including the minimum guaranteed return, the employer has to pay the difference.

Graph BE2. Average return on "Assurance Groupe" Branch 23 contracts



Pillar III: Personal pension savings products

Pension savings funds

The Belgian Asset Management Association (BeAMA) provides quarterly data on pension savings funds. The most recent data regarding their returns was on an annual basis at end-2021.

Table BE18 Annualised performance of pension savings funds

Over 1 year	Over 10 years	Over 25 years
11.7%	6.9%	5.9%

Source: BeAMA

These average returns were calculated based on the average returns of all available funds in the market, after expenses but before taxation and inflation.

Annual returns are also available in the prospectus of each pension savings fund provided by the asset management company that commercialises the fund. In general, there is no available information on returns before 2002 in the fund prospectuses. The following table displays the average return of all available funds for subscription in the Belgian market from 2000 to 2021.

From 2013 to 2021, TER expressed as a percentage of total assets under management were collected and were used in returns calculations. However, there is no historical data for TER before 2013. Over the whole period from 2000-2012, TER from 2013 were used and assumed to remain stable.

Table BE19. Nominal and Real Returns of pension saving funds in Belgium (%)								
2000		-2.81			-4.00			-6.77
2001		-3.32			-4.50			-6.30
		-			-			-
2002		13.44			14.50			15.62
2003		16.02			14.60			12.75
2004		20.19			18.72			16.38
2005		18.54			17.09			13.95
2006		10.45			9.10			6.88
2007		3.75			2.48			-0.61
		-			-			-
2008		25.06			25.98			27.92
2009	Gross	20.03		Nominal return	18.56		Real return after	18.17	
2010	returns	8.59	5.34	after charges,	7.26	4.04	charges and	3.75	1.91
2011		-3.97		before inflation	-5.14		inflation and	-8.07	
2012		13.30		and taxes	11.92		before taxes	9.63	
2013		12.53			11.16			9.88
2014		8.96			7.61			8.04
2015		9.67			8.27			6.72
2016		4.00			2.70			0.49
2017		7.98			6.64			4.49
2018		-6.73			-7.87			-9.86
2019		16.51			15.05			13.99
2020		3.27			1.96			1.61
2021		13.16			11.72			4.81

Table BE20 Annualized performance of pension saving funds (%)			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	13.2%	11.7%	4.8%
3-years	10.8%	9.4%	6.7%
5-years	6.5%	5.2%	2.7%
7-year	6.6%	5.3%	3.0%
10-years	8.1%	6.7%	4.8%
2000-2021	5.3%	4.0%	1.9%

Pension savings funds within the third pillar experienced negative nominal returns from 2000 to 2002, as well as in 2008, 2011 and in 2018. Unlike occupational pension plans, these pension savings funds are not obliged to pay a guaranteed return to retirees. Over the 21-year period (2000-2021), they delivered relatively similar nominal returns to occupational pension plans managed by IORPs. Benefits are taxed at a flat rate of 8%[59], considering an annual return of 4.75% during the accumulation phase, irrespective of the pension savings fund returns.

Pension savings insurance (Branch 21 contracts) and long-term savings products (Branch 23 contracts)

In order to save for their retirement, Belgian can subscribe to pension savings insurance or to long-term savings products. Pension savings insurance consists in investing in individual life-insurance Branch 21 contracts with a guaranteed capital. Long-term savings products combine Branch 21 contracts and unit-linked Branch 23 contracts. Assuralia used to report net returns after charges in percentage of the total reserves managed through Branch 21 and Branch 23 contracts. This information gave an insight into returns of reserves invested within the third pillar. However, since 2015 Assuralia no longer provides on pension savings insurance and long-term savings products in its annual publication. Over the whole period from 2002-2014, the real annual average return after charges and taxation remained positive to 1.67% for Branch 21 contracts and to 1.30% for Branch 23 contracts.

Branch 23 contracts experienced negative nominal and real returns in 2008 and 2011. Nevertheless, there is no available information on return after the year 2014.

Table BE21. Returns of individual Branch 23 contracts (%)

	Nominal return before charges, tax and inflation	Nominal return after charges, before tax and inflation	Real return after charges and inflation, before tax
2005	11.9	11.5	8.8
2006	7.5	7.1	4.7
2007	1.6	1.3	-0.5
2008	-18.2	-18.5	-22.0
2009	13.3	12.9	12.9
2010	7.5	7.1	4.7
2011	-2.6	-2.9	-6.1
2012	9.4	9.1	6.3
2013	5.9	5.6	4.3
2014	8.3	7.9	7.4

Sources: Assuralia, BETTER FINANCE calculations

[59] To calculate the taxation, the following assumptions are made: the saver subscribes before the age of 55. The final taxation is levied at her / his 60th birthday.

Table BE22. Annual average return of individual life-insurance Branch 23 contracts (2005-2014) (%)	
Nominal return before charges, tax and inflation	4.1
Nominal return after charges, before tax and inflation	3.7
Real return after charges and inflation, before tax	1.6
Real return after charges, tax and inflation	1.3
Sources: Assuralia, BETTER FINANCE'S calculations	

In our calculations, we considered that benefits from Branch 21 contracts were taxed like pension savings schemes and a flat tax rate of 10% was applied to the accrued benefits from Branch 23 contracts.

Conclusions

Belgians are encouraged to save for their retirement in private pension vehicles. In 2003, the implementation of the Supplementary Pensions Act defined the framework of the second pillar for sector pension plans and supplementary pension plans for self-employed individuals. The number of employees covered by occupational pension plans keeps rising as well as the number of self-employed individuals covered by supplementary pension plans.

Measures to guarantee the sustainability and social character of the supplementary pensions were enforced in January 2016:

- The guaranteed minimum return on contribution was lowered to 1.75% for both employee and employer contributions. This return will be revised according to an economic formula considering the evolution of government bond yields in the future;
- The supplementary pension age and the legal pension age were aligned;
- Beneficial anticipation measures granted to employees when they claim their supplementary pension before the legal age were abolished.

Over a 22-year period (2000-2021), occupational pension funds managed by IORPs (pillar II) and pension savings funds (pillar III) had a real annualised performance before taxation of 2.27% and 1.9% respectively. These funds offer returns linked to the performance of the underlying assets. Unlike insurance companies, asset management companies are less constrained in their asset allocation and can more easily benefit from potential increases in markets.

Assuralia reported some information on "Assurance Groupe" contracts on its website. In 2018, "Assurance Groupe" Branch 21 contracts offered on average nearly 2.74% of return (including profit share) and "Assurance Groupe" Branch 23 contracts offered a return close to -4%. Nevertheless, we do not have any information on return for and individual life-insurance contracts within the third pillar since 2014.

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Pension Savings: The Real Return

2022 Edition

Country Case: Croatia

Croatian summary

Hrvatska je stvorila tipični mirovinski sustav s tri stupa, gdje se državni organizirani mirovinski stup na temelju PAYG-a (preraspodjela doprinosa radno sposobnog starijeg stanovništva) nadopunjuje obveznim financiranim mirovinskim sustavom (II. Stup) i subvencionira se (izravno kao i neizravno) dobrovoljni mirovinski sistem štednje (III. stup).

Povećavajući omjer obuhvata radnog stanovništva od strane II. stub nadoknađuje slaba pokrivenost unutar III. stup. To bi moglo donijeti rastući problem niskog životnog standarda za umirovljenje populacije u budućnosti, jer I. stup pruža samo 30% stopu zamjene, a preostala dva stupa neće moći dodati značajne izvore za pojedince tijekom umirovljenja. Iako su izvedbe oba financirana stupa prilično solidne, prilično mali doprinosi i nizak omjer pokrivenosti III. Stup postavlja pitanja o adekvatnosti mirovinskog sustava u Hrvatskoj.

Summary

Croatia has created typical 3-pillar pension system, where the state organized pension pillar based on PAYG (redistribution of contributions from working to elderly population) is supplemented by mandatory funded pension scheme (II. pillar) and subsidized (directly as well as indirectly) voluntary pension saving scheme (III. pillar).

Increasing coverage ratio of working population by the II. pillar is offset by low coverage within the III. pillar. This might bring the increasing problem of low living standard for retiring population in future as the I. pillar provides only 30% replacement rate and remaining two pillars will not be able to add significant sources for individuals during retirement. Even if the performance of both funded pillars is quite solid, rather small contributions and low coverage ratio of the III. pillar raises questions about the adequacy of the pension system in Croatia.

Introduction

Croatian pension system is since 2002 designed on conventional World bank 3-pillar model. Croatian pension system was as of 1 January 1999 reformed by introducing a mixed public-private pension system consisting of three pillars of pension insurance:

I. **pillar** – compulsory pension insurance based on generational solidarity;
II. **pillar** – compulsory pension insurance based on individual capitalized savings;
III. **pillar** – voluntary pension insurance based on individual capitalized savings.

Introductory Table - HR Pension System Overview		
Pillar I	**Pillar II**	**Pillar III**
Pension Insurance Act	**Mandatory Pension Funds Act**	**Voluntary Pension Funds Act**
Croatian Pension Insurance Institute (HZMO)	Croatian Financial Services Supervisory Agency (HANFA)[60]	
Mandatory state pension insurance PAYG principle Coverage: 99%	Mandatory DC-based funded pensions Individual accounts Coverage: 84.16%	Voluntary fully funded DC Individual accounts Coverage: 15.84%
Managed by the Social Insurance Company	Managed by Pension Asset Management Companies	
Contribution rate: 15.00%; Replacement ratio: 28.72%; Average pension: €365	Contribution rate: 5.00% 12 pension funds (3 risk-reward classes) NAV: 17,694 mil. Eur Members: 2,111,192	8 open-ended pensions funds 20 closed pension funds NAV: 1,038 mil. Eur Members: 397,267
Quick facts		
Retirement age – 65 years for men; 62 years and 9 months for woman (2021)		
A relatively high old-age dependency ratio of 33.3% in 2021		
An average gross replacement ratio of 28.72% (net 38.5%)		

Source: authors´ composition, data valid for the year 2021 based on HZMO data (https://www.mirovinsko.hr/en/2021-1643/1642)

I. pillar – PAYG scheme

The I. pillar of pension insurance is called a pillar of generational solidarity based on pay-as-you-go (redistributional) principle, as persons who work pay contributions for pension insurance, whereas such contributions serve for giving pensions to current pension beneficiaries. In addition to contributions collected from insured persons, the first pillar is also funded from the state budget. According to the Pension Insurance Act[61], insured persons are compulsorily insured in accordance with principles of reciprocity and solidarity for the event of ageing, reduction of working capacity with remaining working capacity and partial or total loss of working capacity, and the members of their families in the event of insured person's or pension beneficiary's death (right to an old-age pension, early retirement pension, disability pension, temporary disability pension, survivors' pension, minimum pension, basic pension).

Funding: the system of generational solidarity is a defined benefits system. The Contribution Act[62] prescribes the obligation to pay contributions for funding of compulsory insurance,

[60] https://www.hanfa.hr/pillar-ii-and-iii-pensions-and-pension-payments/
[61] https://zakon.hr/z/91/Zakon-o-mirovinskom-osiguranju
[62] https://zakon.hr/z/365/Zakon-o-doprinosima

including contributions for pension insurance. Contributions are collected by the Tax Administration and the contribution rate for insured persons who are insured only in the I. pillar amounts to 20% of gross salary, while the contribution rate for I. pillar for insured persons who are insured in both compulsory pillars (I. and II. pillar) amounts to 15%.

The implementation of pension insurance based on generational solidarity falls within the competence of the Croatian Pension Insurance Institute[63]. The Croatian Pension Insurance Institute (HZMO) is the competent institution for exercising the right exclusively from pension insurance based on generational solidarity (I. pillar).

The right to an old-age pension payable from the I. pillar is acquired by an insured person who has reached 65 years of age, if he/she has completed 15 years of qualifying periods. Insured persons – women in the period from 2014 to 2029 are entitled to an old-age pension at a lower age. In 2014, they could retire at the age of 61 (under the condition of 15 years of service), where the age requirement for each calendar year increases by 3 months until 2029. By way of exception, raising the retirement age by 4 months every year was stipulated by the law that was in force from 1 January to 31 December 2019. However, the amendments to the law that enter into force on 1 January 2020 introduced a transitional period for women under more favourable conditions again. Raising of the retirement age is reduced from 4 to 3 months every year, with an exceptional raise by 2 months in 2020 in relation to 2019. As of 1 January 2030, women and men can exercise the right to old-age pension benefit under the same conditions, having reached the age of 65 and 15 years of pensionable service, irrespective of the gender of the insured person.

The amount of old-age pension is calculated by multiplying personal points, pension factor and the actual value of pension. The pension factor is determined by the type of pension to be realised, and the actual value of the pension is determined by the Governing Board of the Croatian Pension Insurance Institute (HZMO), based on the data of the Croatian Bureau of Statistics, no later than two months after the end of each half-year. Personal points are calculated by multiplying the average value point with achieved qualifying periods and the initial factor. The initial factor affects the amount of pension in case of old-age pensions and early retirement pensions, so that:

- An old-age pension is increased to insured persons who are granted pension for the first time after the age of 65, and have 35 years of qualifying periods, by 0.34% for each month after reaching the prescribed age for acquiring the right to an old-age pension, but no longer than 5 years,

[63] https://www.mirovinsko.hr/

- An early retirement pension is reduced for the insured persons by 0.2% for each month of early retirement before reaching the statutory retirement age of the insured person for the acquisition of the right to an old-age pension.

The average value point is calculated based on salaries earned over the entire working life in relation to the average annual salary in the Republic of Croatia.

The right to an early retirement pension is acquired by an insured person who has reached 60 years of age and completed 35 years of qualifying periods. There are again some exceptions for women. The amount of the old-age pension is permanently reduced for each calendar month of the earlier exercise of entitlement, up to the completed years of life of the insurer prescribed for the acquisition of the right to an old-age pension, linearly by 0.2% for each month of early retirement, i.e., 2.4% per year up to a maximum of 12% for a maximum of 5 years prior to retirement.

Paid old-age pensions are adjusted twice a year in relation to economic trends in the Republic of Croatia. The adjustment rate, applied starting from 1 January 2015, is determined by the variable ratio of the consumer price index and gross salaries of all employees in the Republic of Croatia in the previous year, compared to the year preceding it (70:30, 50: 50 or 30:70, whichever is preferred). From July 1, 2019, it is aligned as follows: from January 1 to July 1 each calendar year according to the 70:30 or 30:70 model.

II. pillar

II. pillar has been effectively introduced starting January 2002. The II. pillar represents individual capitalized savings. Individual savings refer to personal assets of insured persons and the fact that paid funds are recorded in personal accounts, while capitalized savings refer to return on investment achieved upon payment to the selected compulsory pension fund. This form of pension insurance was introduced to expand the source of funding in relation to compulsory pension insurance based on generational solidarity, which sought to achieve greater individual responsibility for the safety of the elderly.

II. pillar includes compulsory insured persons of up to 40 years of age. The rate of contributions for persons insured in II. pillar amounts to 5 % of the gross salary, whereby insured persons may themselves choose a compulsory pension fund and compulsory pension fund category to which they will contribute the said amount. Persons compulsory insured in I. and II. pillar and insured persons who voluntarily chose II. pillar have the right in the process of exercising the right to a pension to choose in which system the pension will be realized, that is, the system which is more favourable for them (opt-out system). Insured persons can:

- Leave the II. pillar and get the pension exclusively from I. pillar;

- Stay in II. pillar and get the pension from both pillars (in this case, the pension from I. pillar is determined for the years of service completed by December 31, 2001, with a supplement of 27% and for the years of service completed from January 1, 2002, with a supplement of 20.25 %, determined by the factor of basic pension (0.75%).

Management of savings within the II. pillar is carried out through compulsory pension management companies offering pension funds, while the pay-out phase is carried out exclusively through pension insurance companies. The pension system based on capitalized savings is regulated by two statutory regulations, depending on whether they refer to the phase of accumulation and capitalization of contributions regulated by the Act on Compulsory Pension Funds[64] or the phase of pension pay-outs regulated by the Act on Pension Insurance Companies[65]. The Central Register of Insured Persons (REGOS) is the competent institution for insurance based on individual capitalized savings (II. pillar).

Compulsory pension fund is established by a pension company that manages such fund on its behalf and for the joint account of pension fund members. Pension fund may fall under categories A, B or C, and are managed by the same pension company. Pension funds of different categories have different investment strategies and vary according to membership limitations (considering life expectancy of savers/members), investment strategy and investment limitations. The assumed risk should be the lowest in category C funds, and the largest in category A pension funds.

The right to pension and based on individual capitalized savings – II. pillar is realized based on the Decision on Retirement Benefits issued by the Croatian Pension Insurance Institute (HZMO). From January 1, 2019, all insured persons who are insured in both pension pillars can, when they apply for old-age or early old-age pension, select whether they want to receive pension only from the I. pillar or pension from both pillars through a personal statement to the Central Register of Insured Persons (REGOS).

For a member of the fund to choose a more favourable pension, REGOS will collect informative pension calculations from the Croatian Pension Insurance Institute (HZMO) and the Pension Insurance Company (MOD) and submit them to the home address. If a member of the fund opts for pension only from the compulsory pension insurance based on generational solidarity (I. pillar), the HZMO will determine the pension as if the insured was only insured in the I pillar. The selection of this pension means that a member of the fund wants to leave II. pillar, i.e. compulsory pension insurance of individual capitalized savings, and the total capitalized funds from the personal account of the member of the fund are transferred to the state budget. If a member of the fund opts for a combined pension from I. and II. pillars, HZMO will determine the basic pension from compulsory pension insurance for generational solidarity and submit

[64] https://www.zakon.hr/z/708/Zakon-o-obveznim-mirovinskim-fondovima
[65] https://www.zakon.hr/z/712/Zakon-o-mirovinskim-osiguravaju%C4%87im-dru%C5%A1tvima

to REGOS the data from the Decision. Upon receipt of the Decision, which is provided to REGOS by HZMO, REGOS checks the data from the Decision regarding the status of the future pension beneficiary. It is checked whether the personal account of the future pension beneficiary is opened and whether he or she has exited from the II pillar. After selecting the pension insurance company, REGOS will close the personal account of the member of the fund and transfer the overall funds to the pension insurance company which will contact than the beneficiary for the conclusion of the pension agreement. The compulsory pension company that manages the compulsory pension fund has a deadline of five working days from the date of initiating the closing of the personal account to allocate funds to the payment account for II. pillar contributions. Upon settlement of the obligation by the custodian bank, the following working day it is verified whether the funds have been transferred to the account of the legal recipient of funds – the Raiffeisen Pension Insurance Company (currently the only MOD) that will pay the pension on the basis of individual capitalized savings. REGOS informs the Pension Insurance Company electronically on the data from R-POD form and the amount of transferred funds. Upon receipt of the aforementioned information, the pension insurance company will contact the future pension beneficiary regarding the conclusion of the Contract on pension based on individual capitalized savings.

If the old-age pension from the I. pillar is higher than 15% of the minimum pension from the I. pillar according to the Pension Insurance Act, the future pension beneficiary from II. pillar can decide on a partial, one-time cash payment of 15% in the gross amount of the total capitalized funds allocated to MOD.

III. pillar

Voluntary pension funds were also introduced in 2002 and complete the three-pillar system. III. pillar is a voluntary pension savings DC-based scheme. Voluntary pension schemes are either offered by voluntary pension funds or can be set up by trade unions and employers, making open and closed funds possible. Open-ended pension funds are open for membership to any natural person interested in becoming a member of an open-ended pension fund, whereas closed-ended pension funds form their membership out of natural persons who are either employed with an employer, or are trade union members, members of associations of self-employed persons or self-employed persons. Voluntary pension funds need to have at least 2,000 members two years after being established.

The payment of retirement benefits within the framework of mandatory pension insurance based on individual capitalised savings of members of mandatory pension funds is made by pension insurance companies only. The payment of retirement benefits within the framework of voluntary pension insurance based on individual capitalised savings of members of voluntary pension funds is made by pension insurance companies, but exceptionally, the payment of retirement benefits on a temporary basis may be made by voluntary pension funds under the conditions laid down in the Act on Voluntary Pension Funds.

The collection of funds within the framework of III. pillar of pension insurance is carried out through voluntary pension funds, while pay-outs of pensions are made by pension insurance companies, and, exceptionally, pension companies, that may carry out temporary pension pay-outs from voluntary pension funds. Pension reform, which entered into force on January 1, 2019, has also introduced the possibility of pension payments by the life insurance companies.

There are no limitations on membership. Also, there are no time restrictions on the duration of membership. A member may choose the amount, duration, and dynamics of payments to the fund. Payments are not compulsory and depend solely on payer's current capabilities. The membership in the fund is not terminated by termination of payments or irregular payments. All paid funds are personally owned by a member, no matter who their payer is, and they can be inherited in full. The only condition for using the funds is reaching 50 years of age.

The Act on Voluntary Pension Funds[66] regulates the establishment and operation of voluntary pension funds, while the Act on Pension Insurance Companies regulates the establishment and operation of pension insurance companies, pension schemes and pensions and their distribution. HANFA provides supervision over the business of pension insurance companies.

Overall, the returns of II. and III. pillar pension funds over different holding periods are presented in the table below.

Table HR.02 Average nominal and real net returns of Croatian II. pillar pension funds

Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	7.75%	2.55%
3-years	5.40%	3.38%
5-years	4.90%	3.24%
7-year	6.01%	4.76%
10-years	6.16%	4.82%
Since inception	5.28%	3.25%

Source: Own elaboration, 2022

[66] https://www.zakon.hr/z/709/Zakon-o-dobrovoljnim-mirovinskim-fondovima

Table HR.03 Average nominal and real net returns of Croatian III. pillar pension funds		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	7.20%	2.00%
3-years	4.99%	2.97%
5-years	3.91%	2.25%
7-year	4.73%	3.48%
10-years	5.75%	4.41%
Since inception	5.54%	3.51%

Source: Own elaboration, 2022

Pension Vehicles

II. pillar – Mandatory Pension Funds

There have been 4 mandatory pension asset management companies operating in Croatia in 2021 (HANFA, 2022):

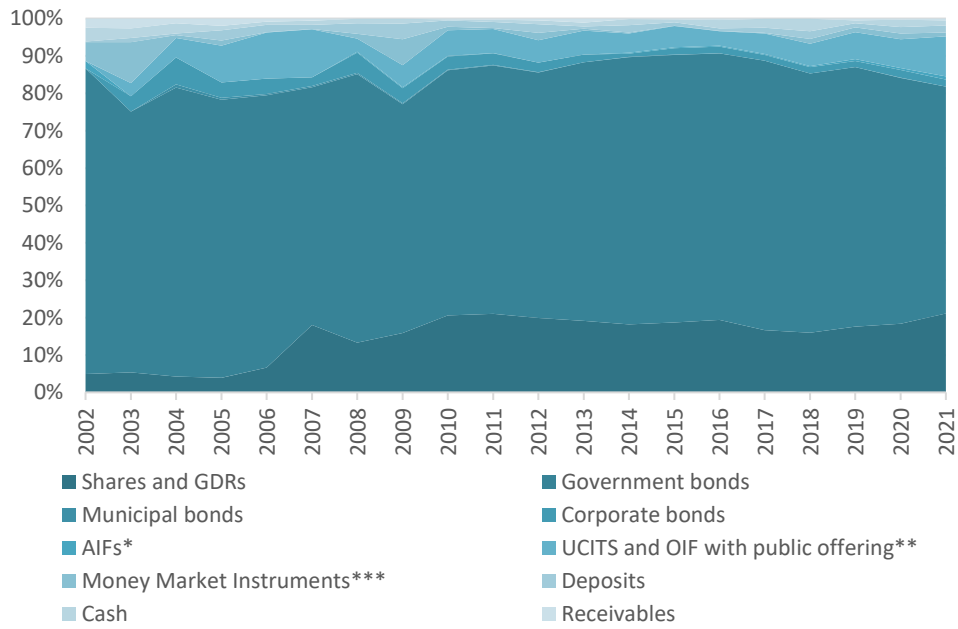
1. Allianz ZB d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
2. ERSTE d.o.o. - društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
3. PBZ CROATIA OSIGURANJE d.d. za upravljanje obveznim mirovinskim fondovima
4. Raiffeisen društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima dioničko društvo

There are 12 mandatory pension funds offered to savers, while each mandatory pension company manages 3 pension funds with different investment strategy:

1. Type “A” mandatory pension fund with riskier investing strategy. Members of this fund can be persons who are at least 10 years old until the age requirements for acquiring the right to an old-age pension are met. At least 30% of the fund's net assets are invested in bonds of the Republic of Croatia, EU or OECD countries. Maximum 55% of the fund's net assets are allocated in shares of issuers from the Republic of Croatia, EU member states or OECD countries and at least 40% of the fund's net assets are denominated in Kuna.
2. Type “B” mandatory pension fund – balanced investment strategy. Initially, all members will be members of this fund, unless they choose Fund A or C themselves. At least 50% of the fund's net assets are invested in bonds of the Republic of Croatia, EU or OECD countries. Maximum 35% of the fund's net assets are invested in shares of issuers from the Republic of Croatia, EU member states or OECD countries and at least 60% of the fund's net assets are denominated in Kuna.

3. Type “C” mandatory pension fund – conservative investment strategy. It is suitable for older members of the fund who have less than 5 years left to meet the age requirements for acquiring the right to an old-age pension. According to this condition, REGOS will automatically transfer policyholders from the category B fund to the category C fund. At least 70% of the fund's net assets should be allocated in bonds of the Republic of Croatia, EU member states or OECD countries. Investment in shares is not allowed, and exposure to investment funds is limited to 10%. At least 90% of the fund's net assets are denominated in Kuna.

Portfolio structure of the mandatory pension funds is presented below.



Source: Own elaboration based on HANFA data, 2022

Considering the portfolio structure of all mandatory pension fund, most of the investments (almost 80%) are allocated in government and municipal bonds.

III. pillar – Voluntary Pension Funds

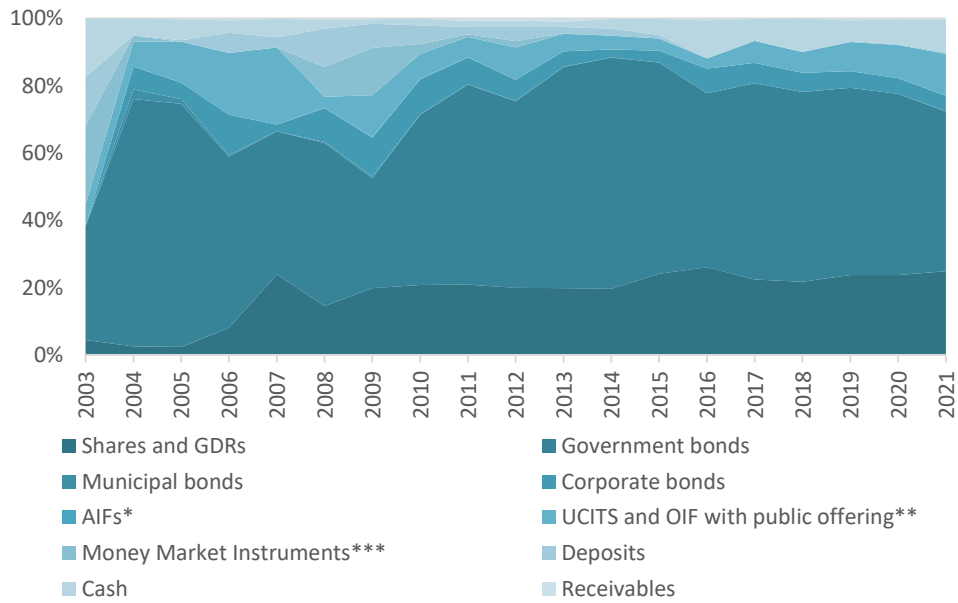
Voluntary pension savings scheme offers more flexibility for providers. There are 4 voluntary pension asset management companies in Croatia:

1. Allianz ZB d.o.o. društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
2. CROATIA osiguranje mirovinsko društvo za upravljanje dobrovoljnim mirovinskim fondom d.o.o.

3. ERSTE d.o.o. - društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima
4. Raiffeisen društvo za upravljanje obveznim i dobrovoljnim mirovinskim fondovima dioničko društvo

These companies manage mandatory as well as voluntary pension funds. Within the III. pillar, the companies can offer open-ended funds to any member as well as closed-ended funds to predefined range of members. Currently (as of December 31, 2021), there have been available data for 17 closed-ended funds and 8 open-ended voluntary pension funds offered to savers. However, open-ended funds manage more than 80% of all III. pillar assets.

Portfolio structure of voluntary pension funds is presented below.



Source: Own elaboration based on See Capital Markets data, 2022

Voluntary pension funds can be considered more riskier compared to the mandatory pension funds. Almost 20% of assets is allocated into equities and equities based UCITs funds and 60% in government bonds.

Charges

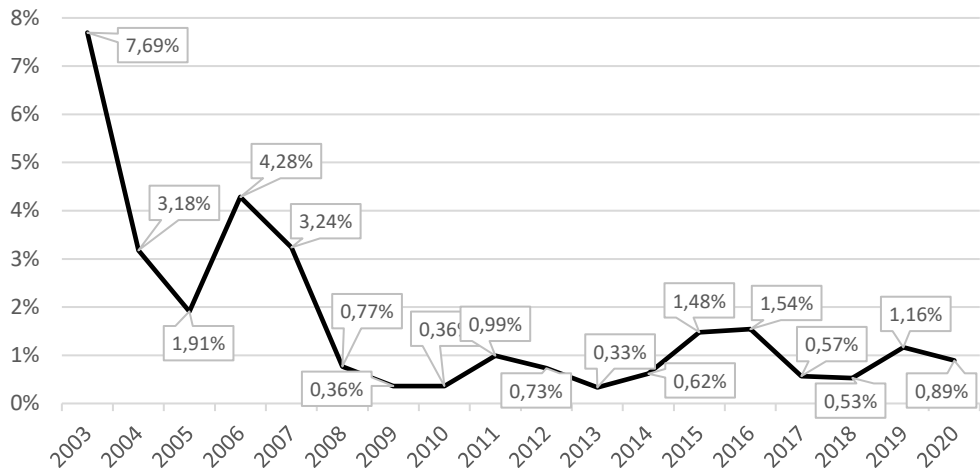
Croatian II. pillar pension funds managed by 4 companies do exhibit regulated fee policy ensuring relatively low level of fees. Detailed structure of fees of mandatory pension funds offered within II. pillar is presented below.

Table HR.04 Charges and fees in Croatian II. pillar pension funds		
Fund name	**Fee type**	**2021**
AZ obvezni mirovinski fond kategorije A	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.015% p.a.
	Total cost indicator	0.31%
AZ obvezni mirovinski fond kategorije B	Management fee	0.27%
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.015% p.a.
	Total cost indicator	0.30%
AZ obvezni mirovinski fond kategorije C	Management fee	0.27%
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.5%
	Depository fee	0.015% p.a.
	Total cost indicator	0.30%
ERSTE PLAVI OBVEZNI MIROVINSKI FOND KATEGORIJE A	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.1% p.a. (max. 0.015% p.a.)
	Total cost indicator	0.3999%
ERSTE PLAVI OBVEZNI MIROVINSKI FOND KATEGORIJE B	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.1% p.a. (max. 0.015% p.a.)
	Total cost indicator	0.3287%
ERSTE PLAVI OBVEZNI MIROVINSKI FOND KATEGORIJE C	Management fee	0.27%
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.1% p.a. (max. 0.015% p.a.)
	Total cost indicator	0.3070%
PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija A	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.019% p.a.

	Total cost indicator	0.39%
PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija B	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.019% p.a.
	Total cost indicator	0.32%
PBZ CROATIA OSIGURANJE obvezni mirovinski fond - kategorija C	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.019% p.a.
	Total cost indicator	0.31%
Raiffeisen obvezni mirovinski fond kategorije A	Management fee	0.27%
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.017% p.a.
	Total cost indicator	0.34%
Raiffeisen obvezni mirovinski fond kategorije B	Management fee	0.27%
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.017% p.a.
	Total cost indicator	0.31%
Raiffeisen obvezni mirovinski fond kategorije C	Management fee	0.27% p.a.
	Exit fee	0.80% in 1 year, 0.40% in 2 year, 0.20% in 3 year and than 0.00%.
	Entry fee	0.50%
	Depository fee	0.017% p.a.
	Total cost indicator	0.30%

Source: Own elaboration using funds prospectuses, 2022

Obtaining data for voluntary pension funds is quite challenging and only average cost ration for all voluntary pension funds is available (see graph below). The fee structure suggests that the total costs are quite dependent on the overall performance and thus the performance-tied fees play key role in the fee structure of voluntary pension funds in Croatia. Unfortunately, we have not been able to gather the data on the fee structure for the year 2021 and present the data only until 2020.



Source: Own elaboration, 2021

Taxation

Taxation of the mandatory pension scheme (II. pillar) is of the EET type. Contributions and investment income are tax-exempt, whereas benefits are taxed. The tax allowance for pensioners is 1.7 times higher than for employees, meaning that pensions are only modestly taxed.

At each pension payment, as well as a one-time payment of 15% of the total capitalized funds allocated to MOD, the pension insurance company calculates and pays income tax and surtax on income tax in accordance with the Income Tax Act and pays the net amount to the pension beneficiary. Tax rates for pensioners are reduced and are 12% and 18%, depending on tax brackets. Based on the final income tax calculation that is done by the Tax Administration, the pension beneficiary may be required to pay a tax or may be entitled to a refund of overpaid income tax, depending on the received receipts and the personal deductions used in that year.

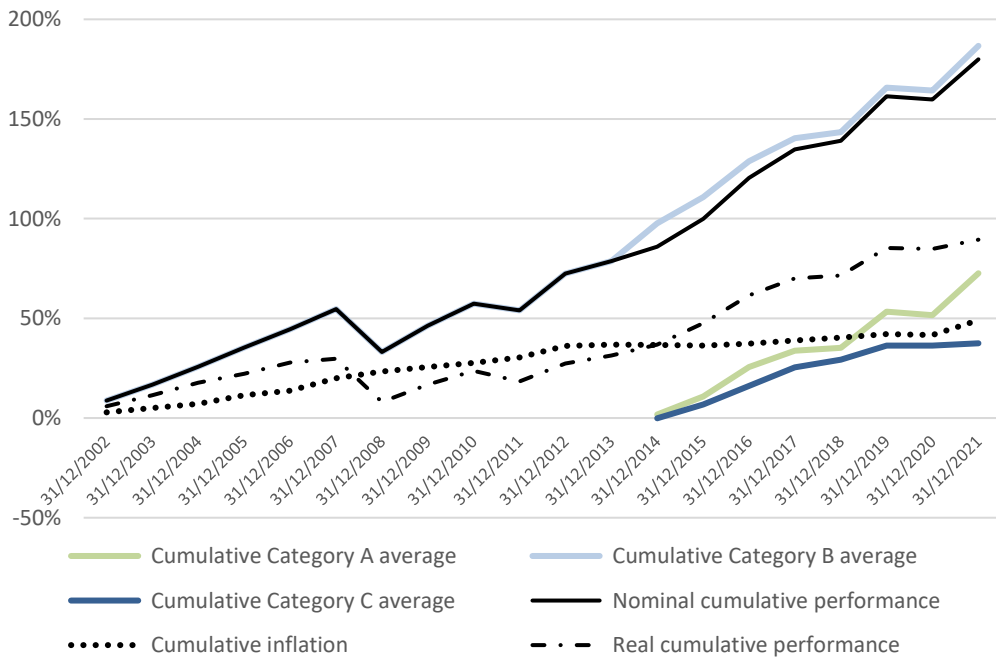
Voluntary pension savings (III. pillar) are the only form of saving which includes two types of state incentives: state incentive funds and tax incentives for employers. Croatia encourages pension savings and approves the incentive to all members of III. pillar in the amount of 15% of the annual payment, up to a maximum of HRK 5,000.00 (672 Euro), that is, the highest state incentive can amount to HRK 750.00 (101 Euro). Every resident can exercise the right to receive incentives only during the period that he/she pays compulsory pension insurance – II. pillar. The membership in a voluntary pension fund offers its member the option of voluntary pension savings being paid by his employer. All payments made by the employer in III. pillar of pension insurance up to the monthly amount of HRK 500 (67.2 Euro), that is, up to HRK 6,000 (806.5 Euro) a year, are not considered a salary. That amount is considered a tax-recognized expense or employer's expense. Paid pension benefits are subject to personal income tax.

Therefore, we can say that the taxation scheme for III. pillar pension savings is EET with exceptions.

Pension Returns

II. pillar

Mandatory pension funds have beaten the inflation over the analysed period of 2002 – 2020. The graph below shows the cumulative performance of mandatory pension funds compared to the inflation (dotted line on the graph below).



Source: Own elaboration, 2022

The table below presents the annual nominal as well as real performance of mandatory pension funds in Croatia.

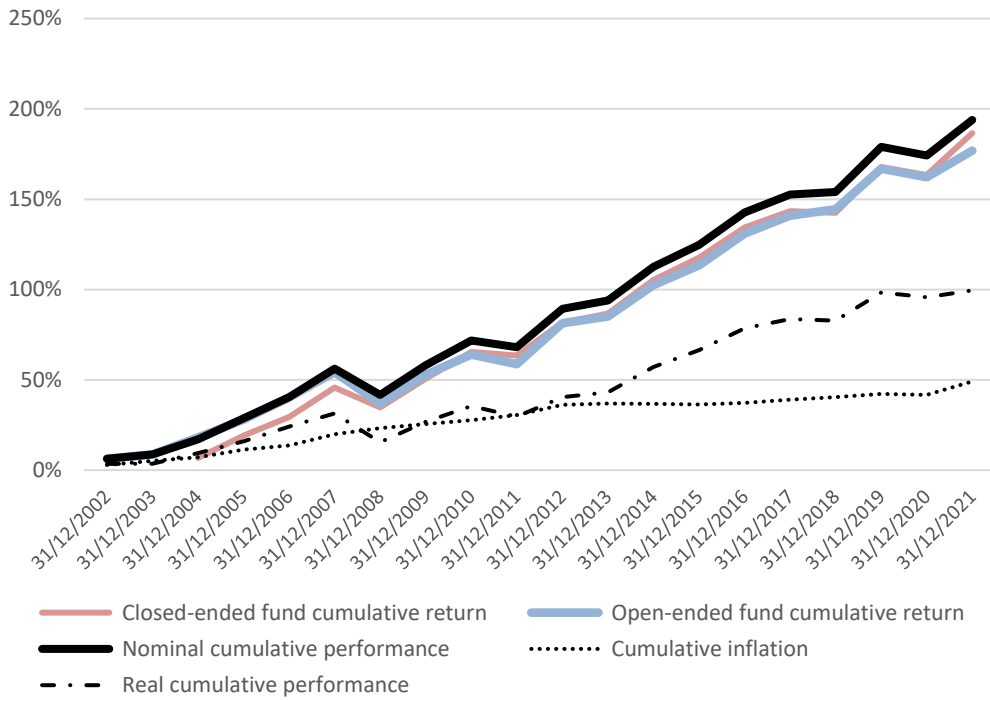
Table HR 05 Nominal and Real Returns of Mandatory pension funds in Croatia					
2002		8.77%		5.92%	
2003		7.33%		5.18%	
2004		7.66%		5.70%	
2005		7.77%		3.79%	
2006		6.64%		4.52%	
2007		7.03%		1.62%	
2008		-13.88%		-16.72%	
2009		9.84%		8.00%	
2010	Nominal return after charges, before inflation and taxes	3.63%	5.28%	5.89%	3.25%
2011		-2.20%		-4.34%	
2012		12.05%		7.65%	
2013		3.63%		3.18%	
2014		5.90%		6.00%	
2015		7.50%		7.80%	
2016		10.21%		9.50%	
2017		6.50%		5.23%	
2018		1.86%		0.86%	
2019		9.32%		8.06%	
2020		-0.59%		-0.29%	
2021		7.75%		2.55%	

Source: Own calculations, 2022

III. pillar

Voluntary pension funds have achieved slightly higher cumulative performance when compared to the II. pillar peers. This could be attributed to the more riskier investment strategy. However, when inspecting the performance on a fund level, there are differences attributed to the different investment strategies.

The graph below presents the cumulative performance of all voluntary pension funds in Croatia.



Source: Own elaboration, 2022

The table below presents the nominal and real annual returns of voluntary pension funds offered in Croatia.

Table HR 06 Nominal and Real Returns of Voluntary pension funds in Croatia						
2002		6.29%			3.44%	
2003		2.22%			0.07%	
2004		7.71%			5.76%	
2005		9.96%			5.98%	
2006		9.14%			7.03%	
2007		11.24%			5.83%	
2008		-9.35%			-12.18%	
2009		11.69%			9.85%	
2010	Nominal return after charges, before inflation and taxes	8.53%	5.54%	Real return after charges and inflation and before taxes	6.80%	3.51%
2011		-2.16%			-4.30%	
2012		12.72%			8.32%	
2013		2.43%			1.97%	
2014		9.63%			9.73%	
2015		5.73%			6.03%	
2016		7.94%			7.23%	
2017		4.12%			2.85%	
2018		0.52%			-0.48%	
2019		9.83%			8.57%	
2020		-1.71%			-1.41%	
2021		7.20%			2.00%	

Source: Own elaboration, 2022

Overall, both mandatory and voluntary pension funds were able to beat inflation on a cumulative basis and can be considered wealth building for savers.

Conclusions

Croatian pension system offers rather low replacement rates from the state organized I. pillar. This leaves the working population to rely on individual savings and thus the importance of mandatory as well as voluntary pension savings will rise over time and will play a significant role of one´s income during the retirement.

Mandatory as well as voluntary pension funds have provided the savers with solid returns over the last 18 years. II. pillar is compulsory for the working population and thus the coverage ratio will be expected to rise in future. The problem could be seen in rather low coverage ratio within the III. pillar, where only 12% of working population saves for retirement.

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Policy considerations

Understating weak points of Croatian pension system (low coverage ratio and relatively low contribution rates for funded schemes), the pension system could be improved by:

1. allowing for additional voluntary contributions for mandatory pension pillar on top of 5% contribution rate envisaged by the current law as the II. pillar offers quite solid performance with low cost ratio;
2. increase indirect state support and further enhance the tax exemption for III. pillar contributions in order to increase the coverage ratio.

Overall, the performance of Croatian pension funds could be considered solid, compared to other peers in other countries. However, the performance is driven mostly by bond yields of domestic issuers, which would not hold for the longer period.

Pension Savings: The Real Return

2022 Edition

Country Case: Denmark

Danish Summary

Det danske pensionssystem er et veludbygget 3-søjle-system. De tre søjlers betydning har gradvist ændret sig i løbet af de sidste 30 år. PAYG-systemet i søjle 1 (folkepensionen) er fortsat den væsentligste indkomstkilde for de fleste pensionister, men arbejdsmarkedspensionerne spiller en stadig større rolle. Mere end 80 pct. af arbejdsstyrken er medlem af en eller flere arbejdsmarkedspensioner. Den gennemsnitlige dækningsgrad er på et niveau omring 75%, og forventes at stige i de kommende år.

Det danske pensionssystem er karakteriseret ved en høj grad af forudgående opsparing og ved en klar arbejdsdeling mellem de offentlige, skattefinansierede pensioner og de private, opsparingsbaserede pensionsordninger. Den samlede pensionsopsparing udgør ved udgangen af 2020 5.500 mia. DKK svarende til det dobbelte af BNP.

I international sammenligning skille det danske pensionssystem ud ved, at der er meget få økonomiske fattige pensionister og pensionernes dækningsgrader er høj. Sytemet er finansielt sammehængene, og de offentlige finanser er holdbare i forhold til en aldrende befolkning. Der er således ingen aktutte reformbehov, den grundlæggende struktur er hensigtsmæssig. Der er imidlertid udfordringer knyttet til incitamenterne til opsparing og senere tilbagetrækning, og der er også fortsat en restruppe, der kun har en beskeden pensionsopsparing.

Arbejdsmarkedspensionerne er i de senere år ændret i retning af markedsbaserede produkter, hvor opsparene mere direkte bærer risikoen knyttet til blandt andet afkast variationer. Det har skabt mulighed for højere afkast, men rejser spørgsmål om risikoniveauer og risikodeling. Historisk har afkastene været høje, på gennemsnit tæt på et realt afkast på 5% efter skat over de sidste godt 10 år. Pensionssektoren har også kunnet håndtere store kriser som fx den finansielle krise og coronakrisen. En ny normal med lave afkast udfordrer mulighederne for at levere afkast på det samme niveau som set historisk.

Summary

The Danish pension system is a well-established 3-pillar system. The role of the pillars has changed gradually within the last 30 years. The PAYG- system of Pillar I still provides the basic income for most elderly, but occupational DC pension schemes play an increasingly important role. More than 80% of the Danish labour force is enrolled in one or more occupational

schemes. The average replacement ratio is expected to increase in the years to come from today's level at around 75%.

The Danish pension system is characterized by a high degree of funding and clear roles for the tax-based public pensions of Pillar I and the privately funded pensions. The total value of funded pension schemes in 2020 is close to €740 billion DKK,[67] about twice the Danish GDP.

In international comparison the Danish pension system stands out. There are few pensioners falling below the poverty line, and replacement rates are generally high. The system is financially viable, and public finances satisfy sustainability criteria taking into account an ageing population. There is thus no urgent need for reforms, the basic structure is sound. However, there are challenges not least in ensuring sufficiently strong incentives for savings and for later retirement, and there remains a so-called residual group with low or no pension savings.

The occupational pension schemes have in recent years changed in the direction of so-called market-based products, where the saver more directly carries the risk arising e.g., due to return variations. This has created room for higher returns but raises questions on levels of risk and risk diversification. Historically returns have been high with an average after-tax real return about 5 % over the last decade. The pension sector has also handled crises, including the financial crisis and the corona crisis. A new normal with lower rates of returns challenges the possibilities of reaching returns at the levels seen in the past.

Introduction

The Danish pension system is in a transition from being largely based on defined-benefit tax financed pensions to a larger role of defined contribution, funded occupational pensions. The latter have been expanded to most of the labour market in the 1990s and will mature in two or three decades. This arrangement both serves to ensure decent pensions for all retired, and pension adequacy in terms of high replacement rates. The system is financially robust and prepared for an ageing population.

In international comparisons, the Danish pension system stands out by low poverty rates among the old and high replacement rates. The financially viability against the backdrop of large demographic shifts is ensured. This position is reflected in a consistently by ranked in the top A-tier in the Melbourne Mercer Global Pension Index.[68].

The challenges for the system include how to ensure an incentive structure supporting savings and later retirement. The sustainability of the system depends critically on retirement ages

[67] Denmark participates in ERM 2 at a central rate of 746.038 DKK per 100 euro, and this exchange rate I used to convert all numbers in DKK into euro.
[68] Melbourne Mercer Global Pension Index, https://www.mercer.com.au/our-thinking/global-pension-index.html#contactForm

increasing alongside increases in longevity. The heterogeneity in work career and health has raised debates on more flexible exit routes from the labour market. Moreover, it remains a challenge that groups are not covered by occupational pension arrangements.

Description of the pension system

- The Danish pension system is a three-pillar system: the aim of the **first pillar** (Pillar I) is to prevent poverty in old age. Pillar I provides all Danish pensioners with a minimum pension. The pension schemes of the Pillar I are compulsory and regulated by law.
- The **second pillar** (Pillar II) is based on collective agreements in the labour market or employment contract ensuring that the individual contributes to a defined contribution, funded pension scheme. Collective agreements determine the contribution rates, and the pension therefore depends on income earned throughout the work career. Pillar II aims to secure a standard of living reflecting the level of income before retirement.
- The **third pillar** (Pillar III) provides individual opportunities for supplementary saving based on individual needs both in explicit pension saving schemes with special tax treatment and in general voluntary savings.

Table DK1. Pension System Overview		
Pillar I	**Pillar II**	**Pillar III**
Base pension plus means-tested supplements, tax-financed	Occupational Pension; DC, funded schemes	Voluntary Personal Pension
Poverty prevention in old age	Ensures a standard of living reflecting the level of income before retirement	Supplementary saving based on individual needs
	More than 80% of Danish labour force is enrolled in one or more occupational schemes.	Voluntary pension savings is declining in important due to the growing role of occupational pensions
An individual entitlement (residence requirement) regulated by law	Determined by collective agreements, but contribution is mandatory for the individual	Voluntary
Quick facts		
Danish pension system has been top ranked (no 2) in the Melbourne Mercer Global Pension Index		
The average replacement ratio is about 75%		
	The total value of funded pension schemes exceeds is close to euro 740 billion, about twice the Danish GDP	
	Period 2007-2021 the average annual after-tax real rate of return for private pension schemes was close to 5%	

Source: BETTER FINANCE own composition

The occupational pension scheme is still in a build-up phase. Contribution rates have been steady at current levels since 2010, and it takes several decades for the scheme to mature in the sense of having contributed during an entire work-career and getting a pension throughout retirement based on the accumulated savings. The system with mature in two to three decades. As a consequence, occupational pensions will eventually become more important than Pillar I schemes.

Table DK2. Participation in the three pillars					
	Pillar I		Pillar II	Pillar III	Pillar II and/or III
	ATP	Folkepension			
Contributors (as % of the work force)	94%	0%	81%	25%	91%
Retirees (as % of retirees)	90%	99%			61%

Source: Forsikring Pension DK - Folkepension og ATP

The total value of funded pension schemes in Denmark in the last 20 years (2000-2019) is presented below (both in DKK and Euro).

Table DK3. Total value of funded pension schemes 2000-2020 (in bln)							
	Life insurance companies	Industry wide pension funds	Company pension funds	Banks	ATP	Total	Currency
2000	650	270	43	215	247	1.424	DKK
	87	36	6	29	33	191	€
2001	650	272	40	215	247	1.423	DKK
	87	36	5	29	33	191	€
2002	669	277	37	198	243	1.424	DKK
	90	37	5	27	33	191	€
2003	732	302	38	215	263	1.550	DKK
	98	40	5	29	35	208	€
2004	810	339	39	244	307	1.740	DKK
	109	45	5	33	41	233	€
2005	953	381	42	298	365	2.040	DKK
	128	51	6	40	49	273	€
2006	1.010	402	43	347	372	2.174	DKK
	135	54	6	47	50	291	€
2007	1.054	412	43	369	389	2.268	DKK
	141	55	6	49	52		€
2008	1.119	396	44	308	678	2.545	DKK
	150	53	6	41	91	341	€
2009	1.212	436	45	378	609	2.680	DKK
	162	58	6	51	82	359	€
2010	1.351	478	51	405	758	3.043	DKK
	181	64	7	54	102	408	€
2011	1.496	556	53	399	776	3.279	DKK
	201	75	7	53	104	440	€
2012	1.682	565	57	438	791	3.533	DKK
	225	76	8	59	106	474	€
2013	1.757	585	53	445	677	3.517	DKK
	236	78	7	60	91	471	€
2014	2.013	646	59	424	812	3.955	DKK
	270	87	8	57	109	530	€
2015	2.074	672	60	446	781	4.033	DKK
	278	90	8	60	105	541	€
2016	2.289	692	59	460	870	4.369	DKK
	307	93	8	62	117	586	€
2017	2.368	727	56	385	893	4.429	DKK
	317	97	8	52	120	594	€
2018	2.344	726	60	354	907	4.431	DKK
	314	97	8	47	122	594	€
2019	2.710	848	68	393	1.024	5.082	DKK
	363	114	9	53	137	681	€
2020	**2.950**	**859**	**69**	**349**	**1,14**	**5.515**	**DKK**
	395	**115**	**9**	**47**	**0**	**739**	**€**

Source: ForsikringogPension

Statutory ages in the pension system (for public pensions, for early retirement, and age limits for payment of funds from pension schemes) are established by law and thus regulated at the political level. The effective retirement age has been gradually increasing over the years, and it is currently about 66 years, see table DK4. A sequence of reforms has tightened the possibilities for early retirement and increased the statutory pension age (and early retirement age). The statutory pension age has increased in steps from 65 years to reach 67 years in 2022. Thereafter the statutory retirement age is indexed to the development in life expectancy at the age of 60 in order to target the expected pension period to 14.5 years (17.5 including early retirement) in the long run (currently about 18.5/23.5 years). There is a "speed limit" stipulating that the statutory retirement can be increased by more than one year every fifth year. In accordance with the indexation rules, parliament decided in 2015 to raise the statutory retirement to 68 years in 2030, and in 2020 it was increased to 69 years in 2035. The next decision comes up in 2025, and according to development in longevity, the statutory retirement age will increase to 70 years.

The indexation scheme has recently been debated, and it has been questioned whether it is too tough, especially when implying a statutory pension age above 70 years. The higher statutory pension age has also prompted a discussion of early exit options from the labour market for those who have a reduced work capability, but not so severely that they are eligible for a disability pension. Recently a so-called senior pension has been introduced giving an option to retire six years prior to reaching the statutory retirement age, provided work capability is reduced (unable to work at least 15 hours per week) and a sufficient strong work record. A new scheme "early pension" (tidlig pension) is available for persons who at the age of 61 have worked at least 42 years in the labour market. Finally, early retirement (efterløn) remains a possibility to retire in a window (after reforms reduced from five to three years) prior to the statutory pension age for persons who have contributed to the scheme for at least 30 years. The number of persons eligible for early retirement is decreasing.

Source: *Forsikringpension.dk*, **preliminary*

Table DK4. Retirement age in Denmark 2000-2021	
Year	Average retirement age
2000	62,4
2001	62,4
2002	62,3
2003	62,2
2004	62,2
2005	62,3
2006	62,3
2007	62,5
2008	62,7
2009	62,9
2010	63,1
2011	63,3
2012	63,4
2013	63,5
2014	64,2
2015	64,5
2016	64,9
2017	65,2
2018	65,6
2019	65,9
2020	65,9
2021	66,1

Source: ForsikringogPension.dk

Pillar I

Pillar I basically consists of two pension plans: the tax financed public pension (Folkepension) and the ATP, a mandatory pension scheme compromising the larger part of the population. Both schemes are regulated by law.[69]

The state pension (Folkepension)

The public pension includes a basic amount (flat-rate pension) and means-tested supplements (I: supplementary pension ("pensionstillægget") and II: supplementary pension benefit ("ældrecheck")). In addition, there are needs-based supplement, e.g., housing, medical expenses. The supplements are means-tested on a family basis. All are entitled to the public pension when reaching the statutory retirement age provided a residence requirement is

[69] See: "Lov om sociale pensioner" (http://www.socialjura.dk/content-storage/love/love/pensionslov/) and "Lov om Arbejdsmarkedets Tillægspension" (https://www.retsinformation.dk/Forms/R0710.aspx?id=164210).

satisfied and earned income is below a certain threshold[70]. Public pensions are indexed to wages.

The state pension consists of a basic pension and a personal supplementary pension. For 2022 the base pension is DKK 78.500 a year (€10,500), and the maximum supplement (for a single) is DKK 89.600 (€12.000). The means-testing is relatively complicated depending on family situation and other sources of income. As an example, for a single the pension supplement is reduced by 30.9% of income above a lower threshold, and therefore there is no supplement for a sufficiently high income e.g., from an occupational pension scheme.

ATP

ATP (The Labour Market Supplementary Pension Scheme) is part of the Danish welfare system for old-age pensioners.

By law, all wage earners and recipients of transfer income contribute to the supplementary labour market pension (ATP). It is a funded defined contribution scheme to which all contribute the same monthly amount (depending on working hours) in 2021 DKK 3.408 (Euro 458) The contribution has been unchanged nominally since 2016. The pension benefit is a guaranteed life-annuity. If the beneficiary dies prematurely (before reaching an age equal to the statutory pension age plus five years), a lump-sum amount is paid to the heirs.

For a person with full-time employment, the pension benefit corresponds to about 1/3 of the base pension in the public pension system. About 40% of current pensioners do not have any pension beyond the public pension and the ATP. Also in the future, the ATP will constitute a significant part of the basic provision of pensioners in the Danish system

As of 2020, a mandatory pension scheme has been introduced for recipients of public transfers. The contribution rate, paid by the state, starts at 0.3% and increases in steps to 3.3% in 2030. The contributions are part of the ATP-pension.

Pillar II

Occupational pensions are an outcome of collective bargaining[71]. Before 1990, Pillar II schemes were almost exclusively for civil servants and white-collar workers in the private sector. A tripartite agreement between the government and the social partners in the late 1980s resulted in occupational pension schemes for the larger part of the labour market.

[70] To be eligible for the full amount, residence in Denmark for 40 years after the age of 15 is required, otherwise the amount is reduced proportionally to the period of residence. To be eligible for the full amount, labour income cannot exceed DKK 344,600 (2021).

[71] Collective agreements cover a large part of the labour market. There is a tradition for tripartite consultations between the Government, unions and employers' organizations, and labour market issues are generally settled by collective agreement rather than law. The establishment of occupational pensions is an example of this. An agreement of the three parties was made in 1989 and it marked the start of introduction of occupational pension schemes to more of the private labour market (most public employees were already covered).

Contribution rates were increased over a sequence of years, and they have remained constant at their current level since 2010. Contribution rates differ across groups and is 12% for blue collar workers and 15-18% for white collar workers (reflecting their longer longevity). Normally, 2/3 is paid by the employer and 1/3 by the employee.

As a result of the phasing in of the occupational pension scheme most pension funds are still in a building up phase with contributions exceeding pay-outs. Accumulated funds are thus on an increasing trajectory, and in total amounts to about two times GDP.

Total contributions to occupational pension schemes amounted to DKK 200 billion (€27 billion) in 2020, close to four times higher than the level in 2000. The total work force is around 3 million people, so the overall average contribution can be estimated to about 60,000 DKK per year (€8,000).

All private pension schemes are fully funded. The vast majority are defined contribution (DC) schemes. Even in the very few defined benefit (DB) schemes, where the employer guarantees a pension proportional to the salary, the guarantee must be funded in a pension fund or a life insurance company.

Table DK5. Number of private pension contracts 2001-2021

Year	Individual schemes	Occupational schemes	Total
2001	1.255.931	2.604.127	3.860.058
2002	1.187.110	2.837.482	4.024.592
2003	1.126.061	3.016.891	4.142.952
2004	953.925	3.055.831	4.009.756
2005	1.022.752	3.361.712	4.384.464
2006	1.095.731	3.405.394	4.501.125
2007	1.112.714	3.589.372	4.702.086
2008	1.293.226	3.771.977	5.065.203
2009	1.378.350	3.898.196	5.276.546
2010	1.142.774	3.891.501	5.034.275
2011	1.208.941	4.059.209	5.268.150
2012	1.398.422	3.997.145	5.395.567
2013	1.481.007	3.801.555	5.282.562
2014	1.431.842	4.153.361	5.585.203
2015	1.403.226	4.265.022	5.668.248
2016	1.568.273	4.028.323	5.596.596
2017	1.645.745	4.403.822	6.049.567
2018	1.666.448	4.513.366	6.179.814
2019	1.750.005	4.515.485	6.265.490
2020	1.786.682	4.620.069	6.406.751
2021	1.754.404	4.790.380	6.544.784

Source: ForsikringogPension.dk

Around 80% of all working people contribute to a Pillar II scheme within a year. However, there is a so-called residual group comprising i) persons not covered by an occupational pension, ii) persons with interrupted working careers (unemployment, sickness, parental leave etc), and thus not contributing consistently through working ages, and iii) self-employed. There are ongoing discussions on how to address this problem. The mandatory pension recently introduced (see above) is a partial solution of the problem.

Pillar II schemes are established in either life insurance companies, in pension funds (pensionskasser) or - not very commonly – in banks (around 2%). By the end of 2020, pension funds and life insurance companies had a total of about 4.6 mln. contracts concerning occupational pension. In the same year, around 2.6 mln. persons paid contributions to one or more occupational schemes, implying that some employees are enrolled in more than one occupational pension scheme.

Pillar II DB schemes

Previously, it was common for civil servants in the state and in local governments to be entitled to a tax-financed DB pension. These schemes are being phased out. Today, only about 30.000 civil servants in the state are still entitled to a pension of this type when they retire. Civil servants in local governments now enrol in a DC scheme, and the very few remaining DB schemes are typically funded in an insurance company.

A small number of private companies still offer DB schemes for some of their employees. These schemes are funded in specific pension funds – *firmapensionskasser*. Their importance has been decreasing for many years and so have their numbers, total assets and number of insured. The number of insured has fallen 1/3 from around 18,000 in 2008 to about 12,000 in 2021. Today, only four firmapensionskasser hold assets of more than DKK 1,000 million (€134 million), and they only constitute 1.1% of the total market, and most of the funds do not enrol new members anymore. About 2,000 persons made contributions in 2019, whereas benefits were paid out to around 10,000 people.

Pillar III

In principle, Pillar III pension schemes provide the same opportunities for the individual citizen as occupational schemes. Products available and tax rules are approximately identical. Individual schemes are offered by banks, insurance companies and most pension funds, but only if the saver is already enrolled through his job.

The strong growth of Pillar II schemes has, to some degree, diminished the interest for individual savings in explicit pension schemes. Also, changes in tax regulation have negatively influenced the demand for Pillar III schemes. Moreover, many households hold assets outside the pension scheme, primarily in the form of real estate.

In 2000, approximately 1 million persons contributed to an individual scheme, but this number has steadily declined until 2013, and since then increased somewhat to about 630.000 persons in 2019. The huge fall in 2013 is due to a shift in the lump sum pension from kapitalpension to alderopsparing. There may take time to get acquainted with the new scheme, and at the cap on the contributions to the periodic instalments or fixed term annuities (*ratepension*) in 2012 is also contributing to explain the decline[72].

In 2000, contributions to individual schemes amounted to DKK 16,209 mln (€2,177 mln), or around 30% of total contributions for pension schemes. The figure decreased until 2013 and has been growing slowly thereafter. In 2020, contributions to individual schemes were nominally DKK 17.195 min (€2.310 mln).

Tax rules have changed, as already mentioned, especially for periodic instalments and lump sum pensions. This may also have had an impact on the demand for Pillar III schemes. In Pillar II schemes, the change of regulations has led to growing contributions to lifelong annuities, but the same substitution has not been seen in Pillar III.

Savings in banks used to play more important role for individual schemes than for occupational schemes. Until 2013, when the tax regulation for lump sum pension was changed, individual pension saving schemes were predominantly held in banks, rather than in insurance companies and pension funds. Today, around 60% of contributions are in insurance companies or pension funds and 40% are in banks.

Replacement ratio and pension benefits

Table DK5 shows the replacement ratio for different educational groups and people not working prior to retirement. The replacement rate is calculated as the disposable income in the year after retirement relative to the year before retirement. The income is presented net of taxes.

[72] See https://www.forsikringogpension.dk/media/7019/pensionsindbetalinger-cps.pdf

Table DK6. Replacement ratio and educational background							
	Working before retirement						Not working before retirement
	Education						
	Unskilled workers	Skilled workers	Short cycle higher education	Medium cycle higher education	Long cycle higher education	All	
2004	72,2	71,2	73,9	82,9	88,2	73,5	88,5
2005	71,9	71,5	75,2	82,1	89,3	73,7	91,4
2006	69,6	69,4	72,7	79,9	84,6	71,4	95,3
2007	68,1	67,7	70,8	77,3	83,3	69,7	96
2008	67,7	67,5	70	76,8	81,1	69,4	100,5
2009	67,4	66,6	69,4	76,5	77,3	68,8	100,9
2010	70,3	69,5	73	78,2	80,1	71,5	103,2
2011	67,2	66,5	73,3	76,2	77,2	68,8	101,6
2012	67,9	66,5	70,1	74,9	77,2	68,8	101,9
2013	70,2	69,2	72,7	77	78,6	71,2	107,6
2014	72,1	71,9	74,1	80	81,9	73,8	107,4
2015	71,4	71	77,3	79,6	83,5	73,5	108
2016	73,1	72,2	78,4	79	83,6	74,4	107,1
2017	72,1	71	76,1	76,3	78,3	73,1	104,8
2018	74,5	71,8	77,5	77,6	78,5	74,3	105,5
2019	75,1	72,0	77,2	75,8	75,7	74,1	103,1
2020	73,0	69,7	72,1	74,0	73,7	71,9	100,5

Source: *Forsikfring & Pension Danmark*

The average net replacement rate was 72% in 2020, and the replacement rate is generally increasing with education reflecting higher contributions rates. The replacement is a snapshot in the transition of the pension system, and since this primarily is improving occupational pensions for groups with low- and medium-income levels[73], the average replacement rate is expected to increase in the future.

A replacement rate close to 100% for individuals not working before retirement reflects the design of the social safety net in the Danish welfare state. The benefit to non-working is close to the public pensions (including supplements) reflecting distributional concerns, and by implication the replacement rate for this group there get close to 100%.

[73] Pension schemes for lower educated people in the private sector were not established until 1990. The contribution rates grew gradually thereafter, therefore people who retired today were between 35-40 years old when they enrolled, thus their contributions were low in the first many years.

Today, the most important source of income for pensioners is Pillar I. Approximately 40% of all current pensioners have little or no other income. Pay-outs from the *folkepension* amounts to DKK 120 billion per year (€16.1 billion). The ATP pays out around DKK 17 billion per year (€2.3 billion). Total pay-outs from private pensions schemes to pensioners were around DKK 71 billion (€9.5 billion) in 2020.

For the 50% of today's pensioners with the lowest income, 90% of their income is *folkepension* (thus, from Pillar I). But this situation is changing with the growing importance of Pillar II. Today almost 60 percent of the newly retired people have made contributions to pillar II during their active years on the labour market. In 2040, private pensions are expected to exceed half of the total income for about 40% of the pensioners. Even for the lowest income groups of the retired population, about 20% of their income is expected to come from private pensions under the condition of an unchanged level for the *folkepension* (of Pillar I).[74] However, at older ages some pensioners become increasingly dependent on Pillar I pensions, since schemes with period instalment expire.

Pension Vehicles

Private pension schemes are administered by pension funds, insurance companies or in banks. This goes for Pillar II as well as for Pillar III.

In the present description, the emphasis is on Pillar II since it is the more important of the two. If Pillar III differs from Pillar II, it is mentioned in the text.

A Danish industry-wide *pensionskasse* – or pension fund – is a legal entity owned and governed by its members. A *pensionskasse* can provide the same kind of products as a life insurance company and it is subject to the same kind of regulation as a life insurance company – specifically, the Solvency II Directive.[75]

The first occupational schemes for civil servants were established in *pensionskasser,* which provided pension schemes for a specific profession, e.g., nurses. Occupational pension schemes in the private sector thus originally covered employees with different professional backgrounds working in the same company. Such schemes used a life insurance company as a vehicle. Today, the differences between the legal forms have lost importance. Many occupational pension schemes for the private sector are industry-wide and are administered by life insurance companies.

But still, a distinction is often made between industry-wide schemes and company schemes. Industry-wide schemes are often more standardized and with little freedom of choice left to

[74] See http://www.atp.dk

[75] Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (recast) http://data.europa.eu/eli/dir/2009/138/2014-05-23.

the single member. All decisions are made collectively. The pension provider is only indirectly exposed to competition since customer mobility is low. These characteristics make in general the schemes relatively cheap. Insurance companies administering company schemes are more exposed to competition. Company schemes more often change pension providers. In general, company schemes offer more individual possibilities, e.g., concerning insurance coverage and choosing between a guaranteed or none-guaranteed scheme. Therefore – as a general trend – the insurance companies have higher costs, especially related to acquisition and to individual counselling.

An occupational pension scheme normally provides coverage for old age, disability and early death. Critical illness and even health care are other insurance risks that have become typical to offer. Typically, 15%-25% of the contributions are spent on coverage for social risks other than old age.

The supply of pension products is regulated partly by tax law and partly by the general regulation for insurance and banking. The regulation is the same for Pillar II and Pillar III. This means that insurance companies and pension funds on the one hand and banks on the other hand provide competing products to the market. Products offered by life insurance companies and pension funds may accumulate savings but must also cover some kind of insurance risk – longevity, death, disability etc. – whereas banks can only act as an intermediary of insurance coverage supplementary to a saving product.

Tax regulation defines the products

Tax rules play a crucial role for pension products.

The tax regulation defines the distinctions between the 3 groups of pension products:

- Annuities (*livrente*);
- Periodic installments or fixed term annuities (*ratepension*);
- Lump sum pension (*kapitalpension/aldersopsparing*);

All kind of pension savings can be paid out in a window three to five years before reaching the statutory retirement age.

The general taxation principle is a so-called ETT-scheme, that is, contributions are tax-deductible in the current income, the return is taxed, and pension income is included in taxable income. More recently a specific scheme has been introduced which is of the TEE-type.

Annuities (*livrenter*) provide the beneficiary with a monthly pay-out from retirement to death. Regular contributions to an annuity are deductible in the income tax base without any limit. Pay-outs are taxed as personal income. The annuity-contract may have contingencies for lump-sum payments to heir in case of death.

Periodic instalments or fixed term annuities (*ratepension*) provide monthly instalments of equal amounts for a period of minimum 10 years and maximum 25 years. A *ratepension* can be life-contingent or the capital value can be paid out to the heirs in the case of death[76]. There is a cap on the contribution DKK 59.200,700 (€7.900) in 2022. Pay-outs are taxed as personal income.

Lump sum pensions (kapitalpension/aldersopsparing) provide you with a lump sum in old age. The lump sum is paid out five years before statutory retirement age at the earliest and 15 years after this age at the latest. The regulation of this product has changed a lot during the years. Today there are two products in the market: *kapitalpension* and *aldersopsparing*. For a *kapitalpension* the income tax is deferred. When paid out the accumulated savings are taxed at 40%. New contributions to a *kapitalpension* have not been allowed since 2013, and instead a new scheme, *aldersopsparing,* has been introduced. Contributions to an aldersopsparing are not deductible and the pay outs are not taxed and are not included in means testing for the public pension supplements. Hence, income tax is no longer deferred when saving in this type of product. The maximum contribution was DKK 29,600 (4,000 euros) in 2017, but the regulation has been changed, so the maximum contribution for 2022 is DKK 5,500 per year (€ 700) except for the last 5 years before retirement age, where the maximum contribution per year is DKK 54,200 (€ 7.200) (see section on taxation).

[76] https://skat.dk/skat.aspx?oid=2559

Table DK7 (A). Number of persons contributing to one or more private pension schemes, 1998-2021							
	Individual schemes						
Year	Annuities	Periodic instalment, insurance	Lump sum insurance	Periodic instalment, bank	Lump sum, bank	TTE lump sum, insurance or bank	*One or more individual schemes*
1998	259.000	82.000	267.000	45.000	744.000	-	1.146.000
1999	257.000	96.000	236.000	91.000	631.000	-	1.078.000
2000	260.000	102.000	221.000	124.000	600.000	-	1.064.000
2001	256.186	105.372	208.361	126.776	566.013	-	1.029.736
2002	252.354	109.068	198.518	137.834	545.463	-	1.010.388
2003	249.901	112.817	189.861	151.401	540.339	-	1.005.919
2004	260.574	117.470	182.494	168.181	543.297	-	1.017.806
2005	262.298	119.131	174.437	198.445	553.162	-	1.033.467
2006	255.074	119.054	166.014	221.825	561.435	-	1.038.035
2007	238.632	123.642	156.234	290.036	646.566	-	1.132.179
2008	232.590	124.325	145.194	259.241	529.316	-	1.017.452
2009	226.275	122.904	137.893	277.580	505.959	-	998.868
2010	216.788	91.110	128.657	191.101	479.363	1.700	855.465
2011	225.108	90.557	121.585	192.034	467.943	7.098	856.640
2012	214.991	93.408	118.720	177.146	457.700	6.795	812.337
2013	221.418	144.571	5.791	206.323	14.711	5.997	571.360
2014	237.274	137.031	3.681	203.616	2.012	220.648	631.716
2015	242.256	130.106	2.953	194.441	1.302	265.193	656.600
2016	253.018	126.346	2.591	185.565	933	291.129	650.869
2017	262.908	124.312	2.289	203.182	953	386.673	740.165
2018	268.336	131.673	2.009	187.622	830	327.887	674.315
2019	268.733	133.086	1.794	181.274	514	3.982	302.547
2020	268.758	134.770	1.573	191.376	501	3.760	316.578
2021	259.458	141.701	1.271	196.597	740	3.728	326.320

Source: *Forsikring & Pension Danmark*

Table DK7 (B). Number of persons contributing to one or more private pension schemes, 1998-2021							
	Occupational schemes						
	Annuities	Periodic instalment, insurance	Periodic instalment, bank	Lump sum, insurance	Lump sum, bank	TTE lump sum, insurance or bank	*One or more occupational schemes*
1998	1.513.000	130.000	26.000	742.000	269.000	-	1.721.000
1999	1.571.000	224.000	60.000	836.000	205.000	-	1.751.000
2000	1.676.000	537.000	69.000	1.115.000	196.000	-	1.855.000
2001	1.728.748	624.144	73.330	1.148.454	195.035	-	1.917.845
2002	1.755.775	678.454	67.771	1.114.154	150.613	-	1.944.128
2003	1.782.288	896.553	68.229	1.103.331	133.711	-	1.963.281
2004	1.818.140	962.244	75.532	1.126.380	118.735	-	1.995.636
2005	1.851.642	1.009.499	87.712	1.133.902	104.503	-	2.027.786
2006	1.897.567	1.099.180	106.666	1.150.081	100.874	-	2.088.547
2007	1.971.768	1.192.310	117.778	1.183.232	97.106	-	2.150.860
2008	2.081.505	1.259.956	123.282	1.184.460	93.221	-	2.270.862
2009	2.077.861	1.251.463	127.094	1.126.765	87.099	-	2.259.965
2010	2.061.011	1.240.876	100.526	1.046.102	80.423	-	2.102.855
2011	2.091.462	1.270.709	92.699	1.009.685	75.510	-	2.242.204
2012	2.123.697	1.310.147	85.834	965.023	72.376	-	2.259.603
2013	2.143.487	1.464.161	92.614	3.537	1.951	9.552	2.265.953
2014	2.174.825	1.506.361	87.255	1.989	142	10.069	2.290.884
2015	2.197.722	1.535.244	82.409	419	37	11.343	2.310.180
2016	2.242.792	1.572.731	78.058	208	12	13.363	2.344.391
2017	2.284.406	1.613.025	74.175	154	35	16.907	2.378.569
2018	2.302.287	1.605.300	72.176	123	253	559.030	2.398.171
2019	2.328.187	1.630.375	66.578	96	11	741.557	2.418.462
2020	2.335.426	1.618.870	59.043	72	12	751.526	2.437.288
2021	2.390.804	1.655.359	57.226	66	16	779.190	NA

Source: *Forsikring & Pension Danmark*

Table DK8. Total pension contributions to private pension schemes (2001-2021)		
Year	Amount in DKK millions	(€ millions)
2001	55.216	7.401
2002	60.187	8.068
2003	65.850	8.827
2004	69.057	9.257
2005	74.074	9.929
2006	85.032	11.398
2007	93.298	12.506
2008	103.381	13.857
2009	98.175	13.160
2010	107.088	14.354
2011	114.456	15.342
2012	120.741	16.184
2013	124.458	16.683
2014	131.663	17.648
2015	138.213	18.526
2016	147.800	19.811
2017	160.480	21.511
2018	170.634	22.872
2019	172.498	23.122
2020	183.376	24.580
2021	203.261	27.245

Source: *Forsikring & Pension Danmark*

Very often a pension scheme combines the three groups into a mix, i.e., a lump sum, with periodic instalments up to the maximum allowed contribution, and lifelong annuities for any payment above the maximum.

Pension savings in banks can have the form of a periodic instalment or a lump sum pay-out. There are three ways in which pension savings in banks can be invested:

- as an ordinary deposit with the interest rate offered by the bank;
- in investment funds of the customers own choice; or
- in listed equities, bonds and other financial assets owned directly by the customer.

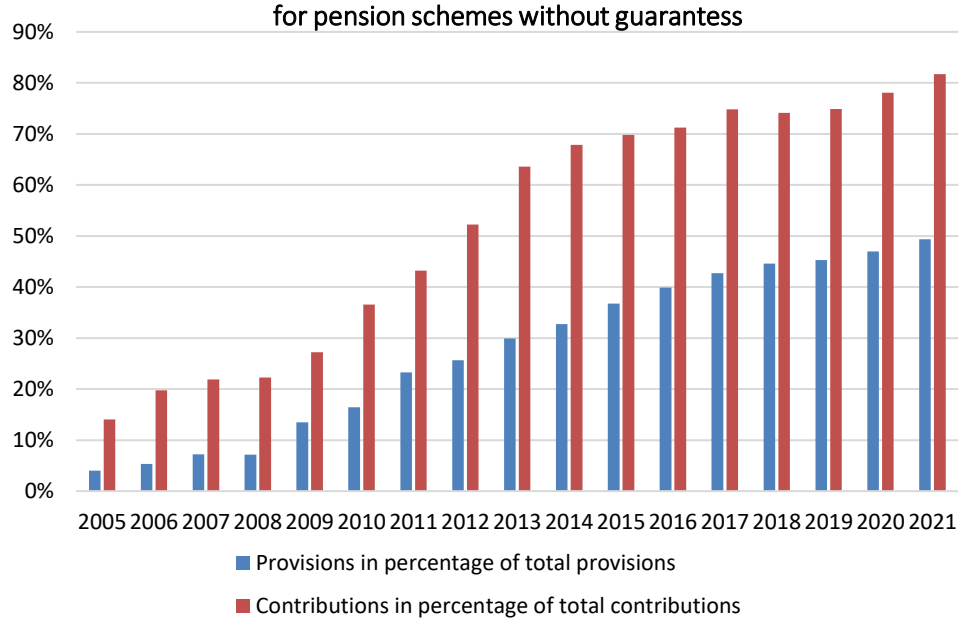
The Danish private pension schemes are DC schemes (with a very few Pillar II exceptions). The system has gradually changed from a guarantee-based insurance approach into a market rate-based approach. Until 1994, the schemes followed a DC hybrid model. According to this model, the life insurance company or the pension fund guarantees a minimum nominal

benefit, calculated on assumptions about a number of parameters such as interest rates, costs and insurance risks like longevity, death rates and disability. The guarantee is issued by the pension provider, not by the employer. The model was originally meant to have no or very little risk, since the regulatory assumptions were very cautious. Therefore, the realized result was always a surplus, and the customers were granted a bonus. But the interest rate and the longevity developments have made it increasingly difficult to meet these guarantees. Therefore, the Financial Supervisory Authority (FSA) gradually lowered the maximum allowed interest rate guarantee to 1% for new contracts and introduced new requirements for projecting longevity. At the same time, the FSA gradually raised the required provisions for existing guarantees. The guarantees are often binding for the insurance company/pension fund. However, some occupational pension schemes have been able to decide collectively to cancel the guarantees and change to a market rate-based approach. Others have offered their customers compensation if they were willing to cancel the guarantee individually. Thus, these guaranteed schemes play a much less important role today than previously with the implication that the single deposit holder carries more risk than in the past.

In 2006, contributions to guaranteed schemes amounted to 83% of total contributions. In 2019, this share has decreased to 24%. Hence, today close to 70 % of all new savings are placed in DC schemes without guarantee or with a guarantee only against loss. Measured by the provisions, the guaranteed schemes have decreased from 95% in 2006 to 50% in 2020. In addition, the high-rate guarantees – above 4% in interest rate – have decreased even more, from 58% in 2005 to 10% in 2020[77].

[77] https://www.finanstilsynet.dk/~/media/Tal-og-fakta/2019/MU/Markedsudviklingsartikel_LP_2018-pdf.pdf?la=da, table A2.

Graph DK9. Relative development of provisions and contributions for pension schemes without guarantess



Source: Forsikring & Pension Danmark

Graph 10. Provisions for guaranteed and non-guaranteed schemes

Source: Forsikring & Pension Danmark

Charges

The level of costs has received increasing attention in recent years. This is partly due to the low rate of interest in the market.

The Money and Pension Panel – a Council under the Ministry of Industry, Business and Financial Affairs – has calculated that, under realistic assumptions, an increase of costs of 50% of total savings/provisions reduces of life-time consumption by 1.2% for low-income groups and 2.3% for high-income groups. The same increase makes it necessary to postpone retirement by two years for life-time consumption to remain unchanged.

The Danish FSA has analysed the development of administration costs, including costs related to acquisitions and sales, but not including investment costs. The administration costs have declined over the last 10 years to 0,17% of total provisions in 2019. The FSA distinguishes between market-oriented insurance companies (running mainly company pension schemes) and non-market-oriented insurance companies/pension funds (running mainly industry-wide pension schemes). Since industry-wide pension schemes are typically governed by the customer representatives, and since their schemes are often very standardized, they are in general cheaper to run than company schemes.

Table DK11. Administration costs in DKK and in percentage of total provisions and contributions, 2007 -2020

	Costs/customer in DKK	in euro	Costs in percentage of total provisions	Costs in percentage of total contributions
2007	949	128	0,44	4,7
2008	895	120	0,43	4,5
2009	929	125	0,43	4,7
2010	814	109	0,34	4,0
2011	956	129	0,36	4,2
2012	882	119	0,33	3,9
2013	881	119	0,30	3,6
2014	826	111	0,28	3,3
2015	772	104	0,26	3,0
2016	769	103	0,22	NA
2017	755	101	0,19	NA
2018	762	102	0,18	NA
2019	787	106	0,22	NA
2020	756	102	0,20	NA
2021	772	104	0,18	NA

Source: Danish FSA

Transparency on costs has increased. Since 2011, life insurance companies and pension funds have agreed to inform all their customers of their total charges in DKK (ÅOK) and their total

charges in percentage of the value of their pension (ÅOP) on a yearly basis. These key figures include direct and indirect administration costs, direct and indirect investment costs, charges to the company for any guarantees and other kinds of risks as well as any charges paid by the life insurance company to intermediaries. How total costs are allocated to the individual customers is decided by each insurance company or pension fund, but the key for distribution is controlled by the external auditor to ensure equivalence between the figures of the annual report and total distributed charges (ÅOK/ÅOP).

For market comparisons between life-insurance companies and pension funds, key figures for several standardized examples are published on the website www.faktaompension.dk (see below).

While higher administration costs always lead to lower pension benefits, it is difficult to evaluate investment costs. Investing in government bonds is very cheap – but it might not be the most profitable investment. Investing in foreign equities is more expensive – but might have a higher expected return. So, the relationship between investment costs, investments risks and expected investment return is not straightforward.

Furthermore, the pension companies' investment management must take their liabilities into consideration. Some investments are made to hedge the risk against, for example, changes in interest rates. When comparing investment costs, one must consider the existence of guarantees.

The website faktaompension.dk offers the opportunity to compare total charges of various pension companies and for various types of customers. All figures are calculated and reported by the pension companies and the website is run by the Danish Insurance Association.

The website www.pensionsinfo.dk gives the individual access to information on all pension entitlement – public and private – and thus essential information to assess the adequacy of pension savings. The website also includes facilities such that the consequences of the retirement age for pension benefits can be assessed. To increase transparency and facilitate comparisons, projections of future pension level are now also presented common return expectations determined by the Council for Return Expectations (https://www.afkastforventninger.dk/en/).

Table DK12 illustrates cost levels and costs structures for three typical different persons at different positions in the lifecycle, for three different pension companies.[78] Costs are relatively

[78] The companies compared are: PFA – Denmark's largest life insurance company with around 1,3 million customers in 2019 and total pension provisions of about DKK 587 billion (€79 billion); a non-profit company founded in 1918 by a number of private employer organizations which runs mostly pensions schemes for large or medium-sized Danish companies; Danica – the second-largest life-insurance company in Denmark with around 650,000 customers and pension provisions of about DKK 304 billion (€41 billion). Runs mostly pension schemes for large or medium-sized Danish companies; Pensiondanmark – founded in 1989 by the social partners to run an industry-wide pension

higher for young than older contributors, reflecting their lower level of accumulated assets. Administrative costs are relatively constant across types and hence matters relatively less, but investment costs are higher for older contributors with larger accumulated assets. Total charges are lowest in the industry-wide schemes with the highest degree of standardization and with no acquisition costs. Remaining schemes with guarantees have higher charges, as an example a person close to retirement (type III) would have costs of 1.4% and 1.1% in Danica and PFA, respectively, and payments for the guarantees constitute about half of total charges.

Table 12 Comparative examples of charges between different pension products and types

		Pension Danmark			Danica Pension			PFA		
Type		I	II	II	I	II	III	I	II	III
Costs in %		1.5	0.5	0.4	4.3	1.3	1.1	2.1	0.9	0.7
Total costs	€	57	375	1190	162	994	3077	78	708	2151
	DKK	425	2790	8854	1205	7397	22895	580	5271	16009
Of which	Administration	297	297	297	852	852	1049	345	575	920
	Investment	128	2493	8557	353	6545	21846	235	4696	15089

Note: Type I: Age below 40, annual contribution DKK 30.000, assets= 0, Type II: Age 40-55, annual contribution DKK 30-80.000, assets DKK 500.000, Type III: Age above 55, annual contribution at least DKK 80.000, Assets DKK 2. mio.
Source: www.faktaompension.dk

Taxation

Numerous changes in taxation have affected pension savings. The general trend has been to decrease marginal income taxes and broaden tax bases. The ETT scheme implies that the tax value of the deduction of a marginal increase in the contribution depends on the marginal tax rate when contributions are made, while the taxation of the resulting pension depends on the marginal tax rate when retired. With a progressive tax system, the latter marginal tax tends to be lower than the former (especially for middle-income groups), which is an implicit tax subsidy to pension savings. The tax reforms reducing the progressivity of the tax system have thus reduced this subsidy.

Taxation of the return was introduced as early as 1984. From this year, all interest earnings in pension schemes were taxed at a variable tax rate aiming to tax all real interest above 3.5%. From 1998, this real interest rate taxation was replaced by a proportional tax rate on all yields from pension assets. The tax rate is at present 15.3% and lower than the general taxation of capital income.

scheme for unskilled workers, mostly in the private sector. 750,000 customers and pension provisions of about DKK 240 billion (32 billion euros).

A difficult design issue is how to match public and private pensions. The former are means tested to target the least well-off pensioners. This distributional consideration creates a disincentive effect for individuals affected by means testing. Increasing pension savings and thus private pension will via means testing lower public pensions. This is an implicit tax which increases the effective tax beyond the tax-rates applying in the ETT-scheme, especially for contributions made close to retirement. Hence, higher savings or later retirement (implying larger contributions via occupational scheme) may result in high effective tax rates – in some cases even exceeding 100%. This is counter-productive to the aim of strengthening savings incentives and providing incentives for later retirement, and this dilemma has prompted several reforms.

Numerous changes in the tax rules for contribution to lump-sum and periodic instalment schemes have been made, especially on the cap on contributions. For individuals – e.g. self-employed – with variable income and thus scope for making pension contributions there is an argument for allowing large contributions in a single year. However, it is also a way for high-income groups to lower effective taxation. These two concerns have influenced policies in this area. As discussed above, the lump-sum pension scheme is closed for contributions (since 2013) and has been replaced by the aldersopsparing. This scheme follows a TTE principle, and pension payments are not included in means testing of public pension. This scheme was introduced primarily to reduce high effective tax rates on pension savings made close to retirement. Therefore, there is a cap on contributions depending on age relative to the statutory retirement age (see above) with a low cap for contributions made between 15 and 10 years prior to reaching the statutory retirement age, and a higher cap for contribution made 5 years or less before reaching the statutory retirement age.

In addition, age-dependent tax premia for pension contributions have been introduced, also to reduce effective taxation of pension savings involving a two-step age dependent tax rebate for pension contributions. Specifically, the rebate equals 12% for contributions made in a window of 15 to 5 years before reaching the statutory pension age, and 32% for contributions made no more than 5 years before reaching the statutory retirement age.

All these changes have added extra layers of complications to an already complex system, and imply that the taxation principles have evolved into a hybrid combining both ETT and a TTE schemes

Table DK13. Taxation of contributions, investment returns, and pension pay outs

	Contributions	Investment returns (4)	Pay outs
Annuities	E (1)	T	T
Periodic installments	E (1) (5)	T	T
Lump sum			
Kapitalpension	E (1) (2)	T	T (3)
Aldersopsopsparing	T	T	E

Source: BETTER FINANCE; Where: 1) Taxed with 8% wage tax; 2) New contributions have not been allowed since 2013; 3) Taxed at 40%; 4) All kind of returns are taxed at 15,3 %; 5) Exempted up to a maximum of DKK 53.500.

Pension Returns

In general, the investment policies are decided by the insurance company or the pension fund with the double aim to limit the risk and generate high returns. Savers can only influence the investments directly in unit-linked schemes and in bank saving schemes.

For DC schemes without guarantee, the major market-oriented insurance companies offer unit-linked products allowing the deposit holder a say on investment policies. Even customers in unit-linked schemes often let the insurance company choose investment funds based on the reported risk profile of the customer.

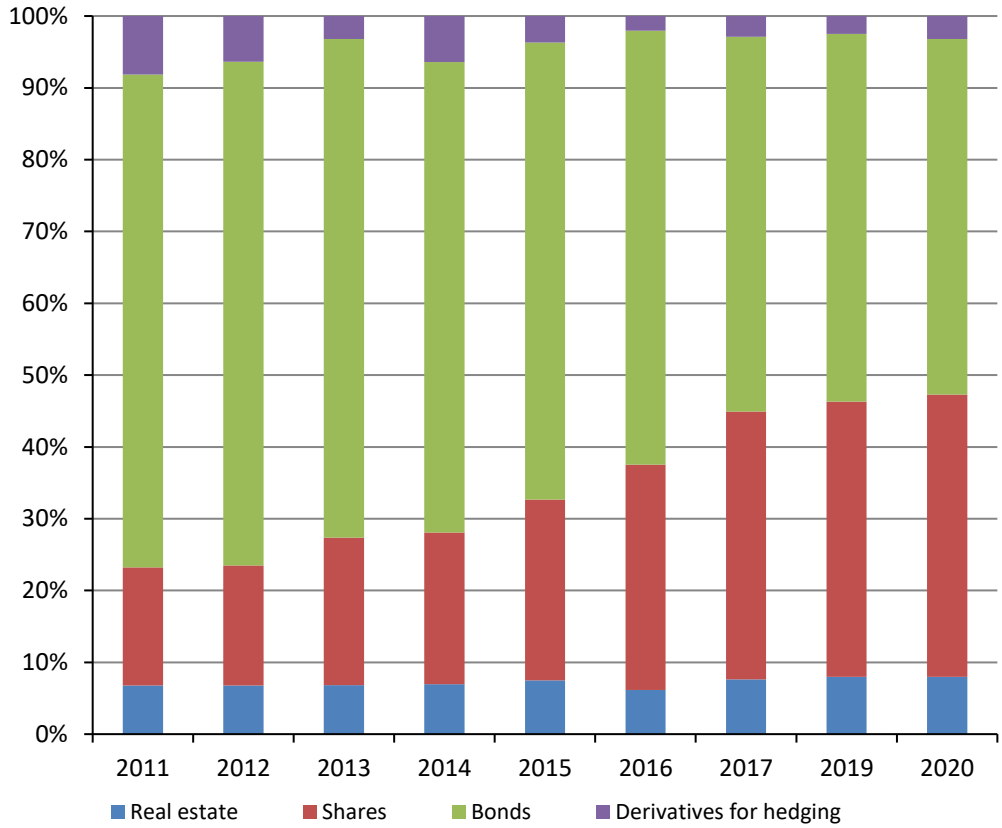
More common are so-called life-cycle products, especially for industry-wide schemes. The insurance company invests in two portfolios, one with high risk and one with low risk. For the young entering the scheme all contributions are invested in the high-risk portfolio. Gradually as the depositor ages, a larger and larger share of the asset holdings are invested in the low-risk portfolio to enhance predictability of the pension eventually received. In most companies the split between the two portfolios depends on age only. But some companies also offer their customers the opportunity to choose their risk profile as an additional parameter. The words "high" and "low" risk should be understood in relation to a rather high spread of these portfolios. Using the risk classification for investment funds (a scale from 1 to 7), the low as well as the high-risk portfolios are normally classified between 3.5 and 4.5.

For hybrid DC schemes with guarantees, the investment policy depends on the guaranteed interest rate and the size of accumulated reserves. The higher the rate – up to 4.5% – and the smaller the reserves, the more focus on hedging and risk minimizing.

Pension savings in banks give the individual customer the opportunity to make individual investment decisions. Savings can be invested in investment funds of the customers own choice, or even in listed stocks and bonds. No statistic data are available for these kinds of investments.

Pension schemes seek an investment return that is stable in the long run, predictable and as high as possible. Traditionally, a large part of pension savings is invested in bonds. The low interest rate environment in recent years has, therefore, been a challenge. Danish pensions are still, for a large part invested in bonds, but less so in government bonds and more in mortgage bonds. The Danish market has a long tradition for financing real estate with mortgage bonds, the mortgage bond market is large compared to the size of the country, and the credit risk is rated almost as low as for government bonds.

Graph DK14. Investment assets



Source: FSA

Investments in equities have grown, and so have investments in non-listed assets and indirect investments in emerging sectors.

Lately, many pension funds have turned to alternative investments such as infrastructure investments, e.g., in green energy. As an example, a significant number of windmill parks inside and outside Denmark are financed partly by pension funds. Also, investments in emerging geographic markets, investment in forestry and other alternatives to more traditional investments have become more common, but still constitute a minor part of total investment assets.

The difference in investment policies between schemes with and without guarantees has become more outspoken in recent years. The spread in risk and return has therefore grown.

Generally, the pension sector has delivered high returns, and weathered crises like the Financial Crisis and the Corona Crises. The long-run trend to lower returns poses challenges. For some years the decline in interest rates have generated capital gains, contributing significantly to the reported returns. The after-tax return has on average been close to 5 %

since 2007 – and a bit higher for schemes without guarantees, although with substantial year-to-year variations. Looking forward, a new normal with low real rates of return will be challenging and has brought focus on the issue whether more risk should be accepted in the quest for higher returns. In an environment where the individual to a larger extent directly carries the consequences of this risk, this is a particularly important discussion.

Table DK15. Nominal and real return of private pension schemes in Denmark 2007-2020 (in %)

	Nominal return before taxes and inflation		Nominal return after taxes		Real return after taxes and inflation	
2007	0,89		0,75		0,74	
2008	-3,09		-2,62		-2,65	
2009	7,57		6,41		6,4	
2010	10,13		8,58		8,56	
2011	9,12		7,72		7,7	
2012	10,47		8,87		8,84	
2013	1,88		1,59		1,59	
2014	12,95		10,97		10,96	
2015	1,8		1,52		1,52	
	Hybrid DC with guarantee	**DC with no guarantee**	**Hybrid DC with guarantee**	**DC with no guarantee**	**Hybrid DC with guarantee**	**DC with no guarantee**
2016	7,58	6,16	6,42	5,22	6,42	5,22
2017	5,45	8,54	4,62	7,23	4,6	7,22
2018	-0,63	-3,15	-0,53	-2,67	-1,2	-3,34
2019	11,9	13,9	10,1	11,8	9,2793	10,9733
2020	5,8	6,7	4,9	5,7	4,5126	5,2749

Source: FSA

The Danish FSA started reporting the returns on investments for private pension funds as a breakdown between *hybrid defined-contribution (DC) with guarantee* and *defined-contribution (DC) with no guaranteed* pension schemes as of 2016. The key figures shown are the return-on-investment net of costs as a percentage of the market value of investment assets.

Conclusion

The Danish pension system comprises tax financed public pensions with funded occupational pensions to deliver pensions preventing poverty among pensioners and high replacement for the larger part of the population. Importantly the system is financially viable, and public finances meet requirements for fiscal sustainability even taking into account the ageing of the population.

The pension system is still maturing, and the private pensions will gain in importance relative to the public pensions, although the latter would still be significant and play an important role in preventing poverty among pensioners.

Despite the attractive track record and the projected outcomes, the system faces a number of challenges.

Combining public and private pensions addresses distributional objectives but also leaves important incentive problems. Means testing serves to target the pensions and to minimize public pension expenditures, but it creates high effective tax rates detrimental to savings incentives and later retirement. Several reforms – especially tax reforms – reduces this problem but has also considerably complicated and already complex system.

It is a strength of the occupational pension scheme that it has the support of the social planners. A drawback is the "residual" groups of individuals who do not (or not to a significant extent) contribute to an occupational pension scheme. This group is heterogeneous, but it is important to address the problem. A recently introduced mandatory pension scheme for recipients of transfer income is a step in this direction, but it is not sufficient to solve the problem.

Higher retirement ages alongside increases longevity is important not only for public finances but also for sustaining high replacement rates. Formally statutory retirement ages are indexed to longevity. This is key to the financial viability of the system, but it also raises a problem of exit routes from the labour market, since not all are capable of prolonging worklife alongside increases in longevity. Recently introduced schemes – "seniorpension" and "tidlig pension" – are addressing these issues, but it is too early to assess whether they adequately cope with the problem.

The pension system's high degree of funding is an attractive part of the system, and in the past the returns on pension savings have been high, which has added to the support to the scheme. Looking forward to a new normal with low real rate of return, pension funds cannot deliver the same returns as seen historically, unless more risk is accepted. However, it is not clear that this is in the interest of pension savers, especially since they now more directly carry the risk.

In a system with mandatory pension contributions, governance structures are particular important to ensure that pension funds are administered in the interest of their members. This also applies in relation to charges. They have been decreasing for a long period of time and it is important to keep focus on this aspect.

Pension Savings: The Real Return

2022 Edition

Country Case: Estonia

Kokkuvõte

Eesti pensionisüsteem on tüüpiline Maailmapanga mitmesambaline süsteem, mis põhineb personaalsetel pensionikontodel. Aastat 2021 ilmestasid kerkivad aktsiaturud ja kiirenev hinnatõus, eriti aasta teises pooles. Teise samba fondide kaalutud keskmine tootlus oli nominaalselt 13,33% ja kolmanda samba sama näitaja oli 18,34%. Tulenevalt tarbijahindade kiirest tõusust 2021. aasta lõpus, kujunes teise samba fondide inflatsiooniga korrigeeritud reaaltootluseks 1,3%. Kolmanda samba reaal-tootlus oli 6,3%.

Teise samba fondide pikaajaline kaalutud keskmine reaaltootlus aastatel 2003-2021 oli 0,75% aastas. Kolmanda samba fondide puhul oli see näitaja samal perioodil 1,78% aastas.

Alates 2016. aasta lõpust on Eesti turule lisandunud mitmeid madalate tasudega passiivselt juhitud pensionfonde (nn. indeksfonde), mis on kiirelt võitnud kliente ja suurendanud turuosa. Madalate tasudega fondide lisandumine turule on sundinud fondivalitsejaid ka teiste fondide tasusid alandama. Nüüdseks pakuvad kõik Eestis tegutsevad pensionifondide valitsejad oma valikus vähemalt üht indeksfondi.

Aastal 2020 jõustunud vastuoluline pensionireform muutis Eesti II pensionsamba vabatahtlikuks ja võimaldas pensionkogujatel oma II samba säästud enne pensioniiga reliseerida. Selle tulemusena lunastati 2021. aasta septembris ja 2022. aasta alguses ligi veerand II sambasse kogunenud pensionivarast.

Lisaks tundub käesoleva raporti kirjutamise seisuga, et 2022 võib kujuneda pensionivara ostujõu siesukohalt võrreldavaks 2008. aasta krahhiga. Põhjuseks nii langevad aktsiaturud kui kiire inflatsioon.

Need kaks hiljutist arengut panevad suure küsimärgi alla Eesti praeguse pensionisüsteemi võimekuse tagada Eesti tänastele töötajatele adekvaatne sissetulek pensionieas.

Summary

The Estonian Pension system is a typical World Bank multi-pillar (three-pillar system) based on individual (personal) pension savings accounts. 2021 saw on average high nominal returns for both the second and third pension pillars, with Pillar II recording average returns of 13.33% and Pillar III funds averaging returns of 18.34%. After adjusting for inflation, which was the

highest it had been in decades, the real returns were: 1.3% for Pillar II funds and 6.3% for Pillar III funds. This meant that the long-term (since 2003) real returns of Pillar II funds ultimately stayed positive, albeit low, at an asset-weighted average real return since inception of 0.75%, while Pillar III funds have achieved a more respectable average real return of 1.78% over the same period.

Low-cost passively managed pension funds introduced since 2016 have forced providers to further decrease the fees charged in Pillar II as well as Pillar III pension funds, with all pension fund providers offering at least one low-cost passive fund as part of their range by mid-2021.

The year 2021 also saw almost a quarter of all pension savings withdrawn from the II pillar, after a controversial change to the pension system from the year before was implemented

Looking forward to 2022, a combination of galloping inflation and falling stock markets look likely to make it the worst year for pension savers in Estonia since the global stock market crash of 2008.

These two factors mentioned above present a huge challenge to policymakers if they wish to find ways to ensure current workers in Estonia will have adequate pensions when they retire.

Introduction

The Estonian old-age pension system is also based on the World Bank multi-pillar approach, which consists of three main pillars:

- Pillar I – State pension organised as a mandatory Pay-As-You-Go (PAYG) scheme;
- Pillar II – Funded pension, which was previously organised as a mandatory funded defined contribution (DC) scheme, starting from January 1, 2021, it has been possible to opt-out of the II pillar funded pensions scheme;
- Pillar III – Supplementary pension organised as a voluntary individual pension scheme.

The Estonian multi-pillar pension reform began in 1998 with the introduction of the third (voluntary) pension pillar in legislation. The formerly mandatory second pillar, which finances individual private retirement accounts with matching contributions from workers and the government, was introduced in 2001 and became operational on July 1, 2002. It became possible to opt-out of the second pillar pension and to liquidate any previous savings held under it, from January 1, 2021.

Table EE1. The multi-pillar pension system in Estonia		
Pillar I State Pension	**Pillar II** Funded pension	**Pillar III** Supplementary pension
Mandatory	Formerly mandatory, possible to opt-out from 2021 onwards	Voluntary
PAYG	Funded	Funded
Financed by social tax	Defined Contribution	Defined Contribution
Benefits paid via State Pension Insurance Fund	Basic benefit	Complementary benefit
Minimum pension + employment related	Individual pension accounts	Individual pension contracts
Publicly managed by Social Insurance Board (government entity)	Either privately managed pension funds or personally managed pensions savings through an individual pension savings account	Two vehicles: 1. Privately managed pension funds 2. Pension insurance

Source: BETTER FINANCE own elaboration, 2022

In 2020, the basic pension system (not counting optional saving instruments) generated an average salary replacement ratio 2020 of only 28% in gross terms. % (data according to OECD bi-annual pension survey from 2021[79]). The replacement rate is calculated by taking the average expected first pillar old-age pension for a person having a full career from age 22 until retirement age and dividing it with the average salary in Estonia. The expected after-tax replacement rate is only slightly better, at 33.8% (Ibid). Both figures are the second worst in the OECD and EU, with only the Lithuanian pension system guaranteeing a lower. For comparison, among EU countries, the average expected replacement rate is 54.3% gross and 67.6% after-tax.

Compared to the previous OECD study, based on 2018 data, both gross and after-tax replacement rates dropped approximately 20%, mainly due to the 2nd becoming optional (Ibid). After the drop, the expected retirement income for a person with no optional savings is well below the relative poverty rate[80]. This highlights the significant old-age poverty risks posed by the recent pension reform, which effectively made the 2nd pillar optional.

While it may be argued that giving more control of the level and instruments of long-term and retirement savings to individuals is a good thing, from the perspective of freedom of choice, it poses the risk that a significant part of the population will discover too late that their pension savings are inadequate. It's critical that the relevant authorities take sufficient measures to

[79] OECD 2021 survey https://data.oecd.org/pension/gross-pension-replacement-rates.htm#indicator-chart
[80] Own calculation, based on Statistics Estonia data for 2020 https://www.stat.ee/en/find-statistics/statistics-theme/well-being/social-exclusion-and-poverty/risk-poverty-rate

inform the population that relying only on the first pillar pension will inevitably result in relative poverty upon retirement.

The authorities also need to consider that as the population ages, a large percentage of pensioners and people close to pension age being at risk of poverty might create irresistible political pressure to rapidly increase the funding for the first pillar. In the context of what is likely to be a very old population, this would put the sustainability of state finances in jeopardy.

Table EE2. Summary returns table - Estonia				
	Pillar II		Pillar III	
	Nominal	Real	Nominal	Real
1-year (2021)	13,33%	1,30%	18,34%	6,30%
3-years (2019-2021)	8,88%	4,60%	12,34%	8,14%
5-year (2017-2021	5,49%	1,52%	7,05%	3,12%
7-year (2015-2021)	4,75%	1,61%	6,11%	3,01%
10-years (2012-2021)	5,12%	2,35%	6,75%	4,00%
Since inception (2003-2021)	4,44%	0,75%	5,60%	1,78%

Source: BETTER FINANCE own composition based on Pensionikeskus.ee data, 2022 (data as of 31.12.2021)

Pillar I – State Pension

The coverage ratio of Pillar I pensions comprises nearly 100% of the economically active population.

The state pension (Pillar I) should guarantee the minimum income necessary for subsistence after retirement. It is based on the Pay-As-You-Go (PAYG) principle of redistribution, i.e., the social taxes paid by today's employees cover the pensions of today's pensioners.

Legislatively, the state pension is governed by the State Pension Insurance Act. The act is part of the pension system reform, which came into force on January 1, 2002. Since then, the act has been amended more than 30 times. Employers pay 33% of the salary of each employee as social tax, 13% of which is for health insurance, and 20% (16% in case of participation in Pillar II) is for the pensions of today's pensioners.

There are two kinds of state pension: the pensions that depend on work contributions (the old-age pension, the pension for work incapacity and the survivor's pension) and the national pension. Estonians are entitled to the state old-age pension if they have been employed for at least 15 years in Estonia. If the period of employment is shorter, they are not entitled to the old-age state pension and might fall under the national pension system.

The **national pension** (also called National Pension Rate – NPR) provides a minimum pension for those who are not entitled to a pension that depends on work contributions, provided that they have lived in Estonia for at least five years before applying for a pension. The amount of the national pension as of April 1, 2022 (Social Insurance Board, 2022) is €275.37 (up from

€255,18 in 2021)[81]. Generally, no additional benefits are provided via the state pension scheme.

The old-age pension, available for those who contributed for 15 years or longer, takes into account the solidarity part (national pension) plus the work and salary-related part. The old-age pension financed through Pillar I is calculated as a sum of two components:

1. Basic amount (equalling to €255.76)[82];
2. Salary based amount calculated as a multiplication of two factors:
    - Pensionable service period;
    - Insurance contributions.

The basic amount, acting as a first component of the state pension, is aimed at achieving basic solidarity and a minimum pension. The solidarity state pension insurance is represented by the basic amount (base component) of a pension which is equal to all, irrespective of the person's salary.

The factor "pensionable service" period represents the part of the state pension which depends on the length of employment (i.e., years of employment and years deemed equal to employment, e.g., raising of children, compulsory military service, full-time studies, etc.) of the pensioner, which entitles him or her to the pension. The period of pensionable service is taken into account up until December 31, 1998. The monetary value of one year of employment in a monthly pension is €7.718 since April 1, 2022 (Social Insurance Board of Estonia, 2022)[3]. This part of the state pension is deemed to diminish in future years (temporary component) as the third component (insurance contributions) will account for a larger portion of the total state pension amount.

The factor "insurance contributions" depends on how much social tax has been paid on the salary of the pensioner since January 1, 1999. The amount of the insurance component is calculated based on the sum of annual factors of pension insurance. An annual factor shows the ratio of the social tax paid on the person's salary during the calendar year to the social tax paid on the average salary of the state. If social tax is paid on the average salary, the annual factor is 1.0 and its monetary value in a monthly pension is €7,718 (since April 1, 2021), the same as the pensionable service period component.

Change in the formula from 2021.

As part of the overall reform of the pensions system, the insurance component has been replaced by a new "combined component" from January 1, 2021. The combined component is calculated based on the previously described insurance component (which will make up 50% of the new combined component), and 50% will be based on a "solidarity component". The

[81] Estonian Social Insurance Board: www.sotsiaalkindlustusamet.ee/en/pension-benefits/pension-types-pensions-and-benefits
[82] Estonian Social Insurance Boar: https://www.sotsiaalkindlustusamet.ee/en/pension-benefits/pension-calculation

solidarity component is calculated based on an annual factor linked to the minimum wage. If a person earns at least the minimum annual salary in one year, this factor is 1.0. If they earn less than the annual minimum salary, the factor is reduced proportionally. After adding up the two factors, they are in turn divided by two so to obtain the final value. This change is intended to increase solidarity in the system.

The solidarity principle of public pension insurance involves a mechanism for redistributing income from high earners to low earners. However, the base component of a pension is equal for all, irrespective of the person's salary, while the law also procures the minimum amount of the old-age pension regardless of the social tax paid.

The **statutory retirement age** in 2022 is 64 years for both men and women. On April 7, 2010, the Estonian Parliament adopted the Act to amend the State Pension Insurance Act[83] and related acts, establishing that the general pensionable age of 65 years is to be reached in 2026. The transition period (starting from 2017) applies to people who were born from 1954 to 1960. For the latter, the retirement age will be gradually increased by 3 months for every year of birth and will reach the age of 65 in 2026. The amendment came into effect on January 1, 2017. Further increases in the retirement age after 2026 will be, by law,[84] automatically linked to increases in life expectancy. From 2027 onwards, any increases to the average life expectancy at age 65 compared to the baseline period of 2018-2022[85] will lead to an increase in retirement age. However, the increase in the statutory retirement age will be capped to a maximum of 3 months per year.

Indexation of state pensions is performed by the Social Insurance Board with the aim to adjust the level of state pensions, so they correspond to the development of the cost of living and receipt of social tax (growth of the salary fund). Once a year (April 1 of each year), pensions are multiplied by an index which is 20% dependent on the change in the consumer price index (cost of living) and 80% annual increase in the social tax collected (linked to labour market conditions). The indexation introduced in 2002 was up until 2008 equally weighted (50% / 50%) on increases in consumers' price index and social tax contributions. This was changed in 2007 to today's 20% and 80%, respectively. According to the Pension Insurance Act, the Government of Estonia has to analyse the impact of the increase in pensions on financial and social sustainability and suggest every five years to Parliament any need for indexation change.

[83] Legal text of the State Pension Insurance Act: www.riigiteataja.ee/en/eli/ee/Riigikogu/act/530042020004/
[84] Legal text (in Estonian): www.riigiteataja.ee/akt/103012019001
[85] Technically, the formula will compare the average life expectancy at 65 for the 5-year period that is 4-8 years before the year for which the pension age is being calculated with the life expectancy at 65 for the five years between 2018-2022.

The average monthly old-age pension in the second quarter of 2022 was €599.9 (compared to €557.2 the year before, in total, the average pension has increased approx. 90% in the previous ten years)[86].

Pillar II – Funded pension

Both the funded pension and supplementary funded pension put a person in charge of their own future; the amount of their pension will depend on how much they put aside for retirement during their working life. The funded pension is legislated by the Funded Pensions Act, which came into force on May 1, 2004, and replaced the Funded Pension Act, effective October 1, 2001. The funded pension pillar (Pillar II) started its operation in July 2002.

The funded pension is based on the accumulation of assets (savings) – a working person saves for their pension, paying 2% of the gross salary to the selected pension fund. In addition to the 2% that is paid by the individual, the state adds 4% out of the current social tax that is paid by the employee and retains 29% (out of 33%). The insurance element of the state pension of a person who has subscribed to the funded pension is also lower respectively (for the years in which one receives 16% for the state pension instead of 20%).

Subscription to the funded pension was compulsory for those born in 1983 or later, but it has become voluntary starting January 1, 2021. The funded pension has always been voluntary for those born between 1942 and 1983. For these people, subscription was possible in seven years; from May 1, 2001, until October 31, 2010. From January 1, 2021, all persons born in 1970 or later, who are not already subscribed to the II pillar pensions, will be able to apply to subscribe to pillar II pensions. Persons who have previously unsubscribed may re-apply after at least ten years from the date when they were unsubscribed.

All persons who have turned 18 years old will be auto enrolled into the II pillar on the year after they turn 18, unless they make an application for exemption. In the case of auto-enrolment, the person will be randomly drawn a pension fund from among the three pension funds with the lowest current fees at that time and which invest at least 75% of assets in shares, equity funds and other equity-like instruments.

Each Pillar II participant has his/her own individual pension account that records contributions and accumulated savings. A pension account is a special type of securities account in which there are only units of pension funds and data related to these units, as well as data about the unitholder.

In response to the impact of the 2008-2009 financial crisis on the Estonian economy, a temporary change of contributions' regime was adopted, which suspended contributions for the period from June 1, 2009, to December 31, 2010. Interested persons were able to

[86] Own calculation based on data from Statistics Estonia: https://andmed.stat.ee/et/stat/sotsiaalelu__sotsiaalne-kaitse__sotsiaalkindlustus__pensionikindlustus/SK153

continue to make contributions to their funded pension themselves upon request from 2010. From 2011, contributions continued in half-volume, i.e., the state contributed 2% and the savers themselves 1%. Customary contributions to Pillar II (2% - 4%) were restored in 2012. There was a special mechanism for Pillar II contributions between 2014 – 2017. To those who voluntarily continued their contributions in 2010 and 2011, the state shall pay an additional 6% during 2014 – 2017 in order to promote personal saving in Pillar II. However, if a saver did not contribute himself in 2010 and 2011 and submitted an application in 2013, they were required to pay voluntary contributions of 3% of their salary between 2014–2017. For those savers that did, the state contributed an additional 6% during those four years. In 2018, the contribution mechanism returned to 2% - 4% in all cases.

A similar temporary measure was introduced in April 2020 as a result of the COVID-19 crisis and its effects on the state budget as well as the overall economy[87]. The state contribution of 4% was suspended from July 1, 2020, until August 31, 2021. For those who voluntarily choose to continue with the personal 2% part to their Pillar II fund, additional 4% state contributions will be made after January 1, 2023.

However, it is not immediately clear why the government chose to take such a radical step, which amounts to taking a forced, no-interest loan from future pensioners which had the effect of discouraging long-term savings and investment at a time when investment conditions were favourable, due to relatively low securities prices. The arguments given by the ministers in charge that it was necessary to support the budget balance seem unconvincing, given that both before and after the Covid-19 crisis, the State of Estonia had the smallest total government debt to GDP ratio in the European Union.[88]

Indeed, in the same period that this measure was debated and adopted, the Treasury of Estonia was able to take long-term loans at close to 0% nominal interest rates[8990] and repeatedly sell short-term (12 months) credit notes at negative interest rates[91].

The above underlines the short-sightedness of the (now former) government's actions and the lack of justification for punishing future pensioners at a time when many of them were anyway suffering large losses to their pension savings due to the market turmoil. The weighted average index of Estonian II pillar pension funds grew by 16% during the period when the

[87] Overview from Pensionikeskus: www.pensionikeskus.ee/uudis/ii-samba-maksete-ajutine-katkestamine-2020-a/
[88] 8.4% of GDP on 31/12/2019 and 18.1% of GDP on 31/12/2021: https://ec.europa.eu/eurostat/databrowser/view/sdg_17_40/
[89] The Treasury took a 750 MEUR, 15-year loan from the Nordic Investment Bank (NIB) on the 30th of March, with an interest rate of 0.32% + the 6-month Euribor (the corresponding Euribor rate was -0.287% on 30 March 2020): see https://www.rahandusministeerium.ee/sites/default/files/Riigikassa/voetud_laenud_30.04.2020.pdf; https://www.rahandusministeerium.ee/et/eesmargidtegevused/riigikassa/riigi-finantsvarad-ja-kohustused/riigi-volakohustused; https://www.euribor-rates.eu/en/current-euribor-rates/3/euribor-rate-6-months/
[90] News item from the Ministry of Finance website: https://www.rahandusministeerium.ee/en/news/high-demand-international-investors-estonias-government-bond-issue
[91] The Treasury had issued several short-term government bonds (6-12 months) between March to early May 2020 for a total value of 475 MEUR with fixed interest rates ranging from -0.141% to -0,296%.

government contributions were suspended, demonstrating the significant value growth that the suspended contributions would have had.

Continuing to use suspensions of II pillar contributions as a "crisis" funding measure has the potential to significantly depress second pillar earnings for future pensioners.

The partial dismantling of pillar II in 2021

Although there have been many changes to the legal framework surrounding the Estonian second pension pillar, the most fundamental and controversial of these "reforms" was pushed through Parliament in 2020, tied to a vote of confidence of the then government. After a protracted legal battle between the parliamentary majority and the President of the Republic regarding the constitutionality of the new law, the Supreme Court eventually ruled by 12 votes to 7 to hold that the reform didn't infringe the constitution on October 20, 2020[92]. This meant that from 2021 onwards, the previously mandatory II pillar, in effect, became a voluntary pension fund with auto-enrolment. Pension savers who had been enrolled in the II pillar could now take out their savings before pension age, subject to a 20% income tax.

2021 had the first two "windows of opportunity" for withdrawing II pillar pension savings prior to pensionable age. All in all, 161 460 pension savers withdrew their II pillar savings (about 22% of all II pillar participants)[93]. The total amount withdrawn in this first round was approximately 1.44 billion euros gross or about a quarter of the total assets of Estonian II pillar funds.

BETTER FINANCE has previously opposed this change since it increases the risk of old-age poverty for those who liquidate their savings. This is because these people not only lose the tax benefits accorded to the II pillar, but surveys conducted among those intending to withdraw their II pillar savings showed that the majority would use the money to cover running costs (such as home renovations or paying back loans), rather than investing for retirement.[94]

The risk of increasing old-age poverty due to this reform is significant, given the already low-income replacement ratio of the first pillar (discussed earlier) and the fact that the largest proportion of savers who left the system were those on low or average incomes[15]

[92] Constitutional Court judgment 5-20-3: www.riigikohus.ee/en/constitutional-judgment-5-20-3
[93] Ministry of Finance statistics on II pillar withdrawals (Estonian): https://app.powerbi.com/view?r=eyJrIjoiYTFhNjU0OTgtMzE3ZC00NTVkLWEwN2YtYTcwZDI3NTUwZDlhIiwidCI6IjRmYjQ2MmUyLWE2MzktNGJlNC1iM2U1LTM2ZWM1MTg0M2M5MSIsImMiOjl9&pageName=ReportSection3cffbc10880514ec16dc
[94] BETTER FINANCE Press release October 27, 2020: https://betterfinance.eu/wp-content/uploads/PR-Dismantling-the-Estonian-Pension-System-is-not-the-Answer-27102020.pdf

Pillar III – Supplementary pension

The supplementary funded pensions scheme, or Pillar III, is a part of the Estonian pension system and is governed by the same act that governs Pillar II, the Funded Pension Act (Chapter 3 and following).

This scheme has been introduced with the aim of helping to maintain the same standard of living and adding more flexibility in securing a higher and/or stable stream of income after one reaches the age of 55. Therefore, the supplementary pension has been designed to help achieve a recommended level of 65% gross replacement ratio of an individual's previous income in order to maintain the established standard of living.

Supplementary pension participation is voluntary for all persons who can decide to save either by contributing to a voluntary pension fund or by entering a respective supplementary pension insurance contract with a life insurance company. The amount of the contributions is determined solely by the free choice of an individual and can be changed during the duration of the accumulation phase. There is also a possibility to discontinue contributions (as well as to finish the contract).

The supplementary funded pension contracts can be made with life insurers as pension insurance or by acquiring pension fund units from fund managers. An individual can choose between three different pension products:

1. Pension insurance with guaranteed interest;
2. Pension insurance with investment risk (unit-linked); and
3. Pension fund.

Pension Vehicles

Pillar II – Funded pension

From September 2019, there are two types of II pillar pension funds in Estonia – conservative and non-conservative funds.

For conservative funds, 80% of assets need to be invested into either bank deposits, investment-grade bonds, money-market instruments trading on regulated markets, other funds which invest the majority of their assets into the before-mentioned categories, as well as derivative instruments which are based on the categories of assets listed in this paragraph. In addition, conservative pension funds may not have an open net foreign exchange position worth more than 25% of total assets.

All other II pillar pension funds are free to set their investment strategies in their prospectus, with only the following global limits:

- Not more than 10% of assets can be provided as **direct loans**, with the additional requirement that the (legal) persons receiving the loans meet the same requirements as the issuers of bonds that the pension fund is allowed to buy ("investment grade");
- Not more than 5% of assets can be invested in **precious metals** and securities whose underlying assets are precious metals or the price of which is dependent on precious metals;
- Not more than 10% of assets can be invested in a single investment fund**,** with the allowed proportion rising to 30% of assets in the case of index funds;
- Not more than 50% of assets can be invested into securities, money market instruments and funds that are **not traded on regulated markets**. Direct loans to non-listed entities also count toward this cap;
- The **total open risk position of derivative instruments** may not exceed 50% of the assets of the fund, although derivative instruments designed to mitigate certain types of risks are exempt from this cap;
- Not more than 40% of assets may be invested in **immovables**, either directly or through real estate investment funds or companies investing in real estate or securities directly tied to the price of immovables;
- Not more than 10% of asset may be invested into a **single immovable property**, based on acquisition price;
- Not more than 15% of assets may be invested in the securities and money market instruments issued by one (legal) person.

Any asset manager wishing to undertake the management of II pillar pension funds, must by law, manage at least one pension fund that conforms to the legal limits of a conservative pension fund, as described below.

From April 1, 2021, it also became possible for pension savers to personally manage their pillar II investments through a Pension Investment Account. Any saver choosing this option will have their II pillar contributions (both personal and state contributions) flow into a special securities account at a bank of their choice[95], instead of the same contributions going into an investment fund.[96] The pension saver can then decide which securities or funds to invest their II pillar savings in. It's worth noting that aside from direct investments in securities, this system also allows savers to choose investment funds other than the specially regulated Estonian pillar II funds.

As of December 31, 2021, 546 548 people save under the Pillar II funds, with a further 3 919 people saving under the recently implemented second pillar personal investment accounts[97]. Together, approx. 79% of the economically active population save under a pillar II pension

[95] Currently, all of the four banks which offer II pillar investment funds in Estonia (LHV. SEB, Swedbank and Luminor) also offer the possibility to open a Pension Investment Account.
[96] Explanation from Pensionikeskus: https://www.pensionikeskus.ee/ii-sammas/pensioni-investeerimiskonto-pik/
[97] Statistics from Pensionikeskus: https://www.pensionikeskus.ee/statistika/ii-sammas/aktiivsed-investorid/

scheme[98]. Notably, just a year earlier the second pillar covered practically the entire economically active population, demonstrating again the effects of the 2021 pension reform (Ibid).

Less than 4% of those saving under a Pillar II scheme have opted for a conservative pension funds.

Pillar III – Supplementary pension

According to the law, two types of pension vehicles for supplementary pension (Pillar III) are allowed:

1. Voluntary pension funds;
2. Supplementary pension insurance contracts.

For the supplementary pension insurance vehicle, two product options are available:

- Pension insurance at a guaranteed interest rate;
- Pension insurance with investment risk (unit-linked).

Considering the size of Pillar III based on the coverage of the economically active population, the Estonian Pillar III amounted to only about 20% by the end of 2021[99].. On the other hand, the number of pillar III pension accounts with a positive balance has almost tripled compared to two years prior[100]. A large part of the growth may have come from people taking out their pillar II savings investing at least a part of their money into pillar III funds, which offer more flexibility in withdrawal terms. The wide-ranging public discussion on the topic of pension savings likely also paid a role.

However, this only had a small effect in the context of the overall decline of pension savings in the two pillars. The total growth of pillar III fund assets in 2021 was less than 10% of the amount taken out of the pillar II funds and a large part of this amount would have been made up of positive returns on capital and payments into the III pillar, which would have taken place even without the pillar II reforms[101].

The investment restrictions for supplementary pension funds are broadly the same as for non-conservative, II pillar pension funds, with the exception that supplementary funds are allowed to invest **up to 70% of assets into immovables** (as opposed to 40% for II pillar funds).

In addition, certain conflicts of interest provisions are laxer for voluntary pension funds. For example, by law, fees charged from a II pillar pension fund for investments made into UCITS managed by the same fund manager that manages the pension fund, or another fund manager belonging to the same consolidation group, need to be repaid into the pension fund. No such

[98] Own calculation based on Statistics Estonia and Pensionikeskus data
[99] Own calculation based on Statistics Estonia and Pensionikeskus data
[100] Data from Pensionikeskus: https://www.pensionikeskus.ee/statistika/iii-sammas/pensionikontode-arv/
[101] Own calculation baed on pensionikeskus statistics https://www.pensionikeskus.ee/statistika/iii-sammas/taiendava-kogumispensioni-fondide-maht/

provision exists for voluntary pension funds, leaving them more open to conflicts of interest from the pension fund manager.

Table EE3. Supplementary Pension vehicles market share		
Supplementary pension vehicles	Assets under management (AuM) / Reserves *(in €)*	Market share based on AuM / Reserves *(in %)*
Voluntary pension funds	387.839.238	58,20%
Supplementary pension insurance	278.570.000	41,80%
TOTAL	666.409.238	100,00%

Source: Own calculations based on pensionikeskus.ee data, 2022 (data as of 31.12.2021)

Charges

Pillar II – Funded pension

Pension funds are offered by asset management companies, which are managed under the Investment Funds Act and, as such, the funds are considered typical UCITS funds with special regulation via the Funded Pension Act.

A saver contributing to the pension fund receives the fund units, which represent the unitholder's share in the fund's assets. Each pension fund can have only one class of units. The nominal value of a unit at the beginning of the fund operation is €1 (up from €0.64 prior to 2021). The rights and obligations attached to a unit with respect to a unitholder will enter into force upon issuing a unit and will terminate upon redeeming a unit. A unit is deemed issued upon registration and is considered redeemed upon cancellation with the register. Ownership of a unit is proved by an entry in the register.

As the pension funds are considered typical UCITS funds, fees and charges typical for UCITS funds are applied to the pension funds, but with some legislative restrictions.

According to paragraphs 58 and 65 of the Investment Funds Act, the following charges can be applied to the expense of a II pillar pension fund:

- management fee,
- exit fee (unit redemption fee),
- transaction costs,
- success fee

Considering the individual saver, additional charges are paid from the individual value of pension savings:

- unit redemption fee,
- entry fee (unit issuance fee, resp. contribution fee).

As of September 2, 2019, the management fees of II pillar pension funds were legally capped at 1.2% for conservative pension funds and 2% for all other II pillar funds. Redemption fees were capped at 0.05% for conservative pension funds and 0.1% for all other II pillar pension funds. No subscription fee may be charged by a II pillar pension fund.

Redemption fees are types of charges that are applied on a one-off basis when a contribution to the fund is recorded respectively when the saver sells the pension units to the issuer. The effect of these charges is limited to the transaction, so there is only a cumulative effect that can be calculated as a simple summation. Redemption fees are also tied to the ability of savers to switch among the pension funds during the saving period. A fund can be replaced only with another fund of the II pillar-funded pension. The choice of the pension fund can be changed in two ways:

1. Directing contributions to a new fund – the units of the current fund will be retained and will continue earning in the former fund. After choosing a new fund, your future contributions will be transferred to it, i.e., units of different funds will appear side by side in your pension account.
2. Changing the pension fund units – the units of one pension fund will be replaced with the units of a new pension fund selected.

From January 1, 2011, onwards, there is no minimum limit for units upon changing a fund (before January 1, 2011, the minimum requirement was 500 units). Since August 1, 2011, it has been possible to transfer to a new pension fund all or only a part (e.g., 25%, 50% or 75%) of the assets collected in the former pension fund.

The investment funds act provides an obligatory reduction in the management fees of investment funds, in line with the growth of assets of the fund. Namely, after a II pillar pension fund reaches 100 million euros of assets under management, the fund manager is obliged by law to reduce the base management fee for each additional 100 million euros of assets under management by at least 15 per cent compared to the rate of the base management fee applicable to the previous 100 million euros. Funds are no longer required to enforce this reduction when the yearly base management fee reaches 0.4% of assets under management.

The idea of the maximum management fee caps and obligatory management fee reduction for II pillar pension funds was to ensure sufficient competition in the pension market at the time of its launch, despite the initial lack of economies of scale (given the initially low number of participants, the low level of salaries in Estonia at the time, as well as the small population of Estonia), while guaranteeing that the overall level of fees and charges would decrease when economies of scale are achieved.

The option of applying a success fee became possible as of January 1, 2019. According to paragraph 65^2 of the Investment Funds Act, the fund manager of a II pillar pension fund has the right to charge a success fee if the cumulative increase in the net asset value of a unit of the fund exceeds the cumulative increase in receipt of the pension insurance part of social tax

as of December 31 of the year of registration of the pension fund (hereafter "reference index"). The success fee for a given year is limited by law to a maximum of 20% of the excess of the increase in net asset values over the reference index and to 2% of the asset value of this pension fund, whichever limit is lower.

Conservative pension funds do not have the right to apply a success fee.

The introduction of the success fee concept and other changes to the way pension fund fees need to be disclosed brought changes to the way Estonian pension funds disclose their fees and to how regulators and statistics agencies collect data on the fees. Given the backwards-looking nature of the success fee, pension funds are required to report on their "Total Expense Ratio" (hereafter referred to as TER) for the previous year.

The TER includes:

1) the fee paid to the fund manager for the management of the fund or the fees, charges and expenses directly related to the management of a public limited fund (management fee);
2) the fee paid to the depositary for the services provided (depositary's charge);
3) the transfer fees and service charges directly related to transactions performed for the account of the fund and other fees and charges and expenses related to the management of the fund and specified in the basic documents of the fund;
4) success fees.

The funded pension register (Pensionikeskus AS), which is the main provider of statistics for pension funds in Estonia, also stopped gathering statistics for separate classes of fees or charges and has moved to collecting statistics on the TER of II pillar pension funds. While this offers a complete overview of the costs of pension funds, it unfortunately also has the side-effect, from the point of view of this report, of limiting long-term comparability of cost levels, since TER statistics currently only go back to 2017.

The table below shows the TER for all II pillar pension funds between 2017-2021, divided into different risk categories following the Synthetic Risk and Reward Indicator (hereafter SRRI) methodology. Low-Risk Funds are those with an SRRI of 1-2, Medium-Risk Funds have an SRRI of 3-4, and High-Risk Funds have an SRRI of 5-7. Pension funds designated as "conservative" are marked with an asterisk.

As can be seen from the table, the average fees generally declined between 2017 and 2020, but that decline has stagnated in the last few years. The competitive pressure associated with many new II pillar funds, most of these low-cost index funds, entering the Estonian II pillar pension funds market in the last five years may have been one of the main drivers of this decrease in total fees, while success fees associated with the bull market of 2021 may be responsible for stopping the trend.

Table EE4. II pillar Pension Funds' Fees						
	Pension fund	2017	2018	2019	2020	2021
High-risk Funds	Luminor A Pluss Pension Fund	1.57%	1.50%	1.62%	1.45%	1,44%
	Pension Fund LHV XL	1.35%	1.62%	0.98%	1.13%	1,28%
	LHV Pensionifond Green	n/a	n/a	0.85%	1.01%	0,83%
	SEB Pension Fund 100	n/a	n/a	0.96%	0.99%	0,87%
	Swedbank Pension Fund K1980-1989	1.13%	0.99%	0.70%	0.66%	0,68%
	Pension Fund LHV Index	0.86%	0.69%	0.63%	0.39%	0,33%
	Tuleva World Stocks Pension Fund	0.47%	0.47%	0.45%	0.39%	0,37%
	SEB Pension Fund Index 100	0.49%	0.43%	0.40%	0.36%	0,34%
	Swedbank Pension Fund K1990-1999 Index	0.89%	0.72%	0.47%	0.33%	0,31%
	Swedbank Pension Fund Index	n/a	n/a	n/a	n/a	0,31%
	Luminor "Sustainable Future" index Fund	n/a	n/a	n/a	n/a	0,47%
Medium -risk Funds	Luminor A Pension Fund	1.48%	1.40%	1.58%	1.39%	1,43%
	Luminor B Pension Fund	1.38%	1.33%	1.55%	1.39%	1,35%
	Pension Fund LHV L	1.34%	1.58%	1.01%	1.14%	1,62%
	Luminor C Pension Fund*	0.78%	0.75%	0.97%	1.00%	1,01%
	SEB Progressive Pension Fund	1.33%	1.27%	0.94%	1.00%	1,01%
	SEB Energetic Pension Fund	1.41%	1.30%	0.92%	0.97%	0,97%
	Pension Fund LHV M	1.08%	1.20%	0.84%	0.86%	1,17%
	Swedbank Pension Fund K1960-1969	1.04%	0.92%	0.65%	0.66%	0,74%
	Swedbank Pension Fund K1970-1979	1.10%	0.97%	0.67%	0.65%	0,70%
Low-risk Funds	SEB Optimal Pension Fund	1.11%	1.07%	0.94%	0.99%	1,03%
	Pension Fund LHV S	0.82%	0.70%	0.69%	0.62%	0,64%
	Pension Fund LHV XS*	0.65%	0.60%	0.61%	0.53%	0,53%
	SEB Conservative Pension Fund*	0.57%	0.57%	0.49%	0.50%	0,51%
	Tuleva World Bonds Pension Fund*	0.50%	0.50%	0.47%	0.43%	0,41%
	Swedbank Conservative Pension Fund	0.39%	0.35%	0.37%	0.37%	0,42%
Average (not weighted)		**0.99%**	**0.95%**	**0.82%**	**0.80%**	**0.80%**

*Conservative pension funds

Source: Pensionikeskus.ee, 2022 (data as of 31.12.2021)

Pillar III – Supplementary pension

The supplementary pension is organised in two ways: as an insurance contract or as a supplementary pension fund. The way in which charges are disclosed to the client is significantly different for both.

For insurance contracts, no charges are publicly disclosed. Even if the charges are disclosed, the structure of fees is not transparent enough to allow the calculation of the total cost ratio. In most cases, the insurer is entitled to change contract fees and risk payments unilaterally during the insurance contract validity, with the obligation to inform the policyholder of the changes at least 30 days before such changes become effective. If the policyholder does not agree with the changes, he is entitled to terminate the contract.

The situation is different for a supplementary pension fund. All funds disclose the most actual charges, which are presented in the table below.

Table EE 5. Supplementary Pension Funds´ Fees

Pension fund name	2017	2018	2019	2020	2021
LHV Index Plus*	0,99%	0,85%	0,75%	0,42%	0,42%
Luminor Aktsiad 100	1,64%	1,66%	2,12%	2,16%	2,14%
Luminor Intress Pluss	1,41%	1,53%	1,84%	1,84%	1,77%
SEB Active	1,97%	1,83%	1,78%	1,76%	1,19%
LHV Supplementary	1,11%	1,08%	1,36%	1,40%	1,46%
Swedbank V100	1,77%	1,75%	1,43%	1,39%	1,15%
Swedbank V60	1,64%	1,60%	1,31%	1,31%	1,05%
SEB Balanced	1,40%	1,31%	1,27%	1,30%	1,13%
Swedbank V30	1,55%	1,48%	1,21%	1,23%	0,95%
LHV Green Plus	-	-	-	1,03%	0,98%
Tuleva III Pillar*	-	-	0,49%	0,43%	0,35%
Swedbank V100 exit restricted*	-	-	0,90%	0,40%	0,29%
Swedbank V60 exit restricted*	-	-	-	0,40%	0,29%
Swedbank V30 exit restricted*	-	-	-	0,40%	0,29%
Luminor “Sustainable Future”*	-	-	-	-	0,58%
SEB “Climate Future”*	-	-	-	-	0,42%
Swedbank III pillar*	-	-	-	-	0,29%
AVERAGE	**1,50%**	**1,45%**	**1,31%**	**1,11%**	**0,87%**

**Index funds*
Source: Own research based on pensionikeskus.ee data 2022 (data as of 31.12.2021)

As can be seen, the average of III pillar pension fund fees has been significantly decreasing in the last 5 years. The biggest impact on the average comes from the introduction of many low new low-cost funds, but the charges of “older” funds have also trended down somewhat, with

the average charges of the nine funds that existed both in 2017 and 2021 having decreased from 1.50% to 1.25%.[102]

Taxation

Both funded pillars use the "EET" regime for taxation, which means that the contributions paid towards the pension schemes are tax-exempt. Returns achieved by respective pension funds are also tax-exempt and the benefits paid out during the retirement are subject to income tax.

Pillar II – Funded pension

Estonia is applying an EET taxation regime for Pillar II with some specifications (deductions) to the pay-out taxation regime, where generally the "T" regime is applied.

Taxation of the Fund

Income or profits of the Fund are not subject to taxes at the fund level.

Taxation of unitholders

Contributions to the Fund usually consist of two parts:

1. 2% withheld from the wages and other remuneration of a resident natural person participating in the II pillar; in certain cases, from the remuneration paid to a member of the management or supervisory body of a legal person; from the business income of sole proprietors; from the remuneration or fees paid to a natural person on the basis of a contract for services, authorisation agreement or another contract under the law of obligations entered into for the provision of services, and
2. the amount added by the state, which equals 4% of the sum of the resident natural person's wages and other remuneration.

The above-mentioned 2% withheld from wages and other remuneration is tax-deductible, i.e., not subject to income tax.

Exchange of a fund's unit for another unit of a II pillar pension fund and redemption of a unit to enter into an insurance contract for a funded pension (pension contract) is not taxed.

During the pay-out phase, income tax is charged on payments made from the II pillar pension fund to the unitholder, the successor of the unitholder, as well as on payments made to the policyholder, an insured person or a beneficiary pursuant to a pension contract provided for in the Funded Pensions Act. Thus, if a unitholder reaches retirement age, funded pension

[102] Own calculation

payments will be taxed together with the state (NDC PAYG pillar) pension. The Estonian income tax rate is 20%,

The taxation period for natural persons is the calendar year. In Estonia, the annual basic exemption (non-taxable amount) per year depends on the person's income, ranging from 6000 EUR for those earning up to 14 400 EUR per annum and none for those earning above 25 200 EUR per annum[103]. The same rate applies also to pension payments.

Taxation of successors

Payments to a successor upon redemption of units are taxed with the income tax rate established by law. Transfer of units into a successor's pension account is not taxable.

Pillar III – Supplementary pension

The effective Income Tax Act stipulates EET regime (similar to Pillar II) where:

I. Resident natural persons have the right to subtract the amounts paid to acquire supplementary fund units from their taxable income. The amount that is deducted may be up to 15% of the income earned in the taxation period, but no more than €6000.
II. Income or profits of the fund are not subject to taxes at the fund level.
III. Pay-outs from a supplementary pension fund are subject to income tax as follows:
    a) 10% income tax if they are made under any of the following circumstances:
        (i) after the unitholder reaches the age of 55, but not before five years have passed from the acquisition of the units;
        (ii) in the event of the unit holder's full and permanent incapacity for work;
        (iii) when the fund is liquidated.
    b) In all other cases, pay-outs from the fund are subject to income tax valid at the time the pay-out is made.
IV. Pay-outs made by an insurance company to the policyholder from the assets saved in the fund as lifelong pension payments after the policyholder turns 55 years of age are exempt from income tax.

[103] https://www.emta.ee/eraklient/maksud-ja-tasumine/maksusoodustused/maksuvaba-tulu-arvestamine

Pension Returns

Pillar II – Funded pension

The year 2021 was characterised on the one hand by a strong global "bull market", with most stock indices showing high returns and on the other hand by accelerating inflation in the second half of the year. The year-on-year inflation reached slightly over 12% by the end of the year, which depressed real returns and put pressure on pension funds with a more conservative strategy. This is because conservative funds invest mainly in bonds and were thus both particularly vulnerable to the high inflation (due to the lower average yield of their portfolios) and also suffered from a fall in the nominal value of their assets due to rising interest rates which accompanied rising inflation.

Overall, Estonian pillar II pensions funds finished the year with an asset-weighted real return of 6.3%, due to very high nominal returns overcoming the high inflation. Table EE6 presents the cumulative, inflation-adjusted returns of all 26 pillar II pension funds active in Estonia in 2021. As can be seen from the table, the majority of investment funds suffered negative returns, with 6 funds losing more than 10% of their net asset value in real terms.

The apparent contradiction between the overall positive result and poor performance of a majority of funds can be explained by the very small market share of the worst performing funds.

In 2021, the foreign owned banks – Swedbank, SEB and Luminor – held approximately 64% of the market between them, with Swedbank being the uncontested market leader, holding a 39% market share. The biggest local bank, LHV, has the second-largest pillar II market share, with 29%[104]. The only pension fund manager in Estonia that is not a wholly owned subsidiary of a bank is the relatively new mutual fund Tuleva, which entered the market in 2017, branding itself as a "social start-up" and advocating for passively managed low-fee funds. Although by the end of 2021, it held only about 7% of the second pillar market, its entry pushed all the other pension fund managers to offer passively managed funds as part of their range. This, in turn, has contributed significantly to the reduction of pension fund fees in the Estonian market.

It should be noted that volatility and performance are closely tied to the structure of the portfolio and the degree of deviation from the benchmark. Active asset management emphasises "stock-picking skills" to optimise returns and deliver overperformance to the market by the maturity (recommended holding period) of the product. To which extent this is happening in Estonian II pillar pension funds can be seen in table EE6 below.

[104] Finantsinspektsioon market overview 2021:
https://www.fi.ee/sites/default/files/finantsteenuste_turu_ulevaade_seisuga_31.12.21_1.pdf

Table EE6. Annualised real (inflation-adjusted) returns of Estonian II pillar pension funds

Pension fund name	1-year	5-years	10-years	Since inception
Swedbank Pension Fund K1990-1999 indeks*	19,52%	8,39%	n/a	8,39%
SEB Pension Fund Index 100*	16,71%	7,98%	n/a	7,98%
SEB 100	14,05%	n/a	n/a	8,57%
Tuleva World Stocks Pension Fund*	12,33%	5,43%	n/a	5,43%
Swedbank Pension Fund K1980-1989	11,08%	4,89%	4,98%	3,63%
Pension Fund LHV Index*	10,79%	5,12%	n/a	5,12%
Luminor Pension Fund A Plus	7,52%	3,78%	4,74%	3,37%
SEB Energetic Pension Fund	7,37%	4,00%	3,87%	2,67%
Luminor "Sustainable Future" Index*	2,12%	n/a	n/a	2,12%
Swedbank Pension Fund K1970-1979	1,20%	1,62%	2,68%	1,00%
SEB Progressive Pension Fund	0,30%	0,49%	1,35%	0,05%
Luminor Pension Fund A	-1,82%	1,53%	2,85%	2,82%
Pension Fund LHV XL	-2,01%	1,25%	3,10%	1,93%
Pension Fund LHV L	-3,00%	0,48%	2,31%	2,41%
Swedbank Pension Fund Index*	-3,67%	n/a	n/a	-3,67%
Swedbank Pension Fund K1960-1969	-5,96%	-1,01%	0,45%	-0,82%
Pension Fund LHV M	-6,71%	-1,42%	0,95%	0,57%
SEB Optimal Pension Fund	-7,60%	-1,80%	-0,72%	-0,14%
Luminor Pension Fund B	-8,82%	-0,98%	0,77%	1,09%
LHV Roheline*	-9,15%	n/a	n/a	33,34%
SEB Conservative Pension Fund†	-10,78%	-3,59%	-2,03%	-1,73%
Pension Fund LHV S	-12,15%	-3,96%	-1,04%	-0,08%
Swedbank Conservative Pension Fund†	-12,23%	-3,47%	-1,54%	-2,23%
Pension Fund LHV XS†	-12,25%	-3,80%	-0,93%	-0,43%
Luminor Pension Fund C†	-13,21%	-2,61%	-0,71%	-0,29%
Tuleva World Bonds Pension Fund*†	-14,21%	-3,07%	n/a	-3,07%

* Index funds

† Funds with a conservative strategy

Source: Own composition based on Pensionikeskus and Statistics Estonia data 2022 (data 31.12.2021)

As can be seen, the only four funds to have achieved real returns in excess of 5% over the latest 5-year period are passively managed (and low cost) index funds. It must be noted that five years is a relatively short period in terms of economic cycles, and we cannot compare longer-term performance in Estonia since the first index-based pension funds appeared in Estonia barely more than five years ago. However, historical returns in other markets support the likelihood that low-cost index funds may well continue to outperform higher-cost actively managed funds in the long term[105,106].

[105] BF study on cost and performance of EU equity funds: betterfinance.eu/wp-content/uploads/BETTER1.pdf

[106] ESMA study on cost and performance of EU investment products: www.esma.europa.eu/sites/default/files/library/esma_50-165-1710_asr_performance_and_costs_of_eu_retail_investment_products.pdf

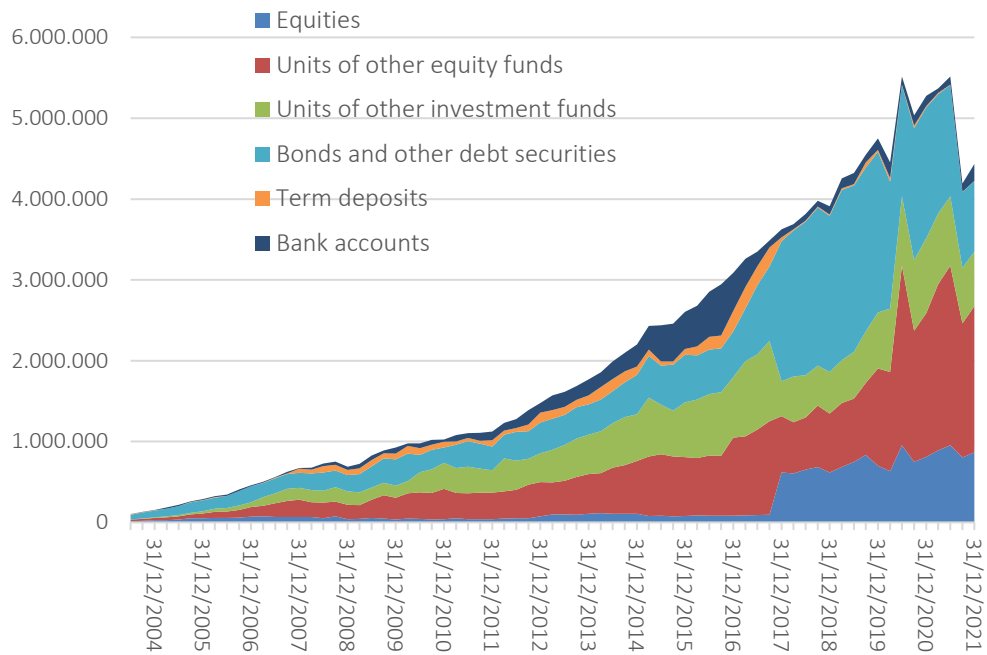
Unfortunately, as can be seen from the above table, there are several II pillar investment funds with significantly negative long-term returns. To put it plainly, these funds have eroded the real value of their clients' savings. While the percentages seem small, it is worth noting that, for example, a constant annual real return of -2% would decrease the purchasing power of a client's savings by about 60% over 45 years (which corresponds to the number of years a 20-year-old would have to work until the current retirement age).

Most of the II pillar funds with negative real returns are in the legal category of "conservative" funds, discussed above in the "Pension Vehicles" chapter. This category of funds is subject to significant restrictions on investment strategy and is often recommended by providers to investors approaching retirement age as a way to prevent any significant negative effects of short-term shocks close to retirement age. However, even for funds pursuing such a strategy, negative real returns over the long term should be considered problematic. In particular, it cannot be expected that only people close to retirement age are to enrol into conservative pension funds. Indeed, until June 2019, people for whom it was mandatory to join the 2nd pension pillar, but did not themselves choose a pension fund, were randomly auto enrolled into a fund with a conservative strategy. According to the Ministry of Finance[107], about 15700 people who were auto enrolled into a conservative pension fund between 2003 and 2019 had not changed fund as of 31st as of 31.12.2021.

As the types of underlying assets in which a fund invests are a key determinant of returns, the graph below demonstrates the overall portfolio structure of II pillar pension funds in Estonia. As asset classes such as money market instruments, direct loans, derivatives and other assets are either not invested at all or to a minimum degree, then the chart only shows such asset classes, which consistently make up at least 0.5% of the overall portfolio structure. However, it should be noted that, for example, a lack of direct investment of pension funds into real estate does not mean these funds do not have exposure to that asset class through investments in real estate funds (which in the underlying dataset would fall under the category "units of other investment funds").

[107] Estonian Ministry of Finance pension statistics for 2020 (in Estonian): https://www.pensionikeskus.ee/wp-content/uploads/page/rahandusministeeriumi-statistika/012021.pdf

Graph EE7. Portfolio structure of II pillar pension funds (in thousands €



Source: Own composition based on Finantsintspektsioon data (fi.ee), 2022 (data 31.12.2021)

The trend of growing investment into other UCITS was abruptly reversed in 2017 and direct bond (as well as equity investments) rapidly rose to dominate in the portfolio structure of II pillar pension funds. These sudden changes can be at least partially associated with regulatory changes. However, since mid-2018, investments in UCITS, especially equity funds, started to gradually grow again.

This can be associated with the entry and increasing importance of passively managed index funds, since at the time of writing of this report, most index funds in Estonia invest exclusively into larger foreign index funds, rather than trying to replicate any index themselves.

Money held by investment funds in banks, either in current accounts or savings deposits, has decreased significantly in since 2015, likely due to negative interest rates.

Nominal, as well as real returns of II pillar pension funds in Estonia using a weighted average by assets under management (AuM) are presented in a summary table below.

Table EST 8. Nominal and Real Returns of II Pillar Pension Funds in Estonia						
2003	Nominal return after charges, before inflation and taxes	6,93%	4,44%	Real return after charges and inflation and before taxes	5,74%	0,75%
2004		10,00%			5,20%	
2005		13,54%			9,88%	
2006		7,45%			2,35%	
2007		6,33%			-3,41%	
2008		-23,47%			-31,01%	
2009		13,09%			14,96%	
2010		9,36%			3,94%	
2011		-4,14%			-8,23%	
2012		9,74%			6,11%	
2013		3,36%			1,32%	
2014		5,00%			4,94%	
2015		2,52%			2,69%	
2016		3,33%			0,98%	
2017		3,76%			0,00%	
2018		-2,47%			-5,79%	
2019		9,77%			7,97%	
2020		3,76%			4,64%	
2021		13,33%			1,30%	

Source: Own calculations based on Pensionikeskus data, 2022 (data 31.12.2021)

Considering the fact that the taxation in Estonia's II pillar (as well as supplementary) pension scheme is applied to the pay-out phase only and the income of each individual is tested, calculating the after-tax annual pension fund performance would lead to misleading results and only general assumptions of tax implications during the accumulation phase. Therefore, the after-income tax performance calculations have not been made in this study.

Additionally, we present the AuM weighted performance for periods of 1, 3, 5, 7 and 10 years and since the inception of the II pension pillar.

Table EST 9. Nominal and Real Returns of II Pillar Pension Funds in Estonia		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	13,33%	1,30%
3-years	8,88%	4,60%
5-years	5,49%	1,52%
7-year	4,75%	1,61%
10-years	5,12%	2,35%
Since inception	4,44%	0,75%

Source: Own calculations based on Pensionikeskus data, 2022 (data 31.12.2021)

Pillar III – Supplementary pension

When analysing the performance of supplementary pension vehicles, only the pension funds should be considered. Insurance-based vehicles do not disclose this information on a periodical basis, as the market risk is shifted onto the insurer.

Supplementary pension funds do differ in their strategy, mostly based on the volatility of their portfolios. In most cases and compared to II pillar pension funds, the investment strategies of supplementary pension funds' portfolio managers are more aggressive. By large, the investment strategies do allow having up to 100% of assets allocated into equities and equity-based structured products. Some asset management companies have reacted to this and started to also offer supplementary pension funds with a conservative strategy.

Broadly, the recent tendencies are the same for the supplementary pension fund market as for the II pillar pension funds market, with more and more providers launching low costs, passively managed "index" funds, with the only difference being that most providers were considerably slower to launch supplementary index funds than II pillar ones. At the beginning of 2019, only LHV was offering a supplementary index fund. However, since then, Swedbank has launched three exit-restricted index funds, differing on the amount of equity exposure (named V100, V60 and V30, with the number in each name indicating the maximum equity exposure) as well as one classic (non-restricted) index fund, while both Tuleva and Luminor launched supplementary index funds, named "Tuleva III Pillar fund" and "Luminor Sustainable Future, Index fund" respectively. This leaves SEB bank as the only supplementary pension fund provider in Estonia not to offer a III pillar index fund.

In addition, investment funds marketing themselves as "sustainable" have entered the market, with LHV launching its Green Pluss fund in late 2020 and Luminor launching its own sustainable index fund (mentioned above) in early 2021.

In table EE10, the performance of supplementary pension funds is shown on a cumulative basis. Returns are shown for funds for which at least two years of returns data is available, and the pension funds are ranked according to the annualised real return since the inception of the fund.

The picture is relatively similar to that of mandatory pension fund returns. Those index funds included in the table, those for which there were at least three years of return data available by the end of 2021, occupy the three top slots in terms of average return since inception. Again, it should be noted that the time horizon of these funds is too short to draw definitive conclusions and that past performance does not guarantee future returns.

However, the high fees for many of the best performing, actively managed III pillar funds, as shown earlier in table EE6, will make it difficult for these funds to keep up relatively high net returns in the long term, compared to funds with similar strategies and lower fees.

Table EE10. Supplementary pension funds' cumulative inflation-adjusted performance

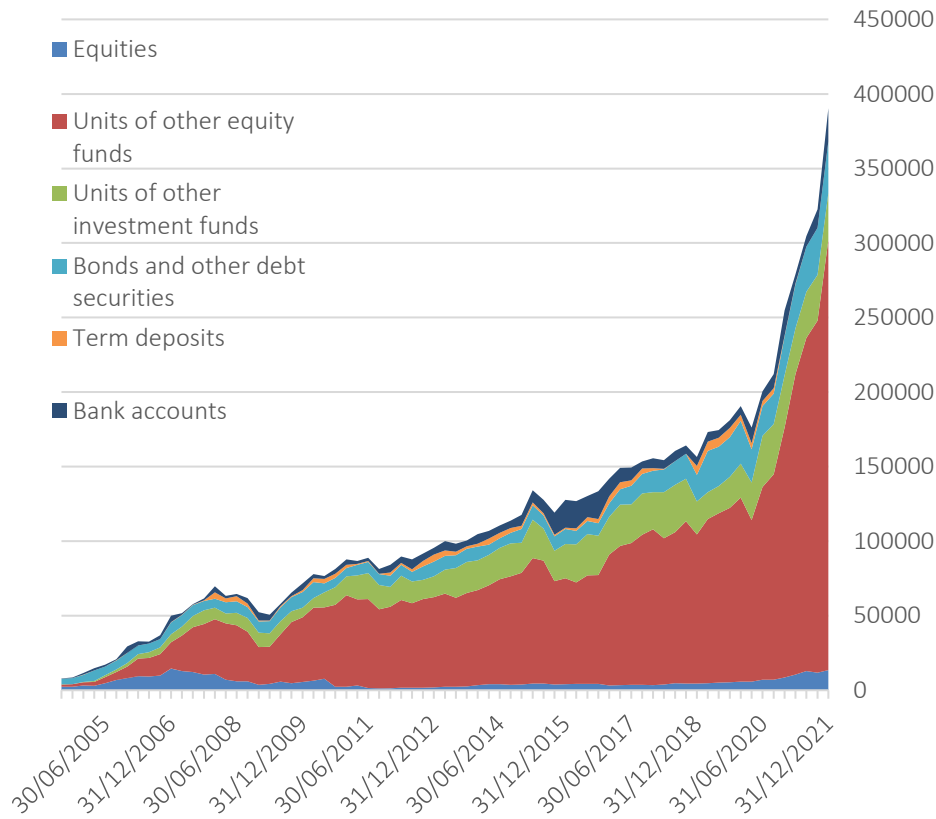
Pension fund name	1-year	3-years	10-years	Since inception
LHV Supplementary Pension Fund	-3,89%	3,87%	3,77%	3,09%
Luminor Aktsiad 100 Pension Fund	-1,35%	7,96%	5,35%	4,57%
Luminor Intress Pluss Pension Fund	-13,21%	-1,10%	0,06%	-0,13%
Luminor Index "Sustainable Future"*	1,55%	n/a	n/a	1,55%
SEB Active Pension Fund	14,19%	13,16%	5,77%	1,80%
SEB Balanced Pension Fund	-7,69%	-0,36%	-0,56%	-0,48%
Swedbank Pension Fund V30	-7,66%	-0,24%	0,11%	-0,70%
Swedbank Pension Fund V60	-0,55%	3,99%	2,32%	0,10%
Swedbank Pension Fund V100	8,91%	10,06%	5,19%	2,10%
LHV Green Plus*	-7,43%	n/a	n/a	1,30%
LHV Pension Fund Index Plus*	10,62%	13,47%	n/a	5,85%
Swedbank Pension Fund V30 Index (Exit Restricted)*	-5,55%	n/a	n/a	-5,55%
Swedbank Pension Fund V60 Index (Exit Restricted)*	3,18%	n/a	n/a	3,18%
Swedbank Pension Fund V100 Index (Exit Restricted)*	20,40%	13,87%	n/a	13,87%
Swedbank III Pillar Pension Fund Index*	-5,60%	n/a	n/a	-5,60%
Tuleva III Pillar Pension Fund*	14,25%	7,66%	n/a	7,66%

* Index funds

Source: Own composition based on Pensionikeskus data, 2022 (data 31.12.2021)

In terms of which assets supplementary pension funds invest in, the portfolios' structure differs significantly from that of mandatory pension funds, with a larger proportion is invested in equity-based structured financial products (mainly equity based UCITS funds), as can be seen from the graph on the following page.

Graph EE11.Supplementary pension funds' portfolio structure (in thousands €)



Source: Own composition based on Finantsintspektsioon data (fi.ee), 2021 (data 31.12.2021)

Similar to the mandatory pension funds, the portfolio structure of supplementary pension funds tends to change in favour of packaged products (UCITS funds, ETFs), confirming the trends of investing via financial intermediaries. However, this trend is even more pronounced in the III pillar.

By the end of 2021, close to 82% of supplementary pension fund assets were invested into units of other funds, mostly equity funds, while only slightly over 12% were invested directly into stocks or bonds, with the rest largely being held in bank accounts.

While above this report looked at the returns of individual funds, the overall functioning of the supplementary pension funds system is best understood from looking at the long-term returns of all funds, weighed by their assets under management.

Table EE12. Nominal and Real Returns of Supplementary Pension Funds in Estonia					
2003		9,40%			8,21%
2004		13,03%			8,23%
2005		23,78%			20,12%
2006		15,57%			10,47%
2007		8,37%			-1,36%
2008		-40,40%			-47,93%
2009		21,99%			23,87%
2010	Nominal return after charges, before inflation and taxes	14,21%	5.60%	Real return after charges and inflation and before taxes	8,79%	1.78%
2011		-8,00%			-12,08%	
2012		11,76%			8,12%	
2013		5,41%			3,36%	
2014		7,69%			7,62%	
2015		2,93%			3,10%	
2016		4,68%			2,33%	
2017		6,05%			2,29%	
2018		-6,51%			-9,83%	
2019		15,61%			13,81%	
2020		3,63%			4,51%	
2021		18,34%			6,30%	

Source: Own calculations based on Pensionikeskus.ee data, 2022 (data as of 31.12.2021)

Another view on the performance allowing the comparison across the EU countries and over time is presenting the nominal as well as real net performance according to the different periods.

Table EE13 Performance of Pillar III Pension funds in Estonia		
Holding Period	Net Nominal Annualised Performance	Real Net Annualised Performance
1-year	18,34%	6,30%
3-years	12,34%	8,14%
5-years	7,05%	3,12%
7-year	6,11%	3,01%
10-years	6,75%	4,00%
Since inception	5,60%	1,78%

Source: Own calculations based on Pensionikeskus.ee data, 2022 (data as of 31.12.2021)

As exemplified by the two above tables, despite higher fees, III pillar funds have, on average, provided higher returns than II pillar funds. The difference of 1.03% in terms of annualized real returns since inception, translates into a total cumulative difference of close to 23% since the founding of the current pension system. Put more simply, for a 1000 EUR investment in 2003, supplementary pension funds would, on average, have been worth about 230 EUR more in the end of 2021 than investing the same amount in pillar II pension funds.

One likely cause of this has likely been the much greater concentration of assets in more "aggressive", equity-heavy funds and fewer restrictions (compared to pillar II pension funds) on investment strategies and the extent to which supplementary funds can invest into equities. This difference in regulation was particularly large at the beginning of the multi-pillar pension system in Estonia but has decreased gradually through subsequent reforms of the II pillar.

Pensions Outlook for 2022 – Financial Repression

Despite the volatile market conditions and accelerating inflation at the end of the year, 2021 was overall a reasonably good year for pension savers in Estonia, with positive real returns. However, due to a combination of record inflation and market turmoil caused by the unprovoked invasion of Ukraine, 2022 seems very likely to prove catastrophic for pension savings.

Consumer prices have increased by 18,1%[108] just in the first 8 months of 2022, while at the same time, 7 out of the 10 biggest II pillar funds suffered nominal losses of more than 6%[109]. This points to a tremendous loss of purchasing power of people's savings, likely to erase all real returns since the creation of the II pillar system.

The first 8 months of 2022 were even worse for supplementary pension funds, where all 10 of the biggest funds by amount of assets under management were deep in negative territory, even before taking inflation into account, with nominal losses ranging between 6.98% to 10.58% (ibid).

Recommending solutions to Russia's aggression in Ukraine is beyond the scope of this report. However, the author strongly calls on both the government of Estonia and the European Central Bank (ECB) to act with more decisiveness in reigning in the rampant inflation which is destroying the purchasing power of all savings.

Just in the first 8 months of 2022, inflation decreased the purchasing power of II and III pillar pension savings in Estonia by close to 900 million euros[110]. If history is any guide, markets are very likely to recover eventually and find new highs. However, significant economy-wide price deflation is extremely rare and usually only occurs in conjunction with economic depression. Put more simply, once consumer prices go up, they rarely come down again. In fact, there is a risk of higher inflation expectations becoming entrenched, which could fuel higher inflation even when the initial causes cease. These historic tendencies underline the case for acting decisively in the face of high inflation.

It's notable that at the time of writing this report, the ECB's headline interest rate was three times lower than the equivalent rate of the US Federal Reserve.

[108] Eurostat data https://ec.europa.eu/eurostat/databrowser/view/PRC_HICP_MIDX/default/table?lang=en&category=prc.prc_hicp
[109] Data from www.pensionikeskus.ee
[110] Own calculation, based on Eurostat and pensionikeskus data

Conclusions

Estonia, as an early pension system reformer, introduced in 2003 a typical multi-pillar pension system that combines unfunded state schemes, as well as an auto-enrolled second pillar and voluntary pillars, the latter two of which are fully funded. Different types of pension vehicles in Pillars II &III) allow savers to choose from a wide variety of investment strategies. Lower transparency in fee history contrasts with the high transparency of performance disclosed on a daily basis. The exception is Pillar III insurance contracts, where no information about performance or fees is publicly disclosed. This resulted in an inability to confront the nominal as well as real returns of insurance contracts with other options available to Estonian savers.

The performance volatility of most pension vehicles is relatively high. However, Estonian savers tend to accept higher risk with regard to their savings. Pillar III vehicles are a typical example of highly volatile pension vehicles.

A new trend emerged in 2016 and continued into 2021 – the introduction of low-cost indexed pension funds for both pension pillars, which could deliver higher value to savers due to lower charges compared to peers. The competitive pressure from these new low-cost funds has led to an overall decrease in fees for II pillar funds, which should increase the ability of the funds to deliver above-benchmark performances to their clients in future years.

Overall, achieving an adequate gross salary replacement ratio in retirement remains a challenge in Estonia. This challenge has only become greater in 2021, after about a quarter of all II pillar pension savings were withdrawn by savers before retirement. This was enabled by a controversial change to the Pension system, which BETTER FINANCE strongly criticised already in 2020[111].

Unfortunately, based on the first 8 months of the year, 2022 looks set to be even worse for pension savers. While the negative nominal returns seen so far in 2022 are likely to be reversed when stock markets eventually recover from the disruption of the war and energy crisis, there is precious little hope of reversing the high-double-digit growth in consumer prices, which is decreasing the real value of pension savings. BETTER FINANCE calls on both national governments in the EU as well as the European Central Bank to urgently take more decisive steps to combat high inflation.

[111] https://betterfinance.eu/publication/dismantling-the-estonian-pension-system-is-not-the-answer/

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Pension Savings: The Real Return

2022 Edition

Country Case: France

Résumé

Le système français de retraite continue à reposer majoritairement sur les régimes d'assurance vieillesse de base et complémentaire par répartition (Piliers I et II), avec un taux moyen de remplacement du revenu d'activité de 48% en 2020,[112] et une valeur totale des actifs représentant 11.1% du PIB en 2021.[113] Malgré une allocation d'actifs plutôt dynamique, les plans d'épargne-retraite entreprise ont eu un rendement réel de +4.26% en 2021 et +0.96% en 22 ans entre 2000-2021 (+23.4% en cumulé). L'assurance vie – le produit individuel de loin le plus utilisé pour l'épargne retraite par les Français – a eu une performance très contrastée : +37.3% (+1,45% en moyenne annuelle) pour les fonds en euros (à capital garanti) encore dominants, mais -8.4% (-0,4%) pour les contrats en unités de compte qui sont davantage promus et se développent plus rapidement. Les produits individuels dédiés spécifiquement à l'épargne retraite (PERP, Préfon, Corem, etc.) sont beaucoup moins développés, et ont des performances plus opaques et le plus souvent plus mauvaises.

Summary

The French pension system continues to rely heavily on the mandatory "pay as you go" Pillar I and Pillar II income streams, with an aggregate replacement ratio for pensions of 48%,[114] and a total value of retirement assets of 11.1% of the French GDP in 2021.[115] Despite a rather dynamic asset allocation, corporate pension plans had an annual real net return of +4.26% in 2021 and +0.96% average annual for the 22 years between 2000-2021 (+23.4% cumulative). Life insurance products - by far the most widely used personal product for pension purposes by French savers - had very contrasted long-term pre-tax real returns: +37.3% (+1.45% annual average) for the still dominant capital guaranteed ones, but -8.4% (-0.4%) for the more promoted and faster growing unit-linked ones, despite very positive listed stocks and bonds returns. The personal products specifically dedicated to pensions (PER, PERP, Préfon, Corem, etc.) are much smaller, and their performances are less transparent and most often poorer.

[112] Voir Report GR9(B) du General Report, dans la section concernant la France - *aggregate replacement ratio for pensions*, selon les données d'Eurostat.
[113] Voir Report GR10 du General Report, selon les données d'OECD *Preliminary Data* 2021 (10 Juin 2022).
[114] See Table GR9(B) in the General Report, in the section concerning France – *aggregate replacement ratio for pensions*, according to Eurostat data.
[115] See Table GR10 of the General Report, based on OECD Preliminary Data for 2021 (10 June 2022).

Sustainability disclosures assessment and ranking

The following analysis was prepared by Zielke Research GmbH, based on the methodology available here.

Executive Summary

Environmental, Social and Governance aspects (ESG) have become an important feature in the choice of investment products, and particularly pension products as these usually amass large volumes of capital for long-term periods, making them the vehicles with the highest potential to drive stable and sustainable change.

According to new EU law provisions, in force since August 2022, distributors must inform, explain, and ask new clients about their sustainability preferences and take the latter into account when making suitability or appropriateness assessments. For this, disclosure of ESG/sustainability information in the public disclosure documents of financial institutions becomes a key aspect of "retail" investors protection.

The researchers analysed the 20 largest (by gross written premiums) insurance companies domiciled in France that provide life-insurance products (as the general FR case shows, life-insurance contracts make for a large part of voluntary retirement provision vehicles in France).

Our analysis shows that, on a company level, a certain degree of insight is given into the different investment styles in the reports published by insurance companies. On a product level, however, based on publicly available information, the majority of pension providers do not give sufficient information. As an overview, the best disclosure (most valuable information) was given by AXA and Generali, whereas 13 out of the 20 companies researched did not give relevant information on a product level.

At insurance company level, the researchers also evaluated their disclosures on a point system, explained at the end of this assessment.

Introduction

What is the EU taxonomy? | The EU taxonomy defines technical criteria to evaluate whether an economic activity contributes to one of the following six environmental objectives:

- climate change mitigation,
- climate change adaptation,
- protection of water and marine resources,
- avoiding pollution,
- enhancing circular economy projects,
- protecting biodiversity.

For the time being, only the first two criteria are defined by the EU. The four others will follow soon.

If an activity falls within the technical criteria defined by the EU taxonomy, it can be called sustainable. But it must not put harm to any of the other five objectives. If an insurance product or an investment fund invests in such an asset, it would fit the client's preference for an economically sustainable objective. But other aspects are also important:

Stranded assets

Stranded assets could be defined as assets that are stranded due to new government regulations that limit the use of fossil fuels (like carbon pricing), a change in demand (for example, a shift towards renewable energy because of lower energy costs) or even legal action against high emitters (LSE).

If the insurance provider invests in possible stranded assets because he thinks these assets might overperform (in the current energy crisis oil and gas stocks have outperformed by far the rest), he might face the problem that he will not be able to sell the assets on the market as the other actors also consider ESG aspects. Then the policyholder cannot be reimbursed.

Riskiness

More sustainable companies tend to be perceived as less risky by the stock market and investors benefit from a lower cost of equity capital and, as a consequence, better access to finance.
Taking into account sustainability risks in the owning company's strategy shows that the management is anticipating the effects of climate change in their risk policy. This is then reflected in the stock price or corporate bond spread.

Different investment styles | There are different ways in order develop an ESG investment strategy on the pension provider's side:

- **Exclusion**: it implies excluding (from the list of potential investments) the companies that violate internationally recognized standards or conventions; It would not be unfair to say that Exclusion could be considered the easiest strategy to put into place. You just define negative criteria the invested companies must not fall into. Typical examples are not investing in alcohol, weapons or coal industries.
- **Best-in-class**: investing in the companies with the most sustainable performance; Best-in-class is already a bit more complicated. You have to choose the investment funds which implement ESG criteria at the strictest. However, as these criteria may vary, it is also a bit vague;
- **Sustainability themed**: investments in companies whose activities contribute to solving societal problems; Sustainability themed is not limited to environmental issues and shows a general commitment to ESG issues when selecting financial assets. It is more a guideline than strict rules.
- **ESG integration**: consideration of ESG indicators in asset analysis and for assessing investment decisions; ESG integration is more concrete. The pension provider defines clear parameters which have to be respected before he decides to invest;
- **Engagement & Voting**: direct participation in ESG strategy of investee companies; Engagement & Voting goes beyond looking at ESG criteria. The asset manager tries to influence the company's strategy he decides to invest in by exerting his voting rights at the general assembly. This works only with equity investments.
- **Impact investing**: investing in companies to achieve measurable, beneficial, social or environmental impacts; Impact Investing is the most powerful and difficult investment style. The asset manager chooses for instance a polluting industry, puts the condition that,

with the given capital, the company has to reduce its CO2 emissions by 40 % within three years and tracks down the performance every year.

Methodology

Scope

We looked at the 20 biggest private French life and pension providers: Allianz, AXA, AG2R La Mondiale, Apicil, Aviva, BNP Paribas Cardif, CNP Assurance, Crédit Agricole Assurances, Covéa, Generali, Groupama, Groupe des Assurances du Crédit Mutuel, HSBC, Le Conservateur, MACIF, MAIF, Natixis Assurances, Société Générale Assurances, Suravenir, Swiss Life.

Data sources

Data sources used are mainly CSR/sustainability reports as well as the official websites of the 20 pension providers. Some other sources such as articles on Sustainanalytics to define certain technical terms were used. We have put our judgements on which investment style the pension providers are following given the information in their CSR reports.

Determining investment styles

First, we looked at the different sustainability or Corporate Sustainability Reports (CSR) based on the fiscal year 2020. We tried to find the information given to qualify the investment style.
In a second step, we asked ourselves whether this information is transmitted to the interested policyholder when he wants to get informed about an insurance product. We looked at the company's website and, depending on the result, we qualified the information given. Each step is described company by company.

Key concepts:

Non-financial returns |

It is the returns beyond the financial short-term performance. For example, new product development or expanding organizational capabilities may be important strategic goals but may hinder short-term accounting performance in the short-term.

ESG risks |

ESG risks are risks related to a company's environmental, social and governance practices. Investors, lenders and customers may rely on ESG data to assess a firm's risk exposure to therefore decide on their investments or purchasing choices.

Analysis

I. Allianz France

I.1. Investment Styles

Best-in-class: Allianz's sustainable strategies apply sustainability assessments to construct portfolios reflecting their clients' values. All apply exclusions and climate engagement or SRI best-in-class. However, they do not use best-in-class as a strategy for their proprietary investment.
Sustainability-themed: Some of Allianz's investments are sustainability-themed funds.
ESG integration: The company provides details about the number of transactions undergoing ESG analysis per sensitive sector as well as explanations about ESG integration processes. An

example of ESG integration is the real estate sector, where investments are only made in buildings that have received green certification.
Engagement & Voting: The company explains its engagement processes, and it provides information about its engagement practices and a breakdown per sector, topics and location. It mentions regular dialogue and exchange with the insurance's clients, investee companies and asset managers.
Exclusion: The company provides an overview of all sectors in which Allianz has invested, including € 6,331 million divested or settled from coal-based business models since 2015.
Impact investing: The company provides impact investing funds for asset management clients, but they do not proceed to impact investment in their proprietary investments.

I.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	1
Were ESG opportunities and risks clearly identified?	1
Are green investments options available?	1
Do clients have a say?	-1

I.3. Particular comments on provision of ESG information

Allianz France: Clearly explains the approach of the integration of ESG factors in the investment decisions; Demonstrates the alignment of the company's ambitions with the Paris accords (financing low carbon emission solutions, accelerating energy transitions etc); Develops methods and tools to measure the impact of their investments on soil erosion, natural capital, flora and fauna, water and air pollution; Presents their ESG approach in actual numbers; Explains the Taxonomy and SFDR regulations and how the company is implementing it; and provides details about their green portfolios.

II. AXA

II.1. Investment Styles

Best-in-class: no particular information given.
Sustainability themed: The company mentions holding green bonds for the energy transition.
ESG integration: Based on the annual report, some of the company's investments are aligned with the Sustainable Development goals. Additionally, investments in companies meeting strict environmental criteria account for a growing proportion of the Group's financial assets; the Group mentions a commitment to address biodiversity loss through investment and underwriting policies. There is also information about the ESG review process within the due diligence for ESG integration strategy in investment in the climate report.
Engagement & Voting: In its climate report, AXA provides a description and several topics where it engaged in ESG topics.
Exclusion: Based on the annual report, AXA mentions divestment in coal and exclusion of the following sectors: controversial weapons, coal mining and coal-based power generation, tar oil sands and associated pipelines, palm oil, food commodity derivatives and tobacco.

Impact investing: AXA's fund invests in companies that have committed to generating positive, measurable impact externalities for the environment or society. €700 M was committed to impact investing since 2013. Also, the company launched a $175 million "Impact Investment" fund focused on biodiversity protection. In 2020, AXA decided to double this commitment to $350 million.

II.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	1
Were ESG opportunities and risks clearly identified?	1
Are green investments options available?	1
Do clients have a say?	1

II.3. Particular comments on provision of ESG information

AXA includes: Information about the different green investments the company invests in; Explanation of the SFDR regulation and how the company is implementing it; Explanation of the importance of green investments; Explanation of the fact that performance and green investment are not mutually exclusive; Introducing different labels to determine responsible investments; and provides the customer with the option to have a say regarding SRI strategy: either investing with a positive impact strategy or exclusion strategy (not including harmful activities).

III.AG2R La Mondiale

III.1. Investment Styles

Best-in-class: The company uses funds that go beyond the common basis of the IR policy to select the best issuers in each sector (best-in-class approach).
Sustainability themed: The company holds sustainable bonds and green activities.
ESG integration: The company declares extra-financial performance and takes it into account in its investment decisions.
Engagement & Voting: The SRI team held 65 meetings in 2020 to discuss and vote on topics related to COVID/exchange, climate, biodiversity, governance and social issues.
Exclusion: Outstanding coal-related assets were reduced by 10 % regarding MSCI and other benchmarks.
Impact investing: 55 % of the company's real estate assets are certified green.

III.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	1
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	1
Do clients have a say?	1

III.3. Particular comments on provision of ESG information

AG2R La Mondiale: offers the possibility to choose how their customers' money will be invested including socially responsible investments but has very limited information about green investments and no details about their socially responsible investments.

IV. Apicil

IV.1. Investment Styles

Best-in-class: As part of the Group's SRI trajectory, in 2020, APICIL Asset Management has undertaken an innovative transformation of its "Stratégie indice Europe" mutual fund into a "Stratégie Euro ISR" mutual fund. This innovation will be extended over 2021 to other APICIL Asset Management funds.
Sustainability themed: The Group has thus chosen to invest in investment funds created in the context of the COVID-19 crisis to support weakened economic players:
- €500,000 by APICIL Mutuelle for the FNMF's IMPACT investment fund.
ESG integration: The company has an outstanding 86 % Carbon intensity coverage rate. The Group also uses the services of an extra-financial rating agency (MSCI) to inform its investment decisions.
Engagement & Voting: The company applies principles of engagement and shareholder dialogue since 2021.
Exclusion: The company's SRI policy is based on 4 pillars: exclusion, ESG screening, environment and engagement. As an example, the Group is committed to excluding issuers whose activities are deemed incompatible with APICIL's values (coal, alcohol and tobacco above a defined threshold, controversial weapons).
Impact investing: The company invested and developed impact Scoring-as-a-Service.

IV.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

IV.3. Particular comments on provision of ESG information

No information is available.

V. Abeille Assurance (old Aviva)

V.1. Investment Styles

Best-in-class: Aviva mentions green investments based on EU Taxonomy.
Sustainability themed: Aviva accompanied 4815 green projects and 100+ companies and incubators in 2020.

ESG integration: Aviva mentioned an increase in green bond positions based on EU Taxonomy. The company also offers pension-saving solutions that have CSR labels.
Engagement & Voting: Aviva voted against the ESG policies of Royal Dutch Shell and Exxon Mobil.
Exclusion: Aviva plans the complete exclusion of coal in 2030.
Impact investing: Dedicated funds to help companies in difficulty due to the Covid crisis.

V.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	1
Were ESG opportunities and risks clearly identified?	1
Are green investments options available?	1
Do clients have a say?	1

V.3. Particular comments on provision of ESG information

Abeille Assurances (old Aviva): Explains socially responsible investments in a simple and clear way; Provides constructive arguments about the importance of SRI; Offers clients, a wide range of responsible investments options; Provides the details about which kind of green investments constitute their portfolios; and includes the use of labels to prove that their funds take into account ESG factors.

VI. BNP Paribas Cardif

VI.1. Investment Styles

Best-in-class: 78 % of the company's assets reach a high ESG inclusion.
Sustainability themed: According to Bloomberg, the company is the second largest global player with €10.8 billion in green bonds.
ESG integration: The company has put in place an ESG strategy and a rating/climate risk management process to integrate these risks into overall risk management.
Engagement & Voting: Most resolutions are on governance issues and a few resolutions deal with environmental and climate issues.
Exclusion: Progressive exclusion of coal.
Impact investing: The company chooses investments with positive impact to generate a measurable environmental (renewable energies, protection of the biodiversity) and/or social, societal (job creation, inequalities reduction) impact.

VI.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

VI.3. Particular comments on provision of ESG information

No information is available.

VII. CNP Assurances

VII.1. Investment Styles

Best-in-class: Only partly.
Sustainability themed: Based on Bloomberg, CNP Assurances is the second largest actor with €10.8 billion in green bonds for its clients in 2020.
ESG integration: The company has in place an ESG strategy, a process to manage risks related to climate, and it integrates ESG factors in the global management of risks.
Engagement & Voting: CNP Assurances voted in 110 general meetings in 2020.
Exclusion: The company progressively excludes coal actors from its investments (1000 excluded already).
Impact investing: European leader I, sustainable thematic with 18.4 billion in assets under management at the end of 2020.

VII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

VII.3. Particular comments on provision of ESG information

No information is available.

VIII. Crédit Agricole Assurances

VIII.1. Investment Styles

Best-in-class: Investments in certified (BREAAM) real estate assets.
Sustainability themed: Based on the ESG report, the company has €6.3 billion in green bonds at the end of 2020.
ESG integration: The company relies on ESG criteria in supplier selection. Additionally, it has +45% of assets under management in contracts with SRI, Finansol and Greenfin labels, and it has +57% of green loans in its portfolio.
Engagement & Voting: The shareholders voted in 69% of the General Assemblies.
Exclusion: Exclusion of coal and tobacco.
Impact investing: The company invested € 7 billion in green offices and buildings.

VIII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

VIII.3. Particular comments on provision of ESG information

No information is available.

IX.Covéa

IX.1. Investment Styles

Best-in-class: Investments in certified ISR funds.
Sustainability themed: The company invests in the following: "Covéa actions solidaires, Covéa Flexible ISR, Obligations vertes".
ESG integration: Covéa finance, portfolio management, subject to the Energy Transition Law.
Engagement & Voting: The company organizes multiple general meetings during the year to vote on important matters (Board of directors' appointments etc).
Exclusion: The company has put a plan to completely exclude coal in 2030.
Impact investing: The company has funds which are considered Impact investing funds including "Covéa Aeris, Covea Aqua, Covéa Solis, Covéa Terra, Covéa Immobilier, Charte énergétique, Empreinte Carbone".

IX.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	1
Do clients have a say?	-1

IX.3. Particular comments on provision of ESG information

No significant information is available (except CSR report).

X. Generali

X.1. Investment Styles

Best-in-class:
United Nations Global Compact, PRI since 2007 and 2011. Assets appraised by GIAM, Trucost, and S&P Global.
Sustainability themed: €1.6 billion in green bonds with labels such as ISR, Greenfinch and Sycomore.
ESG integration: 47% of the portfolio is eligible for the EU Taxonomy.
Engagement & Voting: No significant information is given.
Exclusion: The company has presented a plan for decarbonization in 2050.
Impact investing: €3.8 billion of real estate assets are certified BREEAM and LEED.

X.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	1
Were ESG opportunities and risks clearly identified?	1
Are green investments options available?	1
Do clients have a say?	1

X.3. Particular comments on provision of ESG information

Generali: Offers to invest responsibly via labelled funds such Label ISR, Label Finansol and Label Greenfin.

XI. Groupama

XI.1. Investment Styles

Best-in-class: BREEAM or LEED certification for sustainable real estate.
Sustainability themed: The company invests in social housing, renewable energies and green buildings.
ESG integration: The company uses ESG criteria to select suppliers. Additionally, it has ESG management strategies for more than 45 % of assets under management.
Engagement & Voting: Voting in 69 % of general meetings.
Exclusion: The Company excludes coal and tobacco.
Impact investing: The company launched green structured products in 2020 for reforestation or to support territories and SMEs.

XI.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XI.3. Particular comments on provision of ESG information

No information is available.

XII. Groupe des Assurances du Crédit Mutuel

XII.1. Investment Styles

Best-in-class: The company has 14 pension funds with SRI, Greenfin and Finansol labels.
Sustainability themed: The company has green and sustainable development bonds. €3.8 billion for ESG p19.
ESG integration: 50.1 % of assets under management include ESG criteria, compared to 48.2 % in 2018.

Engagement & Voting: GACM exercises its voting rights assisted by ISS to develop ISS' sustainability policy.
Exclusion: Progressive exclusion of coal, 80 million € divested by 2020 and no more new coal-related infrastructure.
Impact investing: The company launched green structured products in 2020 for reforestation or to support territories and SMEs. It also invests in real estate investments certified by SINTEO, BREEAM, HQE and BBCA.

XII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XII.3. Particular comments on provision of ESG information

No information is available.

XIII. HSBC Insurance

XIII.1. Investment Styles

Best-in-class: The company has €1.6 billion in green bonds including investments in sustainable infrastructure and energy systems.
Sustainability themed: Almost 89 % of total assets under management were invested according to at least one of the seven strategies defined by the Global Sustainable Investment Alliance.
ESG integration: The company raised ESG issues in engagements with over 2,300 corporate and non-corporate issuers in 78 markets in 2020.
Engagement & Voting: The company voted on more than 86,000 resolutions at over 8,200 company meetings in 70 markets.
Exclusion: The company excludes coal.
Impact investing: No significant information is given.

XIII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XIII.3. Particular comments on provision of ESG information

No information is available.

XIV. Le Conservateur

XIV.1. Investment Styles

Best-in-class: The company markets SRI label.
Sustainability themed: Minor significant information is given.
ESG integration: Minor information is given.
Engagement & Voting: The Group votes on proposals that are of interest to the members such as executive compensation, dividend and capital issues, diversity of the board and capital issues.
Exclusion: Minor information is given.
Impact investing: No significant information is given.

XIV.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XIV.3. Particular comments on provision of ESG information

No information is available.

XV. MACIF

XV.1. Investment Styles

Best-in-class: The company has real estate assets managed by Macifimo Finansol, Greenfin, ESG Luxflag, state SRI labels.
Sustainability themed: The company has €735 million of green bonds.
ESG integration: No significant information is given.
Engagement & Voting: The Company organized relevant meetings including a meeting with bond issuers and another one related to plastics.
Exclusion: Exclusion of coal in 2020.
Impact investing: The company invested in the following:

- €17 billion in real estate assets that are certified or in progress,
- investments in renewable energies in 2020.

XV.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	-1
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	1
Do clients have a say?	1

XV.3. Particular comments on provision of ESG information

MACIF: Automatically invests in projects for the development of renewable energies, plastic recycling or social integration projects.

XVI. MACSF

XVI.1. Investment Styles

Best-in-class: The company has European convertible bonds with an SRI label and energy transition funds according to Greenfin and Finansol.
Sustainability-themed: The company invests in green bonds, infrastructure funds, and renewable energies.
ESG integration: The Company takes into account ESG factors in its investment strategies and has at least 8% of funds that respect the ESG factors.
Engagement & Voting: Dialogue with companies the company has invested in to encourage them to implement the Group's ESG policies, in particular, to reduce their carbon impact.
Exclusion: The company excludes any investments in coal and tobacco.
Impact investing: Responsible investments have doubled in two years to €1.3 billion in 2020.

XVI.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	1
Do clients have a say?	1

XVI3. Particular comments on provision of ESG information

No information is available.

XVII. Natixis Assurances

XVII.1. Investment Styles

Best-in-class: The Company has put in place a methodology to avoid investing in companies with mediocre ESG investment strategies.
Sustainability themed: The company invested €880 million in green bonds.
ESG integration: Minor information is given.
Engagement & Voting: Minor information is given.
Exclusion: Minor information is given.
Impact investing: The company supports the stimulus plan presented by the Minister of the Economy in 2020.

XVII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XVII.3. Particular comments on provision of ESG information

No information is available.

XVIII. Société Générale Assurances

XVIII.1. Investment Styles

Best-in-class: 90 % of assets are in connection with the requirements of the reporting standards of the Task Force on Climate Disclosures (TFCD).
Sustainability themed: The company invests in green bonds.
ESG integration: 93 % of assets are covered by ESG analysis.
Engagement & Voting: In 2020, the various types of direct engagement resulted in 2,378 topics with 878 companies in ESG topics.
Exclusion: Funds are aligned with Paris Agreement. Exclusion of investments in Tobacco and coal.
Impact Investing: Societe Generale structured and distributed the first "Positive Impact Support Notes - Africa", enabling their clients to promote Positive Impact Finance in Africa, including projects to build hospitals or provide access to drinking water.

XVIII.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XVIII.3. Particular comments on provision of ESG information

No information is available.

XIX. Suravenir

XIX.1. Investment Styles

Best-in-class: The company invests in real estate funds with SRI and Greenfin labels.
Sustainability themed: Suravenir has committed nearly 780 million in activities that promote the energy transition.

ESG integration: The company developed an environmental charter and integrated ESG in its investment policy.
Engagement & Voting: Suravenir responded to 100% of the votes at the 47 General meetings for which it held voting rights.
Exclusion: There are no investments in coal.
Impact investing: Primonial Reim manages 56 % of real estate under PRI and SRI standards.

XIX.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XIX.3. Particular comments on provision of ESG information

No information is available.

XX. Swiss Life

XX.1. Investment Styles

Best-in-class: Distribution of green labeled funds.
Sustainability themed: Minor information is given.
ESG integration: Minor information is given.
Engagement & Voting: Minor information is given.
Exclusion: Swiss Life does not invest in sovereign bonds issued by states that are sanctioned by the United Nations Security Council or by the European Union.
Impact Investing: Participation of 25 million CHF in impact investments.

XX.2. Evaluation

Information type	Grade
How easy is it to get ESG information?	N/A
Were ESG opportunities and risks clearly identified?	-1
Are green investments options available?	-1
Do clients have a say?	-1

XX.3. Particular comments on provision of ESG information

No information is available.

Ranking | Based on the above results, we have added up the different scores to create a ranking – in terms of how well the investment styles are applied and explained.

ESG in investment policy	Minimal points	Maximal points
Best-in-class	-1	0,5
Sustainability themed	-1	1
ESG integration	-1	0,5
Engagement & Voting	-1	1,5
Exclusion	-1	0,5
Impact investing	-1	2

Source: Zielke Research Consult

In addition, we award points for the four aspects in the analysis section. On this basis, points are awarded for transparency: +1 if the information given is detailed (on each category, risks, opportunities and impacts on investment returns), 0 if the information is addressed but not detailed (on each category), -1 if no information is given (on each category).

Introduction

Using the World Bank multi-pillar structure, the French pension system mainly relies on:

- **Pillar I** – the public pension, a defined benefit (DB) Pay-As-You-Go (PAYG) scheme, which is managed by the State and comprises the basic pension insurance;
- **Pillar II** – the occupational retirement provision (complementary component), also DB and privately managed and funded by both employer and employee contributions, to which participation and contribution rates are mandatory;
- **Pillar III** – composed of the voluntary retirement savings plan, also privately managed, to which participation is optional, and which can be set up by the employer (voluntary occupational plans) or by providers for the pension saver on his own (voluntary personal plans).

Introductory table: French Pension System Overview		
Pillar I	**Pillar II**	**Pillar III**
Mandatory State Pension	Mandatory Private Pension	Voluntary Personal & Occupational Pension
Basic pension insurance	Supplement of the 50% pre-retirement income target of Pillar I	Divided into different financial retirement savings products
Divided into multiple sub-categories of pensions regimes for private sector, private service and special professions.	The complementary component contributions are collected by different designated paritarian institutions, depending on the sector.	Voluntary pension products are tax-incentivised in order to support participation in the third pillar and are mostly defined contribution
DB PAYG	DB PAYG	DC
Quick facts		
A relatively high old-age dependency ratio of 34.3% (2021)		
An average pre-retirement income replacement ratio of 48% (2020)		

Sources: Table GR9(B) in the General Report

Summary return table - Average real net returns of French pension savings (before tax)					
Average real net returns	1 year 2021	3 years 2019-2021	7 years 2015-2021	10 years 2012-2021	whole reporting period
Life insurance - CG	-4.19%	-1.14%	0.01%	0.46%	1.45%
Life-insurance - UL	3.41%	1.00%	1.71%	3.17%	-0.40%
Corporate plans	4.21%	4.38%	1.78%	2.68%	0.96%

Sources: Tables FR3, FR5, FR7; CG = capital guaranteed; UL = unit-linked; PS = pension schemes;
** return proxy measure*

Pillar I

The French state pension system (Pillar I) is divided it into several sub-categories of pension regimes for:

- Private sector employees;
- Public service; and
- Special professions (such as the army or hospital workers).

Each pension regime is further organised into two sub-components: (1) *The base pension insurance,* which incorporates both the non-contributory Pillar 0 and the defined benefit Pillar I to which all employees and self-employed individuals must contribute; and (2) *The complementary pension insurance*, which supplements the basic state pension allowance (Pillar II).

To benefit from the basic pension allowance (*assurance vieillesse*) of the French social insurance system, a person must reach the standard retirement age, which is currently not the same for all cohorts, thus birth-date dependent.[116]

The full pension entitlement from Pillar I is calculated by multiplying the mean annual gross income,[117] by the correction coefficient,[118] and by the insurance coefficient, the latter being calculated by dividing the total insured period (limited by a set ceiling in the form of a maximum insurable period) by the maximum insurable period (thus, it cannot be higher than 1).[119]

Pillar II – occupational pensions

The French Pillar II is a mandatory defined benefit, PAYG and privately managed pension scheme, designed to supplement the 50% pre-retirement income target of Pillar I.[120]

The complementary component contributions are collected by different designated paritarian institutions, depending on the sector. The largest part of complementary mandatory contributions, those for private sector employees, are collected and redistributed by AGIRC-

[116] The standard retirement age for the basic allowance and for the full pension entitlement starts at 60 and 65 years, respectively (for those born before 1951) and grows by 5-months for each later year of birth until 1954. This is to say, all persons born after 1 January 1954 have a standard retirement age of 62 years (for the minimum allowance) and 67 years old (for full entitlement) – see https://droit-finances.commentcamarche.com/contents/1163-age-de-depart-a-la-retraite-en-2018.

[117] Which is the average of the highest 25 annual gross salaries.

[118] The correction coefficient, in fact, referred to as a *rate* which can represent a maximum of 50% of the social security income limit.

[119] CNAV, "Elements de calcul de la pension" https://www.statistiques-recherches.cnav.fr/les-elements-de-calcul-de-la-pension.html.

[120] This is because, as indicated above, the full Pillar I pension entitlement at retirement is calculated by multiplying the average annual gross income and the insurance coefficient (which should be 1 in normal conditions) with a correction coefficient, which in normal conditions is set at 50%.

ARRCO (employees' pension regimes association). Employer and employee participation in Pillar II is mandatory and usually set up through collective agreements.

In France, Pillar I and Pillar II should cover 100% of all employees receiving a salary.

Pillar III – voluntary occupational and personal plans

The third pillar of the French pension system is composed of the voluntary pension plans. It was reformed in 2019, with the "PACTE" Law creating the "PER" ("Plan d'Epargne Retraite" or Pension Savings Plan) divided into:

A. occupational PERs are:
   - Collective corporate PERs (corporate plans, for private sector employees at large), which are set up by employers either through DC pension funds, which are progressively replacing the existing "*PERCOs"*; employee participation is voluntary;
   - "Mandatory" collective corporate PERs are insurance regulated PERs which are mandatory for employees or a category of employees, once the employer has set it up. They are replacing the existing PERE.
   - Existing professional or sector-specific personal plans, such as the *Contrats Madelin (for self-employed), Madelin Agricole* (for the agricultural sector) or the *CRH* (for Public Health sector,) and Préfon (mainly accessible to public employees) have or will be converted into individual PERs.[121]

B. Personal PERs UCITS unrelated to occupation
   - Individual PER (People's Retirement Savings Plans), sub-divided into insurance-regulated contracts with capital guarantee (including Préfon and Corem, see below) or linked to units in collective investment schemes (UCITS or AIFs), and into securities accounts. The insurance regulated individual PERs are progressively replacing the "PERPs" ("Plan d'Epargne Retraite Populaire" or ""People pension savings plan") and "Contrats Madelin" (for self-employed workers): the existing balances can be transferred to PERs, and no such new plans can be opened since 1st October 2020.

The PER can be offered both by insurers and by banks / asset management companies, and beneficiaries are free to choose between the two pay-out options: annuities or capital withdrawals. All PERs are freely transferable to other PERs. However, the new law lifted the 15-year ban on inducements for unit-linked personal pensions in order to try to boost their promotion. French savers organisation FAIDER estimates that this will cost pension savers at the very least €20 billion over the average life of the PER contract[122].

[121] *Fonpel*, *Carel-Mudel* and *RMC* are special pension vehicles and not covered by this report.
[122] Faider.org, 6 June 2019

The new French Pension Savings Plan (PER) default option

Interesting innovation: the one and only default option for the accumulation phase is one simple "life cycle" one:

The share of low investment risk assets is at a minimum:

- 20% of total assets of the plan starting 10 years from the liquidation date envisaged by the Plan participant;
- 50% starting 5 years from then;
- 70% starting 2 years from then.

Voluntary pension products are tax-incentivised in order to support participation in the third pillar and are mostly defined contribution.

Life insurance contracts and bank accounts still represent the two largest blocks of financial savings products in portfolios held by French households. Total outstanding insurance-regulated savings (excluding real estate units) reached €2.16 billion in 2021, i.e., 33% of total financial savings. Direct bond holdings continued to shrink to 0.54% of the total, but direct listed equity ones rose to 6%.

Table FR 1. Financial assets of French households at the end of 2021

	% of total	2021/2020
Currency and bank deposits	32.4%	0.3%
Investment funds*	4.3%	-4.7%
Life insurance & pension funds	36.1%	-4.8%
Direct investments (direct holdings of bonds and shares)	27.2%	7.6%
Total	100.0%	

* 10.2% when including "units" of insurance-regulated products

Source: Banque de France

Pension Saving Vehicles

Life insurance contracts

Ordinary life insurance contracts are not specifically designed for pension purposes. However, retirement is the main objective of French savers who subscribe to these insurance contracts, and they are by far the main long-term financial savings products used in France.

From 2016 to 2020, contributions to unit-linked contracts rose more than those to *"contrats en euros"* (capital guaranteed contracts – or misleadingly called "with profit policies" in the UK) and their share in total mathematical reserves increased from 15% to 22%.[123] This increase is partially due to capital gains but can be mostly attributed to net inflows (contributions minus

[123] Source: ACPR

benefits). Unit-linked contracts accounted for 30% of inflows to life insurance in France in 2013 and 39% in 2020.

Table FR 2. Life insurance mathematical provisions (in € billion)							
	2016	2017	2018	2019	2020	2021	2021/2020
Unit-linked life contracts	285	328.4	328.3	372	416	488	17.2%
All life contracts	1,871	1,919	1,917	2,057	2,163	2,181	0.8%

Source: ACPR (solvency 2 reports)

In 2014 a new life insurance contract, the *Eurocroissance*, was created. The contract does not guarantee the invested capital in case of withdrawal until eight years following subscription. This new type of contract aims to incite savers to accept a higher level of risk in the short-term for potential better long-term returns, for example by investing more on equity markets. By the end of June 2022, those contracts amounted to only €5.4 billion of mathematical provisions,[124] probably at least partly due to the ultra-low interest rates, making it challenging to generate a decent return. Since 2016, insurers are allowed to transfer unrealised capital gains from their general assets covering capital guaranteed contracts to the *Eurocroissance* contracts to boost returns.

Personal pension plans

"PERs"

Launched in October 2019, PERs reached €48.5 billion in assets and 4.3 million participants by September 2021.

"People pension savings plan" (PERP[125])

PERPs were launched in 2004 as insurance-regulated personal pension plans. Thanks to higher contributions and paid benefits remaining low, mathematical provisions in PERP personal pension plans increased from €7.5 billion in 2011 to € 20.9 billion in 2020. New PERP contracts are not allowed since October 2020.

The number of subscribers increased slowly from 2011 to 2019 from 2.1 to 2.5 million, (+18%), and flattened out in 2018 and 2019 due to an exceptional ban on tax deductibility and to the launch of the PER that year.

"Contrats Madelin" (for self-employed individuals)

Mathematical provisions related to "*contrats retraite Madelin*" decreased by 3.8% to 39 billion in 2020.[126] There were 1.363 million outstanding contracts at the end of 2019 (+2.0%). The "*contrats Madelin*" are widely used by self-employed individuals because the PAYG system is

[124] Source: France Assureurs
[125] "*Plan d'épargne retraite populaire*". Figures source: FFA, French Federation of Insurance.
[126] Source: Federation Francaise de l'Assurance (FFA)

less generous (and contributions lower) than for employees. New Madelin contracts are not allowed since October 2020.

"Contrats Madelin agricole"

Mathematical provisions of "*contrats Madelin agricole*" (plans for persons working in the agricultural sector) decreased by 1.6% in 2020 to €6 billion. 326,000 farmers had an open contract at the end of 2018.

Personal pension products exempted from governance rules

All personal pension products in France have to be subscribed by savers associations in which the participating pension savers are members of the general assembly, have the right to vote at the general assembly, and have the right to propose resolutions to the general assembly. However French Law exempts the three biggest ones (Préfon, Corem and CRH) from all these governance rules protecting pension savers' rights. They could also transform themselves into PERs as soon as 2019 without requiring the approval of their participants as they would for any other pension savings product.

Préfon

Préfon is a deferred annuity plan open to all current and former public employees and their spouses that had 398,500 participants at the end of 2021. Its assets under management reached €17.6 billion (market value) at the end of 2021, up from €17.3 billion at the end of 2019.[127]

Corem

Corem is also a deferred annuity plan open to everyone but so far mainly subscribed to by civil servants. It had 326,678 participants at the end of 2021 (down from 397,515 in 2016). Its assets under management went from €1.7 billion (market value) at the end of 2020 to 11.0 billion at the end of 2021.[128]

CRH

CRH (*"Complementaire Retraite des Hospitaliers"),* a deferred annuity plan[129] open to all public employees from the public health sector and their spouses, had about 350,000 participants in 2021. Its technical reserves amount to €3.3 billion in 2018.[130] We could not find more precise publicly available information.

[127] https://www.prefon.asso.fr/assets/files/publications/rapport-gestion/rapport-de-gestion-prefon-2021.pdf.
[128] Combined participants and assets of Corem (9.5 billion) and another smaller pension plan ("R1") managed by the same provider (UMR).
[129] Rights acquired before mid-2008 do not provide annuities guaranteed for life, but only for 10 to 15 years.
[130] Règlement intérieur CRH 2020 article 18.

Collective deferred annuities

In total, mathematical reserves grew a little, from €118.8 billion to 134.9 billion from the end of 2017 to the end of 2021.

For insurance-regulated corporate defined contribution plans under "Article 83" of the French tax code ("PER Entreprises" or PERE), mathematical reserves stood at €65 billion at the end of 2020.

For insurance-regulated defined benefit plans ("Article 39" of the French tax code), mathematical reserves stood at €40,5 billion at the end of 2021.

Corporate long-term savings plans

The total assets of French defined contribution corporate savings plans (PEE[131] + PERCO + collective PER) increased by 14% in 2021 to € 167.6 billion. The number of members in those plans increased to 11.2 million people in 2020.

The *"Plan d'Epargne Retraite Collectif"* (PERCO), exclusively dedicated to pension investments, is still less "mature" than other pension plans, since it started in 2004, but continues to grow quite rapidly. Since October 2019, PERCOs have begun to be converted into the new "collective "PERs". Assets under management amounted to €26 billion at the end of 2021 (+15.6% over 2020). Close to 3.4 million employees had a PERCO or collective PER at the end of 2021 and 189,000 companies propose this type of plan to their employees.

PERCO and collective corporate PER are quite similar to the US Corporate pension plans ("401k") in their design. However, they are generally not invested in general purpose investment funds like UCITS, but mostly in specifically dedicated French-domiciled alternative investment funds (AIFs) called *Fonds Communs de Placement d'Entreprise* (FCPEs).

Charges: often opaque, high and rising

Available data on average annual charges for savings products are scarce in France.

- Investment funds – According to the AMF[132], overall annual fees for equity funds were 1.51% on assets, and 1.25% overall in 2020, and they would have gone down slightly from previous years. However, these averages are not asset-weighted, and include 2,374 funds, both "retail" and "institutional" ones. Moreover, they only include French-domiciled funds and leave out other UCITS funds sold to French individuals. Even more important is the fact that the AMF data do not take into

[131] PEE: « *Plan d'épargne entreprise* » is a corporate savings plan where savings are typically blocked for a minimum of five years.
[132] La lettre de l'Observatoire de l'épargne de l'AMF - n° 47 – février 2022

account the fact that two thirds of investment funds offered to French retail investors are via insurance contracts' "units".

- For French equity funds offered via those, annual total charges of the funds themselves reached 2,17% on average in 2021 and 1,96% for the now most offered mixed funds[133]: much more expensive than the overall French fund market estimated by AMF.
- But the full "units" cost was even higher: respectively 2,98% and 2,77%, when including the annual contract wrapper charge.

These charges are very high: the average ongoing fund charge for all UK domiciled active funds (both equity funds and all other funds) was only 0.92 % in 2015 (1.38% for retail funds and 0.69% for institutional ones).[134]

- Insurance capital-guaranteed contracts *("fonds en euros")* – Since 2018, the national supervisor ACPR publishes their annual average charge, based on a sample of 93 insurers. The published charge increased from 0.62% in 2020 to 0.65% of assets in 2021[135], but doesn't include:
  - the profit sharing taken by insurers (0.31% in 2019[136]),
  - the underlying fund fees,
  - and the impact of any entry and exit fees.

- Unit-linked insurance contracts - Neither ACPR nor the industry trade body disclose any information on the total charges of UL insurance, which cumulates at least two annual asset-based fees: the units' (investment funds) charges plus those of the wrapper contract itself. Contract fees alone account for 0.81% to 0.95% in fees on average per annum on assets according to private surveys[137].Overall, for unit-linked insurance contracts invested in French equity funds, the total average fees are estimated at 2.98% per annum, 2.08% when invested in bond funds, and 2,77% when invested in mixed funds[138]. Mixed funds and equity funds combined account for 71% of all funds in French unit-linked contracts[139]. Two thirds of investment funds held by French households are through these unit-linked insurance contracts. These actual total annual charges are never disclosed to prospects and retail clients either.

  And these fees do not include the "delegated management" fees which are growing as more and more savers are directed by insurers and distributors to this "delegated

[133] Source: Good Value for Money
[134] UK Financial Conduct Authority – Asset Management Market Study, November 2016 https://www.fca.org.uk/publication/market-studies/ms15-2-2-interim-report.pdf
[135] ACPR, 2022
[136] Source: ACPR, 2020 (did not publish more recent data)
[137] Dossiers de l'épargne n°152, 2014. A more recent evaluation from Goodvalueformoney.eu (2021) mentions 0,81% but could be on the rise as newer contracts tend to charge 1,00% or more.
[138] Good Value for Money, newsletter nr. 54, August 2022
[139] AMF, cartographie des risques, 2022, page 106

management" in unit-linked contracts. There are no aggregate data on the amount of these additional asset-based fees, but it often represents an additional 0,30% or more every year on assets.

The total average fees of around 3% per year or more also seem to be rising further. For example, the biggest life insurance subscribing association announced an increase of its units-linked contract annual fees by 35 basis points in 2019 [140].

- Personal and occupational pension plans - There are very few data available on their charges as well as for corporate DC plans. When available, the data tell us that they are on average rather high. For example, Préfon charged 0.54% on assets for asset management plus a 3.90% entry fee in 2020. For unit-linked personal pension products, the French government has lifted the 15-year ban on commissions in 2019, when deciding to end "PERPs" for "PERs" (see above, previous sections). This massively increases their charges. FAIDER estimates the cost impact for French pension savers to represent a minimum of €20 billion over the life of these personal pension plans[141]. A recent study of the National Public Advisory Committee CCSF[142] estimates that the annual ongoing costs of the new equity "units" alone are close to 3%, of which close to 0.90% result from commissions ("inducements"). This represents an increase of more than 40% in annual charges for the new PER compared to its PERP predecessor, for which commissions on "units", if any, have to be credited back to the PERP itself, i.e., to its participants.

  This average annual fee of around 3% compares very unfavourably with the annual 1% fee cap of the basic option of the future PEPP (Pan-European Personal Pension) created by the EU, and with the annual total charges of US IRAs (Individual Retirement Accounts), which are very often well below 1%.

  The CCSF report also points to the opacity of these total annual charges and recommends the public disclosure of total annual charges of unit linked PERs, i.e., the sum of the underlying "units' costs and the wrapper fee. This was obtained by FAIDER back in 2005, but this disclosure rule was repealed two years later by the French Authorities. The French Government then reinstated the mandatory disclosure of the total annual charges in February 2022[143]. This also applies to all UL life insurance contracts.

  Since 2018, the French Supervisor ACPR estimates the average annual charges for the capital guaranteed funds in the personal and occupational insurance regulated pension products and puts it at 0.43% for 2021. But like for life insurance, this does

[140] Afer.fr, 2019
[141] Faider.org, June 2019
[142] CCSF – Rapport sur les nouveaux plans d'épargne retraite, July 2021
[143] Arrêté du 24 février 2022 portant renforcement de la transparence sur les frais du plan d'épargne retraite et de l'assurance-vie

not include the profit sharing for the provider (0.24% on average in 2018), the underlying fund fees or the impact of entry and exit fees. Exit fees can be very heavy on annuities, typically 1 to 3% of their amounts.

Taxation

For PERs, PERPs and Public Employee schemes (*Préfon, Corem, CRH*), contributions are deductible from taxable income up to 10% of total professional income with a tax deduction ceiling (€41,136 in 2021). For *Madelin* contracts, the ceiling is higher. Annuities are taxable like pensions with a 10% fixed haircut (with a ceiling of €3,850 in 2021). They are also subject to a social contribution, currently standing at 9.10% (7.4% in 2017). In some cases, capital withdrawals from PERPs are allowed up to a 20% maximum of total pension rights. In those cases, the current taxation amounts to 7.5% income tax plus social contributions of 17.2%.

Since August 2012, the taxation of employers' contributions to corporate savings plans (PEE and PERCO) and defined contribution plans ("Article 83") increased from 8% to 20% (with some exceptions).

The general rise in taxation of savings also impacted life insurance. In 2012 the rate of "social contributions" increased from 13.5% to 15.5%[144], and again in 2018 to 17.2%.

The taxation of all long-term financial savings was again globally increased from 2018 onwards, with the creation of the "PFU" or "flat tax". It amounts to 30% for most investment income except for life insurance contracts after eight years (24.7%, or 17.2% for annual divestments below €4,600 for an individual, and below €9,200 for a couple). And direct long-term investments in equities are no longer taxed at a lower rate than short term ones: the negative impact of inflation on long-term investment values and income is no longer taken into account except for real estate investments.

On the other hand, the wealth tax on all financial assets was abrogated from 2018 on (but not on real estate).

Pension Returns[145]

Equities and bonds (direct investment in securities)

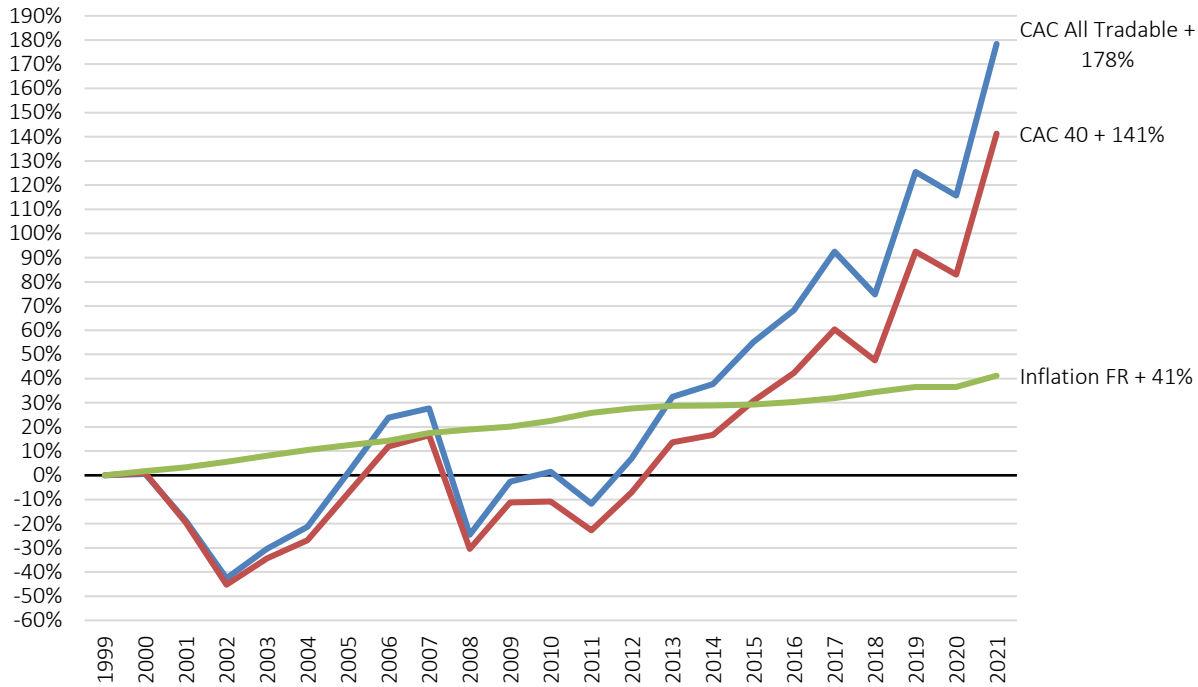
In 2021, the French equity market (dividends reinvested) rebounded very strongly + 29.1% (CAC all tradable GR index) after a loss of 4% in 2020, in line with European equity markers overall (see Graph GR15). Over the last 22 years (end 1999 to end 2021), it returned a total of

[144] Loi de Finance rectificative du 29 Février 2012: LOI n° 2012-354 du 14 mars 2012 de finances rectificative pour 2012

[145] Real Returns in the French case are calculated using Eurostat French HICP monthly index annual rate of change (December to December)

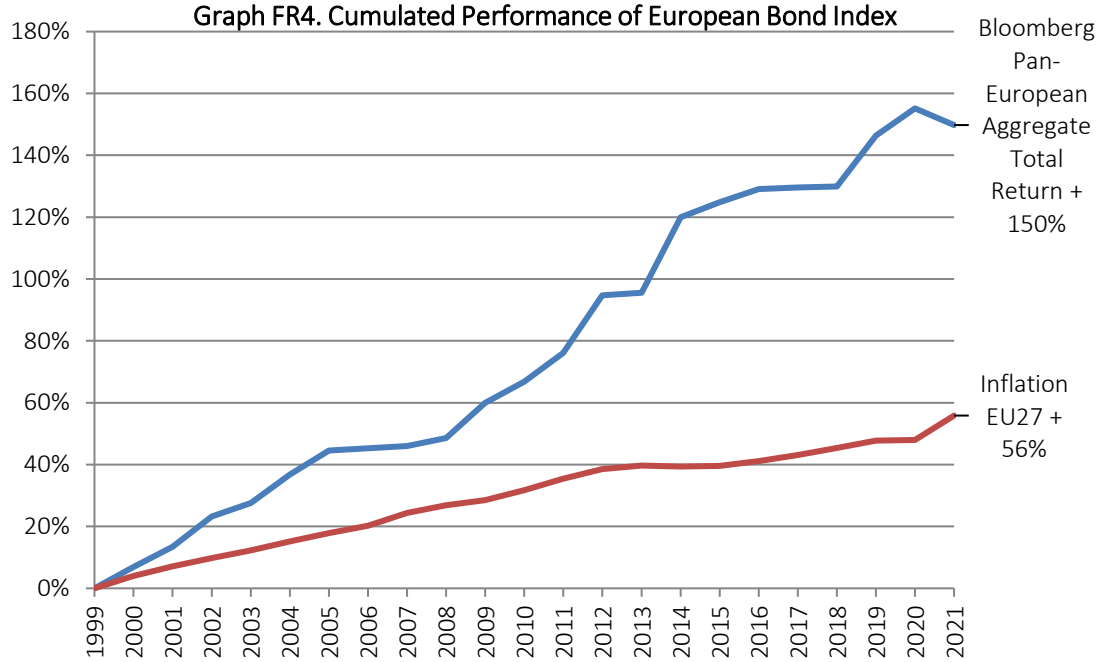
+178% % (+4.8% annual average), while large capitalisations (CAC 40 index, dividends reinvested as well) returned notably less, +141% (4.1% annual average), demonstrating the very strong long-term over-performance of small and mid-cap equities. Inflation over the same period was +41% (1.6% annual average). So, despite two sharp downturns (2000-2002 and 2007-2008) plus other drops in 2011, 2018 and 2020, French equities delivered positive nominal and real returns over the whole period. However, the real (after inflation) performance of the largest stocks (CAC40) started to be positive only since 2015.

Graph FR3. French Equity market performance: broad market vs. big caps market 22 years (1999-2021)



Sources: Own composition based on data from Euronext and Eurostat

Graph FR4. Cumulated Performance of European Bond Index



Sources: Bloomberg Pan-European Total Returns & Eurostat HICP EU27 (midx)

The performance of European bond markets fell for the first time in 2021, as bond interest rates slightly firmed up after several years of quantitative easing policy by the European Central Bank. Overall, capital markets delivered significant positive returns[146] over the last twenty-two years despite two major downturns in equity markets, in large part thanks to the continuous decline of interest rates and its positive impact on the value of bonds.

Life insurance contracts – capital guaranteed

The after-tax real returns of guaranteed life insurance contracts plunged deeply into negative territory in 2021: -2.5%, mainly due to the rise of inflation to +3.4%, while nominal returns remained quite stable. Such returns should be assessed from a long-term perspective: the last data available from the industry trade body indicate that outstanding life insurance contracts were open for 11 years on average. These contracts – although of a long-term nature – are invested only 9% in equities[147]. The perspective for 2022 is much worse still, with a much higher inflation.

[146] Of course, these market returns are without charges and without taxes. The closest retail investment products would be low-cost index funds using the same or similar indices over the same period. As a reference, total annual charges on the Lyxor CAC40 ETF index fund are 0.25%, and 0.25 % as well on the Vanguard Euro Government Bond Index Fund.

[147] Source: goodvalueformoney.eu, 2021

Over a 22-year period, cumulated after-tax real returns of guaranteed life-insurance contracts totalled +22%, and varied from a maximum annual performance of +3.1% in 2001 to a negative performance of -2.5% in 2021.

In the most favourable case, where savers do not redeem more than €4,600 per annum for at least eight years after the first subscription (see Taxation section above), real returns after tax are slightly better (-2.4% in 2021 and +28% cumulated over the last 21 years).

These returns do not take into account the changes in the insurers' reserves for profit sharing ("Provisions de participation aux bénéfices" or PPB), which are legally required and are credited with the capital gains on sales of non-fixed income assets. They must be returned to the life insured within 8 years of their inception. They are then included in the annual return. French regulators allowed insurers to book most of these profit-sharing reserves into their shareholders' funds for prudential purposes from 2019 fiscal year. This is not an incentive for insurers to use these large and growing profit-sharing reserves to offset the poor current returns, quite the contrary[148]. Indeed, the outstanding amounts of these reserves stood at 4.3% of total mathematical reserves at the end of 2018 and have increased again since then to reach 5.4% in 2021.[149]

[148] "*The persisting accruals to the PPB could be also helped by the evolution of rules, which allow insurers since 2019 to include part of it in the computation of own funds eligible to cover capital requirements*" (ACPR)
[149] Source: ACPR, Analyses et synthèses n° 126, 2021

Table FR 5. The returns of French life insurance contracts – capital guaranteed (%)				
	Disclosed return	Real return before tax	Real return after tax	Real return after tax*
2000	5.3	3.5	2.7	3.1
2001	5.3	3.8	3.1	3.5
2002	4.8	2.6	2.0	2.3
2003	4.5	2.1	1.4	1.8
2004	4.4	2.1	1.5	1.8
2005	4.2	2.4	1.6	1.9
2006	4.1	2.4	1.6	1.9
2007	4.1	1.3	0.5	0.8
2008	4	2.8	2.0	2.3
2009	3.6	2.6	1.8	2.1
2010	3.4	1.4	0.7	1.0
2011	3	0.3	-0.3	-0.1
2012	2.9	1.3	0.7	0.9
2013	2.8	1.9	1.3	1.5
2014	2.5	2.4	1.8	2.0
2015	2.3	2.0	1.5	1.6
2016	1.9	1.1	0.7	0.8
2017	1.8	0.5	0.1	0.3
2018	1.8	-0.1	-0.5	-0.4
2019	1.3	-0.3	-0.6	-0.5
2020	1.09	1.1	0.8	0.9
2021	1.08	-2.2	-2.5	-2.4

* for redemptions below € 4,600 per annum

Source: France Assureurs up to 2018, GoodValue forMoney since 2019, Eurostat (HICP inflation index)

Following capital guaranteed life insurance reporting rules, capital gains or losses are not accounted for in the disclosed returns above.

In 2012, taxation increased by 200 basis points, as a result of the rise in social contributions from 13.5% to 15.5%. In 2018, social contributions rose again to 17.2%. As taxation is applied to nominal returns, any rise in inflation increases the real tax rate which reached 76% in 2017, as shown in the table below. For 2018 ,2019, and 2021, since the real income before tax was negative, taxing nominal income had the effect of deepening the real loss for life insurance savers. 2022 will be even worse.

Table FR 6. French nominal and effective tax rates on capital guaranteed life insurance returns (%)			
	Inflation	Nominal tax rate	Effective* tax rate
2000	1.8	13.4	21
2001	1.5	13.4	19
2002	2.2	13.4	25
2003	2.4	13.4	29
2004	2.2	13.7	29
2005	1.8	18.5	32
2006	1.7	18.5	32
2007	2.8	18.5	60
2008	1.2	18.5	27
2009	1.0	19.6	28
2010	2.0	19.6	49
2011	2.7	21.0	>100
2012	1.5	23.0	49
2013	0.8	23.0	33
2014	0.1	23.0	24
2015	0.3	23.0	26
2016	0.8	23.0	40
2017	1.2	23.0	76
2018	1.9	24.7	> 100
2019	1.6	24.7	> 100
2020	0.0	24.7	24
2021	3.4	24.7	> 100

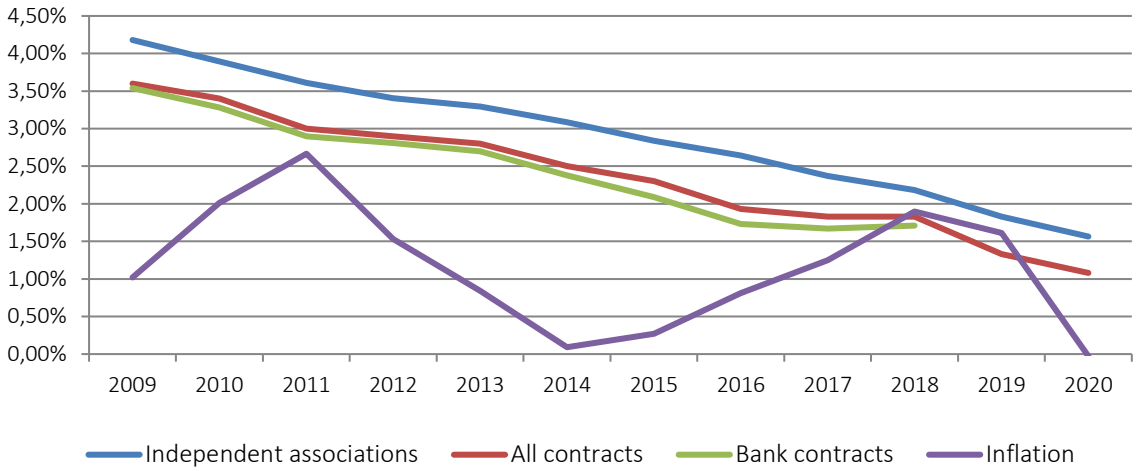
Source: Eurostat (HICP index 2015 base), BETTER FINANCE computation; * Effective tax rate = tax / real (net of inflation) income

These average returns mask important differences depending on distribution networks and governance: for standard contracts distributed by banks, the 2020 average nominal return was less than 1.08%[150], whereas the return for contracts subscribed by independent associations was 1.56%[151]. Higher annual average fees for bank insurers (0.65% versus 0.58% for traditional insurers in 2020) and higher profit-sharing reserves are part of the explanation. Considering that contracts distributed by banks represent 60% of the French capital guaranteed life insurance market, this returns gap constitutes an opportunity cost of about €6 billion for 2020 alone for savers getting their capital-guaranteed life insurance contracts from their bank instead of from independent savers' associations.

[150] FAIDER estimates that it may have fallen below 1%, as, according to ACPR, the 2020 return of all types of capital guaranteed contracts run by Bancassureurs was 10 bps below the market average, and the average return for standard contracts was 1,08% according to GoodValueforMoney.eu.

[151] Source: FAIDER. Independent associations representing life insurance contracts holders included AGIPI, AMIREP, ANCRE, ASAC-FAPES and GAIPARE in 2020 FAIDER is a member organisation of BETTER FINANCE.

Graph FR7. Nominal returns - all contracts versus independent life insurance associations



Sources: Own composition based on FAIDER, ACPR, FFA and GVfM data

Life insurance contracts – unit-linked

Nominal returns were pushed upwards by the rise in stock prices from 2012 to 2017 and from 2019 to 2021. Despite the current long period of positive equity returns, unit-linked contracts still have a very negative cumulative return net of inflation since the end of 1999 (see next section and table FR9).

Over a 22-year period, real returns after tax of unit-linked life-insurance contracts were very volatile. The worst performance was recorded in 2008 (-23.9%) and the best one in the following year (+12.2% in 2009).

Table FR 8. The returns of French life insurance contracts – unit-linked (%)			
	Disclosed Return*	Real return before tax	Real return after tax
2000	-2	-7.3	-7.3
2001	-9.5	-11.7	-11.7
2002	-15.2	-17.8	-17.8
2003	8.4	4.9	4.9
2004	6.4	3.1	3.1
2005	14.4	11.4	11.4
2006	8.8	6.0	6.3
2007	1.5	-2.2	-2.2
2008	-22.3	-23.9	-23.9
2009	14.4	12.2	12.2
2010	5.2	2.1	2.1
2011	-7	-10.3	-10.3
2012	10.2	8.5	8.5
2013	7.4	6.5	4.8
2014	5.1	5.0	3.8
2015	3.3	3.0	2.3
2016	2.1	1.3	0.8
2017	5	3.7	2.6
2018	-8.9	-10.6	-10.6
2019	13.1	11.3	8.1
2020	1.10	1.13	0.9
2021	9.10	5.52	3.3

* net of wrapper fees since 2012

Source: FFA / France assureurs, Eurostat (HICP index), own calculations (deduction of the non-deducted fees, and of HICP price index variation from disclosed returns)

All life insurance contracts – 22 years returns (1999-2020)

In order to compute the real return achieved by an investor who would have subscribed to a life insurance contract at the end of 1999 and who would have withdrawn his funds 22 years later, one has to subtract the entry costs paid in the year of subscription, as these fees are not taken into account in the disclosed returns. We estimate that entry costs in 2000 represented 2.76% on average[152] of the investment, to be deducted from real returns that year. Also, annual contract fees on assets are already taken into account for capital guaranteed contracts by the insurance industry body (France Assureurs), but not for unit-linked ones in its annual "key figures". The aggregate figures deduct an entry fee of either 2.77% (for 2000) or a proxy 2% for other periods.

[152] Source: OEE

Table FR 9. Real returns of all life contracts 1999-2021		
	22-year return	Average yearly return
Before tax returns		
Capital guaranteed contracts	37.2%	1.45%
Unit-linked contracts	-8.4%	-0.40%
All contracts (avg.)	25.5%	1.0%
After tax returns		
Capital guaranteed contracts	21.7%	0.896%
Unit-linked contracts	-15.6%	-0.8%
All contracts (avg.)	12.1%	0.52%

Sources: France Assureurs, GVfM, own computations (based on the relative weight of both categories in the overall mathematical reserves)

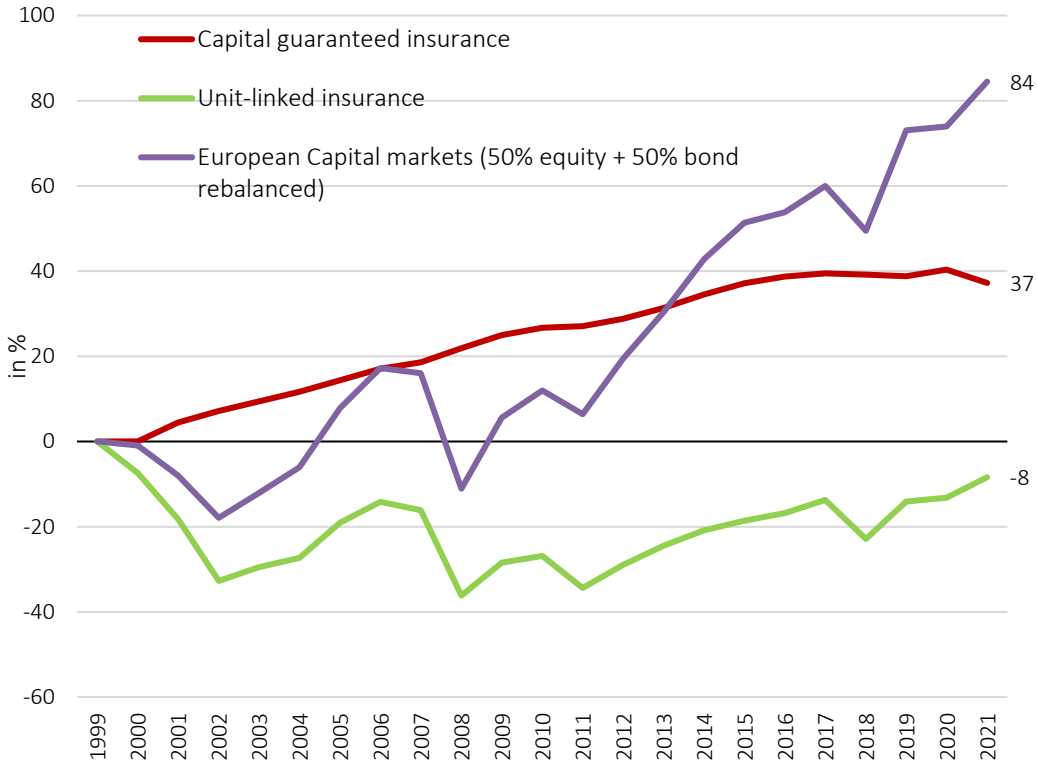
An average saver has thus received a cumulated net real after tax return of 22%[153] for this 22-year period of investment on guaranteed contracts, and a negative one of -17% on unit-linked contracts. On a yearly basis, the rates of returns would be +0,9% and -0,8% respectively. It is worth noting that, although unit-linked contracts are riskier for subscribers, they also provided returns that were much lower than those of the guaranteed contracts. Such a lower - and negative - real performance over 22 years is primarily due to:

- much higher fees (see the fees and charges section above): about five time higher for the dominant equity and mixed asset "units",
- and to the fact that mostly expensive retail share class actively managed funds are offered and promoted and very few, if any, low-cost funds such as index ETFs or institutional or "clean" share classes of actively managed funds[154]. Independent research determined that over the mid and long-term, high charges hurt net performance on average[155]. This in turn is due to the higher sales commissions ("inducements") for highly charged funds.

Capital markets as a whole (bonds and equities) provided a strong positive real performance over the same period (see graphs FR3 and FR4). Graph FR10 below shows that the pre-tax real performance of unit-linked contracts is well correlated to that of capital markets, but massively below those over time (minus percentage points over the last 22 years), making unit-linked a high-risk and low return offer.

[153] + 28% with the most favourable tax treatment and minimum 8-year-old contracts, see table FR 5 above
[154] The institutional share class of an investment fund bears lower annual fees than the retail share class but requires a higher minimum initial investment. The "clean" share class of an investment fund bears no sales commissions and therefore also enjoys lower overall annual fees.
[155] See for example BETTER FINANCE research on-the-correlation-between-cost-and-performances-in-eu-equity-retail-funds, 2019

Graph FR10. Long-term life-insurance real returns



Sources: Own composition based on STOXX, Bloomberg, Eurostat, Tables FR6 and FR7.

Personal and collective deferred annuities

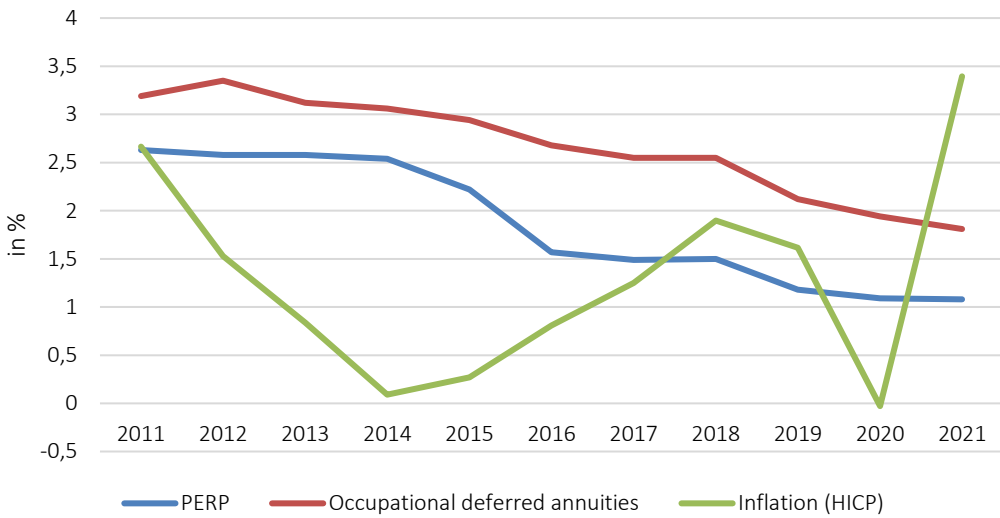
PER

According to GoodValueforMoney.eu, aggregate performance for the new PERs' "fonds en euros" (capital guaranteed investment option) launched at the end of 2019 has been better than for ordinary life insurance contracts: +1,51% nominal in 2019 (versus 1.33%), 1.35% in 2020 (versus 1.09%).

PERP

A majority of PERPs are structured like ordinary life insurance contracts in the accumulation phase: a combination of capital guaranteed funds *("fonds en euros")* and "units" representing investment funds. A minority of PERPs are structured like deferred annuities, similar to the main pension savings products for public employees (see next section below).

Graph FR11 - Nominal returns of PERP* and occupational deferred annuities** 2011 -2021 in %
(capital guaranteed only)



* Those include PERE, Madelin and Article 83 contracts
Source: ACPR, 2022

It was impossible to find global long-term return data on PERPs before 2011. The insurance industry body publishes the average return of ordinary capital guaranteed *("fonds en euros")* and unit-linked life insurance contracts (see previous sections), but not that of insurance-regulated personal pension products such as PERPs. Based on the disclosed nominal returns of a majority of PERPs collected by the French Supervisor ACPR only from 2011, the weighted average nominal return of the capital guaranteed PERPs *("fonds en euros")* was 1.08% in 2020, similar to the average return of ordinary capital guaranteed life insurance contracts.

This can be surprising, since PERPs enjoy a much longer duration of their liabilities, which should allow for a higher allocation to equities which have performed much better than bonds since 2011. The returns of PERPs should also be boosted by the rule unique to PERPs according to which the commissions (inducements) on units (funds) must be credited to the PERP, and, in practice they are credited to the capital guaranteed fund. On the other hand, PERPs are on average more recent than ordinary life insurance contracts and therefore so is their bond portfolio, which generates lower returns than older bond portfolios.

In 2021, pre-tax real returns of French personal pensions (PERP) became very negative; on average -2,2%.

Madelin, PERE and Article 39

The nominal returns of occupational deferred annuities were much higher (1.81% in 2021) and did not decline as much as for PERPs. This could be explained by older fixed income

portfolios yielding higher rates, and by higher discount rates ("taux techniques") forcing insurers to deliver higher returns. Charges may also be lower than for PERPs, but cost data are missing specifically for these pension products. Since 2018, the French supervisor ACPR publishes the average annual cost (0.43% in 2021) but that is for all personal and collective differed annuity products combined.

Unfortunately, it does not currently identify separately the historical returns and costs of the pension products for self-employed individuals ("Madelin" - most of which are subscribed and supervised by independent pension saver associations), for the employer-sponsored DC plans ("PERE") or DB plans ("article 39"). Following the European Commission's request for the European Financial Supervisory Authorities to improve the transparency of past performances and fees, it is urgent to collect, analyse and disclose these data.

Deferred annuity plans with less governance rules (Préfon, Corem, CRH)

One difficulty in assessing real returns of deferred annuity plans is that up to 2010, it was not mandatory for those plans to disclose investment returns. Following action by BETTER FINANCE's French member organisations, a 2010 Law[156] made this a legal requirement from 2011 onward. Préfon has also started to give an indication of its economic returns (taking into account the annual evolution of the market value of all assets in the portfolio) in its annual report.

Préfon

Préfon published an accounting return (net of fees) on its investment portfolio for 2020 of 2.97% versus 2.88% in 2019. However, as mentioned above, the accounting return does not take into account the changes in the market value of assets (unrealised capital gains stood at € 4.4 billion at the end of 2020 (24% of the total market value). In 2020 Préfon indicated that this portfolio performance reached +6.82%, excluding real estate and private equity, with the fixed income portfolio generating +8% thanks to the continued drop in interest rates. Prefon's investment portfolio is still heavily tilted towards fixed income (79% of total, and equity weighing only 12%, in accounting, not market value terms). This seems an inadequate asset allocation for the long-time horizon of the pension plan.

Part of the investment return has been set aside in the past in order to replenish reserves. In 2010, the French Supervisor (ACPR) decided that Préfon reserves were not sufficient and forced Préfon's insurers to contribute €290 million of their own funds (as of 31 December 2013) to help Préfon balance its assets and liabilities[157]. At the end of 2016, this contribution from the insurers amounted to €333 million[158] despite the massive cuts in pension rights for those who retire after age 60 decided in 2014 and 2017 (see below Graph FR12).

[156] Law n° 2010-737 of 1 July 2010 - art. 35 (V), which modified Article L441-3 of the French Insurance Code.
[157] "*Les Echos*" 27 December 2010. This information was not disclosed by *Préfon* to the participants.
[158] Source: Rapport de gestion Préfon Retraite 2016.

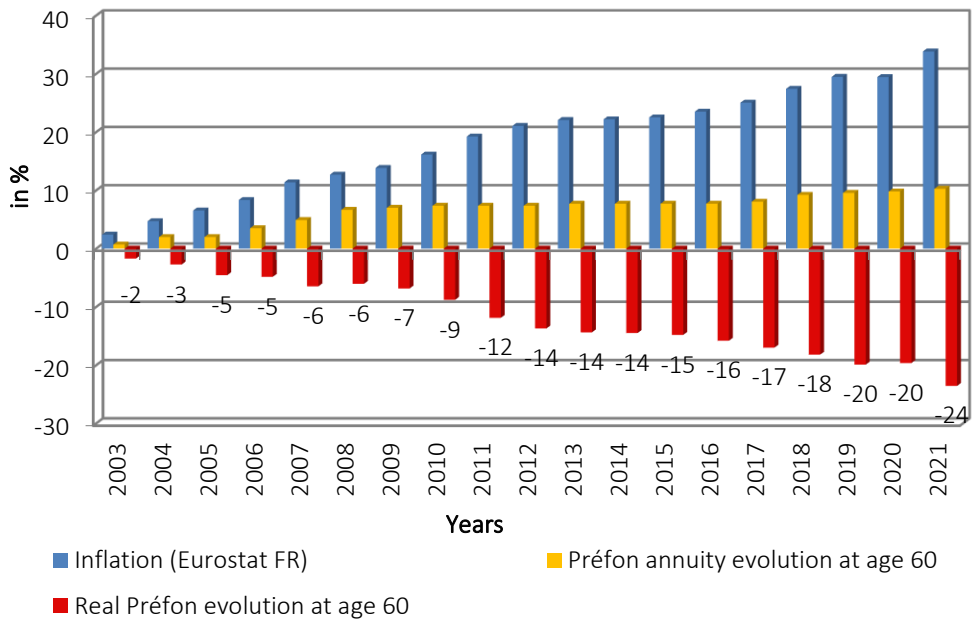
In 2017, in relation to the entry into force of the Solvency II Directive, French law was modified to move to use the market value of assets instead of their historical cost (accounting value). This enabled Préfon to show at last sufficient reserves and solvency ratio, but – up to now – not enough to allow for reducing or even capping the loss of purchasing power of its pensions since 2002. Thanks to this change in solvency rules, the ratio of assets to liabilities of Préfon increased from 97.5% in 2016 to 119.6% in 2020, allowing it for the first times in many years to increase the nominal value of its annuities from 2017 on. But from then to the end of 2021, despite these increases, the real value (purchasing power) of its participants pensions rights (for those who retire at the age of 60) shrank again by 5.5% (+2.4% nominal increase for a +8.4% inflation). It will be even worse in 2022.

In addition, only since 2012 is the value of the participants' accumulated savings communicated individually to them, and unfortunately with more than a one-year delay (this essential information should be released sooner), and just as an "estimate". It was therefore impossible to compute a real rate of return individually and for all participants with the data made available by the Plan up to 2019 (see below the new approach).

Another difficulty for deferred annuity products is to translate the impact of portfolio returns (and other factors such as the capital conversion rate into annuities, the discount rate and the evolution of annuities paid) on the actual long-term return for the pension saver. One proxy return indicator is the annual rate of pension rights' and annuities' increases before tax for several years[159] (see graphs FR12 and FR13). Préfon participants who contributed in 2002 and who will retire at the age of 60 have lost 24% of the real value of their pensions (before tax[160]). The advertised objective of Préfon to maintain the purchasing power of pensions has not been fulfilled since 2002 and Préfon remains silent on the perspectives to reduce this loss of the real value of pensions in the future. This key performance information is not publicly disclosed[161].

[159] This key data is very difficult to find, but recently Préfon has been making significant efforts to improve its transparency and disclosures.
[160] Savings into Préfon (like into PERPs and into Corem) are income tax deductible, but the annuities are fully taxable. Both savings and annuities bear social levies ("prélèvements sociaux").
[161] ARCAF, 2019

Graph FR12- Préfon annuities real value : retirement at age 60
Compounded evolution in %



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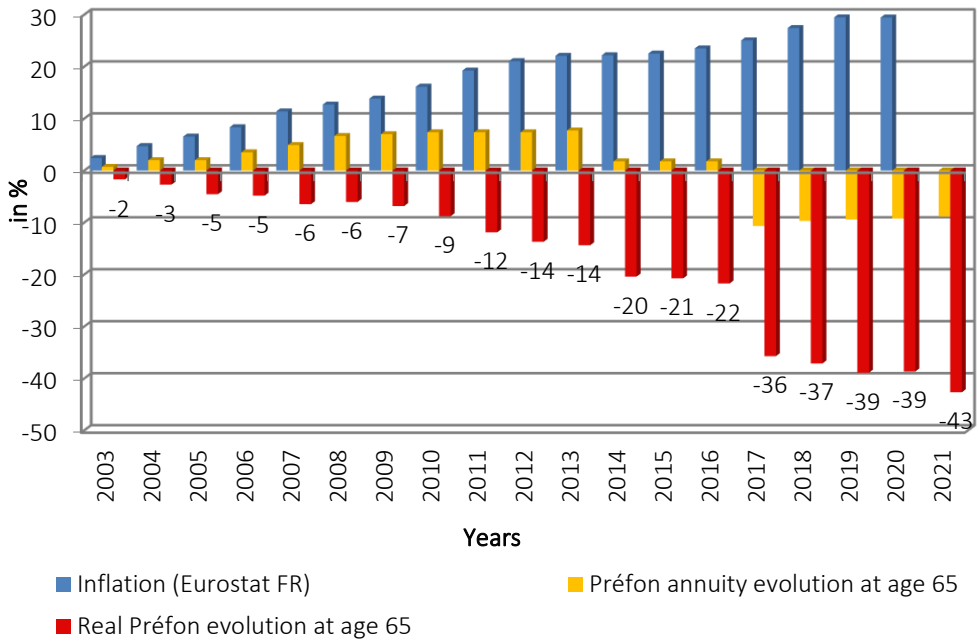
This return indicator, however, does not include the discount rate embedded in the conversion ratio of accumulated savings to annuities. But this discount rate varies from one year to another, and also varies according to the actual retirement age - which is not disclosed.

Also, this indicator is only valid if one exercises his liquidation rights at age 60. But very few people can now retire at age 60 due to the postponement of the legal age to retire with full Pillar I pension rights to between 62 and 67. For example, if one exercises these rights at the age of 65, starting from the year 2026 on, the initial annuities have been reduced by 17.3% in nominal terms from 2013 to 2017), even though Préfon always guaranteed its participants at subscription that its pension annuities could never be reduced in nominal terms. In real terms it is much worse (-43% lost since 2002 to 2021), as shown by the graph below.

Graph FR 13 - Préfon annuities real value : retirement at age 65 from 2026 - Compounded evolution in %



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It is difficult to compute the evolution of the Préfon annuities paid after tax, since they are taxed at the marginal income tax rate on pensions and salaries (plus social levies) and since contributions have been deducted from the taxable income for income tax purposes (but not for social levies).

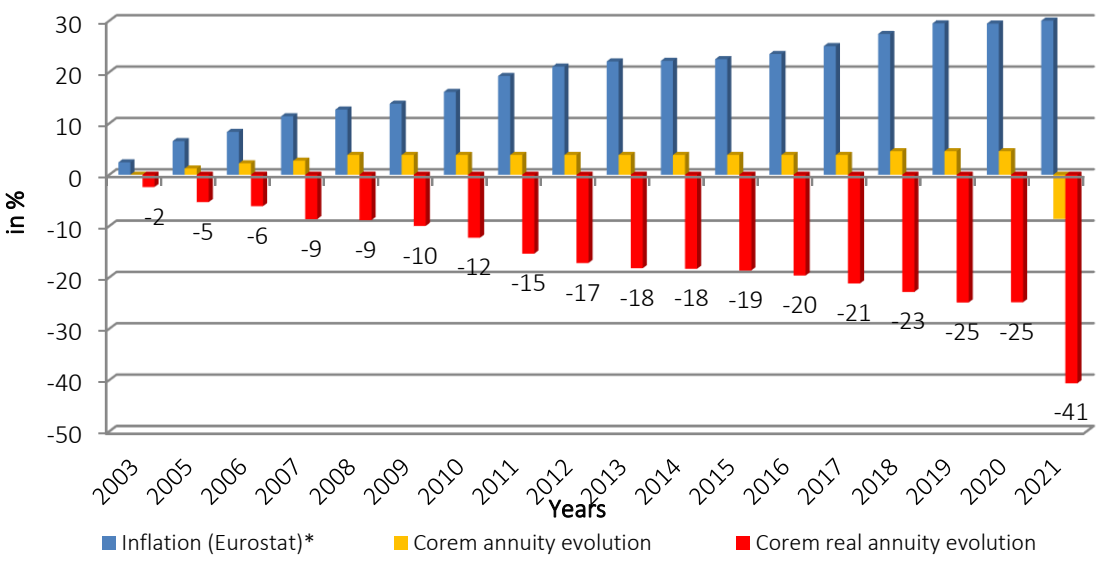
An alternative approach mentioned by Préfon in its latest annual report (for 2020), could be to use the new valuation of transfers or redemptions of accumulated pension rights in capital (which are allowed in certain cases since 2010). For valuations done since 2019, those are based on annual revaluation coefficients computed on contributions. Préfon claims that they beat inflation on average by nearly 1% since 2004. But they are computed on contributions net of the 3.9% commissions charged. And (based on a published graph that does not disclose the quantified data for two out of every 3 years), they are on average below the historical returns of other capital guaranteed long-term products such as capital guaranteed life insurance (see table FR5), and far below the returns achieved by Préfon itself on contributions invested (e.g., for 2020 + 1.15% revaluation versus + 6.82% for the portfolio return: five times higher).

Corem

Corem publishes the annual accounting return on its investments but does not specify whether these are gross or net of fees. The accounting return for 2021 was +3,37% up from +2.86 in 2020. Its asset allocation is less inadequate than Préfon's for a long duration pension plan: 22% in equities. However, this accounting return does not take into account the changes in the market value of assets. In addition, and more importantly, all the investment return of the Corem assets has been set aside in order to replenish reserves. It is therefore impossible to compute a collective real rate of return.

The deferred annuity mechanisms of Corem are similar to those of Préfon, with the same difficulties in estimating the real return for the pension saver. Therefore, we also use the evolution of the annuities' values as a proxy return indicator here (Graph FR14 below). Corem has been in deficit for a very long time; the main – undisclosed – tool of its recovery plan in place since 2002 is not to increase the nominal value of annuities served. As a result, the annuities served by Corem will have lost a whopping 41% of their real value before tax (purchasing power) over the last 18 years (see graph FR14), since Corem has not increased them for many years, pocketing the return on its portfolio for other purposes, and has announced in April 2021 to its participants that the nominal value of their pension rights as of 1/1/2022 will be reduced by 12.6%. These figures are before tax. This key performance information is not clearly disclosed to the public and to new participants.

Graph FR14. Corem annuities real value, compounded evolution in %



* ECB estimate for 2021

Source: ARCAF, 2021

The reality is even worse since, in November 2014, Corem announced new measures to reduce its reserve gap by further reducing the returns for participants: they now need to be 62 years of age to get the full pension rights instead of 60 years of age (thus losing 2 years of

pensions), and the minimum guaranteed return on pension contributions was lowered from 2.3% to 1.5% from 2015 on.

The financial situation has been very difficult as its reserve gap (difference between its assets and the present value of its pension liabilities) reached €2.9 billion at the end of 2014, as measured using French common prudential rules at that time[162]. At the end of 2015, Corem obtained permission from the French Government to use a minimum discount rate of 1.50% (instead of 0.59% according to the previous rule) to compute the present value of its liabilities, helping it to reduce its reserve gap to €1.3 billion at the end of 2016.

In 2017, the French Government allowed deferred annuity schemes such as Corem to use the market value of assets instead of the accounting (acquisition cost mostly) one, to compute its assets/liabilities coverage ratio. This new rule improved its coverage ratio to 98.2% at the end of 2018, but it went down again in 2019 and in 2020 to 91.8%. Otherwise Corem would have been in breach of its Recovery Plan which required it to cover at least 90% of its liabilities. Thanks to the massive cut in pension rights as of 1/1/2022, the coverage has jumped to +119%, again at the sole expense of participants

Since 2016, the Corem rules also allow it to reduce the nominal value of annuities under certain conditions, contrary to the commitment that was provided to participants when they joined.

The distribution of new Corem contracts has resumed in 2019, despite the continuously escalating losses borne by its participants. In 2021, despite complaints to the French supervising Authority ACPR, the product is still actively distributed and without any visible and intelligible warning about its catastrophic performances and about its massive recent cut in its pension rights.

CRH

CRH does not disclose an annual report or financial data publicly. Even its pre-contractual publications do not disclose past performance. Because of an on-going restructuring that started in 2008, the real returns of this plan are probably low and below inflation. For the last six years (2015-2021), CRH annuities' nominal value has increased by 2.7%, against an inflation of 9.2.0%; representing a loss in the real value of the outcome of participants' savings of 6%.

Overall, BETTER FINANCE estimates the loss of purchasing power over the last eighteen years (2002-2020) of participants to the French Public Employee Pension Schemes (Préfon + Corem) to be at -21.4% (-1.4% per annum), based on the relative asset portfolio size of Préfon and Corem, and assuming that Préfon participants retire as early as age 60 and not later. As mentioned above, 2022 will be catastrophic for Corem participants.

[162] Until 2017, *Corem*'s recovery plan allowed it to exceptionally use a discount rate of 3% and an older mortality table to compute the present value of its pension liabilities instead of the regulatory 0.78% at the end of 2014 and 1.5% end of 2015. Using the 3% discount rate, *Corem* assets cover 107.5 % of its liabilities at the end of 2015.

Defined contribution corporate plans

With the precious help of AFG, the French asset management industry association, we combine information provided by SIX on the performance of each category of funds ("FCPE") with data on their total outstanding relative weight[163] to estimate the overall returns of corporate savings (PEEs, PERCOs and the new collective PERs).

Table FR15. French corporate savings plans - 22 years returns before tax 1999-2021

Fund ("FCPE") category	Equity	Bond	Money market	Diversified	All funds
22Y Nominal return	85.4%	74.2%	29.6%	78.2%	74.2%
Yearly average	3.0%	2.7%	1.2%	2.8%	2.6%
22Y Real return	30.5%	23.4%	-8.5%	26.1%	23.4%
Yearly average	1.3%	1.0%	-0.4%	1.1%	1.0%

Source: AFG/SIX

Real returns of corporate DC-based (Defined Contribution) plans before tax over a 22-year period, from the end of 1999 to the end of 2021, were overall positive: the yearly average real performance before tax of the aggregate of all funds was + 1.0%, which makes French DC plans the second-best performing pension savings product after life insurance capital-guaranteed contracts. This regards PEEs (€ 141.6 billion of assets) and PERCOs and collective PERs (€ 26 billion). PERCOs and collective PERs only had a slightly higher return (+1.1% per annum) due to a slightly lower allocation to money market funds.

The overall real returns before tax are:

- positively influenced by the positive real return of DC equity funds (with a positive real return in 2021 of +16.5%). However, equity funds, which account for about 24% of total outstanding assets (excluding company stock), largely underperformed equity markets over the last 22 years: +85% in nominal terms versus +164% for European equities or +221% for world equities[164];
- CAC 40 (dividends reinvested) returned cumulatively +141.3%;
- negatively influenced predominantly by the declining but surprisingly heavy weight and negative return of money market funds (respectively 21% of assets; -3.9%).

Also, DC Bond funds (around 19% of total assets) returned +74% in nominal terms over the period versus +150% for the European bond market (see graph FR4).

A primary factor for this underperformance of DC equity and bond funds relative to capital markets could be the level of fees charged. Unlike corporate DC pension plans ("401k") in the

[163] Data published by AFG relate to "FCPE L214-164". These funds are diversified funds which do not invest in the own shares of the concerned company ("company stock"). There is another category of corporate savings' funds, the "FCPE L214-165" dedicated funds which can invest without limit in the own shares of the concerned company but there are no data available on the returns of these "FCPE L214-165" funds. The "FCPE L214-164" assets represented 63% of all FCPE assets at the end of 2021.

[164] MSCI ACWI NR index in euros

US, the French ones do not invest in general purpose mutual funds, but in special purpose alternative investment funds (AIFs) called FCPEs, specifically dedicated to these plans. Consequently, French savers are faced with an additional offering of investment funds (about 1100 FCPEs in addition to the about 3,500 UCITs funds already domiciled in France), the average size of these AIFs is quite small, and many FCPEs are merely wrappers of other – general purpose – funds, adding a layer of fees. Another factor is that equity FCPEs are not 100% invested in equities.

However, the French supervisor AMF recently found that the ongoing annual charges of multi-sponsor FCPEs are on average lower than those of French-domiciled general-purpose funds: 1.31% in 2019 for the 178 diversified (multi-asset) FCPEs analysed versus 1.53% for the general-purpose diversified funds; and 1.46% for the 145 European equity FCPEs analysed versus 1.53% for the general-purpose European equity funds[165]. As mentioned above in the costs & charges section, these estimates are unfortunately not asset weighted. Still, that is about half the cost of the comparable funds held via unit-linked insurance contracts. In addition, a part of the FCPE fees can sometimes be paid by the employers, not by the employees. Therefore (see above the costs and charges section) the differences are even bigger with investment funds held via insurance contracts. This seems due to the distribution modes - more "wholesale" for corporate plans, and more "retail" for life insurance (implying commissions paid out of fund charges to distributors) - and to the double layer of fees in the latter case.

A limitation of such computations is that performance indices provided by SIX only relate to diversified funds inside the corporate savings plans. They do not take into account the part of corporate long-term savings which is invested in shares of the plan sponsor company ("company stock"), accounting for 37% (€ 61.3 billion end of 2021) of all corporate savings plans.

Return of regular identical investments over 22 years

Also – same rule whenever possible for the whole research report – the computed returns relate to a one-time investment at the end of 1999 and kept to the end of 2021. Many pension savers will tend to invest regularly every year or every month. AFG computed the annualised returns from 2000 to 2021 for the same amount invested every year over the last 22 years. This generated a similar before tax real return of 21.9% instead of 23.4%. This return becomes less volatile with time, as it is spread over many years instead of only one.

[165] La lettre de l'Observatoire de l'Epargne de l'AMF nr 42 – mars 2021

After-tax returns are often higher

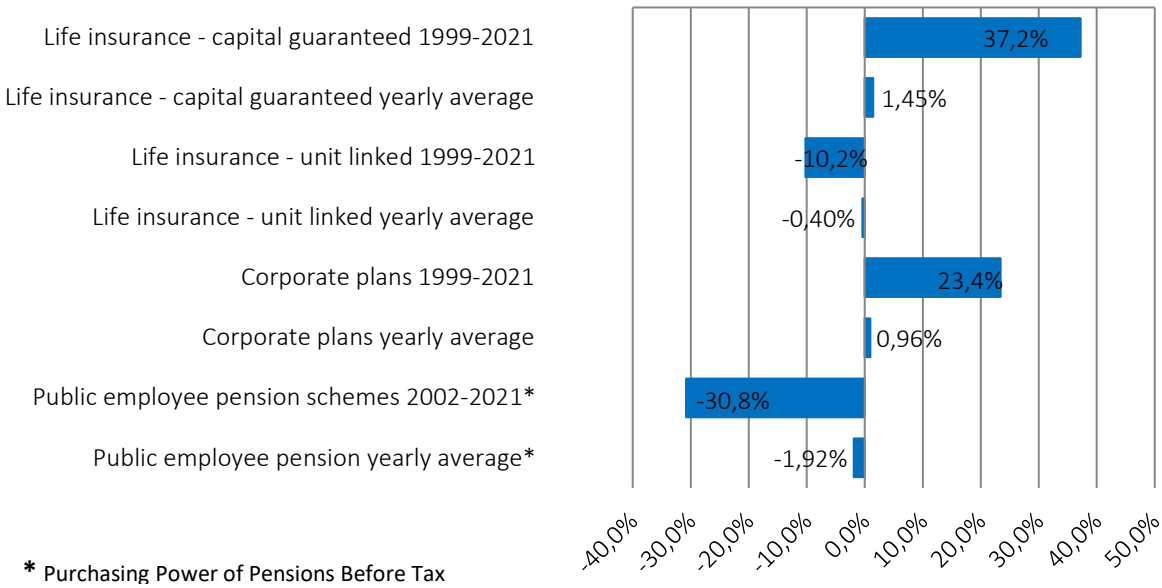
Finally, after-tax returns of French corporate long-term savings plans are difficult to compute globally, but they can often be very close to - or higher than before-tax ones since their taxation is the most favourable of all long-term and pension savings products in France (redemptions are exempt from income tax and are only subject to "social" levies of 17.2% of net gains). Also, most of these savings come from non-taxable profit-sharing income contributed by employees ("*intéressement*"and "*participation*") and by employers' matching contributions.

Conclusions

After a year of negative real returns before tax in 2011, for the main long-term and pension savings product in France, subsequent years were more favourable to pension savers. Against the backdrop of bullish stock markets and inflation kept at historically low levels, unit-linked life insurance contracts showed a positive real performance every year from 2012 to 2017. However, their 22-year performance is still quite negative. The real performance of capital-guaranteed life insurance contracts *("contrats en euros")* has been positive for every year since 2011, but the continued decrease of interest rates, and increases of taxation, have already turned it negative in 2018 and 2019. The rise of inflation since 2021, "financial repression" at its highest level (policymaking induced negative spread between nominal interest rates and inflation) and taxation of the largely fictitious nominal long-term investment income, combine for a disastrous 2022 year for long-term savers, as EU public policies to ensure bias-free investment advice and transparency of costs and performances are either stalled or going backwards.

Over a 22-year period, from the end of 1999 to the end of 2022, capital-guaranteed life-insurance contracts show on average a positive yearly real pre-tax performance of +1.5% in real terms, while the unit-linked contracts show a negative yearly return of -0.4%. Corporate DC plans delivered +1.0% on an annual basis before tax. After-tax returns would typically be close for the latter due to a favourable tax treatment.

Graph FR16. French Pension Savings Real Returns before tax, 2000-2021



* Purchasing Power of Pensions Before Tax

Summary return table - Average real net returns of French pension savings (before tax)					
Average real net returns	1 year 2021	3 years 2019-2021	7 years 2015-2021	10 years 2012-2021	whole reporting period
Life insurance - CG	-4.19%	-1.14%	0.01%	0.46%	1.45%
Life-insurance - UL	3.41%	1.00%	1.71%	3.17%	-0.40%
Corporate plans	4.21%	4.38%	1.78%	2.68%	0.96%

Sources: Tables FR3, FR5, FR7; CG = capital guaranteed; UL = unit-linked; PS = pension schemes;
** Purchasing power of annuities as return proxy measure*

Pension Savings: The Real Return

2022 Edition

Country Case: Germany

Zusammenfassung

Das deutsche Rentensystem gehört zu jenen, in denen das System der gesetzlichen Rentenversicheurng (Säule I) eine relativ wichtige Rolle für das Alterseinkommen der deutschen Rentner spielt. Die Bruttorentenersatzrate aus dem obligatorischen öffentlichen System beträgt 41,5% des individuellen Einkommens (gegenüber durchschnittlich 42,2% im Durchschnitt der OCED-Länder), während die Ersatzrate aus freiwilligen Systemen (Säule II und Säule III zusammen) 14,1% beträgt. Die Riester- und Rürup-Reformen von 2002 und 2005 zielten auf eine stärkere Beteiligung deutscher Arbeitnehmer an betrieblichen und individuellen Altersversorgungssystemen ab, da die akkumulierten Ansprüche relativ gering waren.

Summary

As in most EU countries, the German pension system is among those where the mandatory public scheme (Pillar I) plays an important role in retirees' old-age income, though the replacement rate from mandatory public scheme remains lower than in many other European countries including France and especially Italy and Spain. The average gross pension replacement rate from mandatory public scheme for a full-career average earner is equal to 41.5%[166] of individual earnings (against 42.2% on average in OCED countries, 60.2% in France, 73.9% in Spain and 74.6% in Italy), while the replacement rate from voluntary schemes (Pillar II and Pillar III together) is 14.1%. With a relatively low level of accumulated entitlements, the *Riester reform (in 2002)* and the *Rürup* reform (in 2005) were aimed at increasing participation in occupational and individual pension schemes for German workers.

[166] OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris

Introduction

In 2007, the German government raised the statutory retirement age from 65 to 67. A transitional phase to attain the retirement age of 67 for individuals with less than 45 years of contributions was started in 2012, including a gradual increase of the working life of one month per year until 2029. For individuals with 45 years of contributions, the pension age had been lowered to 63 years in July 2014 but started to increase again in 2016 until it will reach 65 in 2028. The average effective age of labour market exit was about 64.6 years for men in 2017 and 64 for women[167].

The contribution rate[168] in mandatory public schemes is the same for employees and employers and is equal to 9.3%. The total contribution rate (salary share + employer share, i.e., 18.6%) is lower than what can be observed in Italy (33%), France (27.5%), the Netherlands (25.6%) and Sweden (21.7%) but higher than in Belgium (16.4%).

The German pension system can be divided into three pillars:

- Pillar I: Mandatory Public Pension Scheme
- Pillar II: Voluntary Occupational Pensions
- Pillar III: Voluntary Personal Pensions

The first pillar with the statutory and the civil servant pension system is mandatory for all employees and civil servants. Currently, the general pay-as-you-go (PAYG) earnings-related first pillar statutory pension scheme covers about 85% of the employed German population whereas the public civil servants scheme protects 5%.

In 2020, the gross pension replacement rate[169] for average-wage workers form the mandatory public scheme (41.5%) was below the OECD average (42.2%). Increasing life expectancy and fewer children being born represents a challenging demographic shift in Europe, forcing younger generations to assure an adequate retirement income through private savings.

In the early 2000s, the German government executed an important pension reform to promote private pension savings through subsidies and tax incentives, as well as social security contribution savings in the case of occupational pension plans. In 2002, company pension plans (Pillar II) traditionally provided on a voluntary basis by employers, were transformed into an employee's right to have a part of its earnings paid into a company pension plan under a deferred compensation arrangement. That same year, the *Riester Reform* was introduced to

[167] BMAS (Federal Ministry of Labour and Social Affairs) - Pension Projections Exercise 2018 - For the attention of the Economic Policy Committees' Working Group on Ageing Populations and Sustainability, November 2017 https://ec.europa.eu/info/publications/economy-finance/2018-ageing-report-economic-and-budgetary-projections-eu-member-states-2016-2070_en

[168] Source: OCDE 2020, including disability Insurance in Germany.

[169] OECD (2021), Pensions at a Glance 2021: OECD and G20 Indicators, OECD Publishing, Paris, https://read.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2021_2d5919e5-en#page1

boost personal pension savings, followed by The *Rürup* pension in 2005 to further complement personal pension plans.

Table DE1. Introductory Table - Pension System Overview		
Pillar I	**Pillar II**	**Pillar III**
Mandatory State Pension Insurance:	Voluntary Occupational Pensions:	Voluntary Personal Pensions:
all persons subject to social security charges contributed 18.7% of their gross income to the scheme	employees have the right to a deferred compensation arrangement - employers the right to choose the scheme	supplement to the statutory pension insurance
	Occupational retirement schemes that can be divided into two sub-pillars: 1) direct pension promise - 2) external occupational pension schemes	Riester pension or Rürup pension or life insurance
Mandatory for all employees who are subject to social insurance contributions	Voluntary or by tariff agreement	Voluntary
PAYG	DB and hybrid	DC
Quick facts		
Coverage (active population): 90%	About half of today's retirees receive income from a private pension	
Gross replacement rate: 41.5%	Gross replacement rate: 14.1%	
	16.5 million contracts recorded by the German Insurance Association	16.2 million *Riester* contracts

Source: BETTER FINANCE own composition

In the table below we present the annualized real net rates of return for retirement provision vehicles in Germany.

Aggregate summary annualised return table - After charges, inflation and before tax				
		Pillar II	Pillar III (1)	Pillar III (2)
1 year	2021	n.a.	-3.72	-3.55
	2020	3.53	2.68	2.78
3 years	2019 - 2021	n.a.	-0.16	-0.05
	2018 - 2020	2.23	1.30	1.36
7 years	2015 - 2021	n.a.	0.64	0.73
	2014 - 2020	2.63	1.62	1.68
10 years	2012 - 2021	n.a.	1.11	1.18
	2011 - 2020	2.46	1.64	1.70
Whole reporting period*		2.35	1.20	1.84

**maximum available in this report*

(1) Riester pension insurances contracts. Acquisition charges are included and spread over 5 years.
(2) Classic pension insurance products or life insurance products. Acquisition charges are included and spread over 5 years.

Pension Vehicles

Private pensions are divided into Voluntary Occupational Pensions and Voluntary Personal Pensions. About half of today's retirees receive income from a private pension, however the proportion, currently at 16% (8% from occupational pension and 8% from personal pension) of a retiree's gross income, is currently rather low[170].

In general, there are no taxes on dividends, income or capital gains to take into account during the accumulation phase of the real return calculations. However, the calculations are considerably complicated by the fact that EET and TEE taxation formulas (or intermixtures) can still be found depending on the effective date of the pension promise and the type of vehicle. Consequently, the after-tax calculations are simplified and exclusively simulated as deferred taxation for the occupational *Pensionskassen* and pension funds, as well as personal *Riester* and *Rürup* insurance contracts. For that reason, the average retiree income tax rate is estimated from customised data provided by the German Federal Ministry of Finance for the year of 2012 - the most recent information available[171] - and set at 18%.

The classic pension insurance is not subject to deferred taxation but is (partially) taxed during the capital accumulation phase (see Taxation chapter). Furthermore, performance data is available for a longer time span, so the results cannot be directly compared to *Riester* and *Rürup* insurance contracts.

Voluntary Occupational Pensions

For a long time, occupational pension plans have typically been provided by employers on a voluntary basis. Since January 2002, however, employees have the right to occupational pensions through deferred compensation. This means that future salary or special payments, such as vocational benefits or salary increases for up to 4% of a variable contribution cap[172], can be converted to entitlements to a pension - if not regulated differently by a labour agreement. While employers have to comply with the demand for occupational pensions and execute them, they can choose when it comes to structuring the retirement provision, leaving little to no choice to beneficiaries. There are five types[173] of occupational retirement schemes that can be divided into two sub-pillars:

[170] Bundesministerium für Arbeit und Soziales (2016).
[171] Data on income tax for a given year can only be completed three years later and is subsequently reprocessed by State Statistical Offices. The data also includes joint tax assessments.
[172] *"Beitragsbemessungsgrenze";* there are differences between "*West*" and "*Ost*" due to the difference of the general level of salaries, but the variable contribution cap is always 4%. The "*Beitragsbemessungsgrenze Ost*" will gradually be aligned from 2018 until 2025.
[173] The aba (Arbeitsgemeinschaft für betriebliche Altersversorgung e.V., German Association for Occupational Pensions) - Occupational Pension Landscape in Germany – January 2015
https://www.aba-online.de/en/docs/attachments/42616471-6d26-4abc-a4de-5aa328b5fc8c/20150121-Occupational-Pension-Landscape-in-Germany.pdf

- one direct pension promise (book reserves); and
- four external types of occupational pension schemes (support funds, direct insurance, *Pensionskassen* and pension funds).

To some extent, the five different financing methods compete with each other, but it is also possible to combine two or more types. Both employers' and employee's contributions to occupational pensions are voluntary, however employers have to at least offer a direct insurance pension scheme so that employees may benefit from tax advantages (deferred taxation) and social security contribution savings if they choose to contribute. When there is a binding labour agreement, occupational pensions are generally organised for whole industrial sectors and there is no employee's right to demand divergent occupational pension provisions. Many collective agreements also oblige employers to participate financially in occupational pensions and withdraw the employer's right to choose the retirement scheme. Indeed, employer-funded pensions represent the largest share of occupational schemes, though an increasing number of deferred compensation arrangements can be found. If the occupational pension is structured as a deferred compensation and contributions are subsequently exempt from taxation and social security contributions, this will in turn lower claims from the statutory pension insurance.

Occupational pensions in Germany are managed as defined benefit (DB) plans, either as traditional or hybrid ones that can take the form of contribution-oriented DB plans with an annual minimum return guarantee, or as contribution-oriented DB plans with a minimum guarantee of the sum of nominal contributions at the retirement. The German labour law requires employers to guarantee employee's given pension promises. All occupational pensions also have to cover at least one biometric risk, such as longevity, disability or death[174].

Book reserves ("Direktzusage")

Book reserves are direct pension provisions that the employer realises on the company's balance sheet in order to pay an occupational pension once the employee reaches the retirement age. In recent years, an increasing number of employers' resorts to external funding of the provisions through Contractual Trust Arrangements (CTAs). The legislator obliges to protect claims from book reserves through the "*Pensions-Sicherungs-Verein*" (PSVaG) in the case of an employer's insolvency. Reserves via CTAs are protected from creditors in the case of insolvency through legal independency. Book reserves are usually designed as pure benefits given by employers, though deferred compensation arrangements are generally also possible. If an employee leaves the company, there is no possibility to continue the retirement provision through private funding, though deferred benefits are maintained. Book reserves are the most widely used type of occupational pension plans in terms of assets under management.

[174] http://www.aba-online.de/glossar.html (Accessed on 14 June 2017).

Support funds ("Unterstützungskasse")

Support funds, one of the oldest forms of occupational pension schemes, are institutions funded by one or several companies to provide retirement provisions for employees. The latter have no direct legal claim to benefits from support funds, only from their employers. Support funds invest the deposited funds to pay a company pension at a later date. If there is not enough money in the support fund to meet retirement commitments, employers have to compensate for the difference. The "*Pensions-Sicherungs-Verein*" (PSVaG) protects employee's benefits in the case of an employer's insolvency.

Direct insurance ("Direktversicherung")

These types of occupational pensions are life insurance contracts that an employer enters into with an insurance company for its employees. Only last-mentioned or surviving dependents have claims to benefits from direct insurances. The insurance contracts can be continued with personal contributions if the employee leaves the company or, under specific conditions, be transferred to a new employer. If an employee solely contributes to a direct insurance, exemptions from taxation and social security contributions can be granted[175] or, alternatively, the employee can make use of the *Riester* support if the contributions are made from individually taxed income.

Regulated by the German occupational pension law, both the individual transfer of occupational pension claims and the application of the *Riester* support under above-mentioned prerequisite also apply to *Pensionskassen* and pension funds.

"Pensionskassen"

Pensionskassen are institutions, formed by one or several companies, which take the form of special life insurance companies. They are legal entities that continue to pay benefits even in the case of an employer's insolvency and are supervised by the German Federal Financial Supervisory Authority ("*Bundesanstalt für Finanzdienstleistungsaufsicht*"; BaFin). In contrast with direct insurances, employees become direct insurees and often even members of the *Pensionskasse*. The traditional form ("*regulierte*") of *Pensionskassen* offers classic life annuity contracts that may invest a maximum of 35% of the capital in equity. They are allowed to implement divergent actuarial interest rates and even to change the applicable mortality table. The new ("*deregulierte*") *Pensionskassen,* in place since 2006, must act as life insurers with guaranteed interest rates and specific calculation standards.

[175] For direct insurance, *Pensionskassen* and pension funds: 4% of the contribution cap "*Beitragsbemessungsgrenze West*" (BBVG-RV West) + €1,800 are tax exempt; 4% of the BBVG-RV West are exempt from social security contributions.

Pension funds ("Pensionsfonds")

Pension funds were introduced on 1 January 2002 as a new type of occupational retirement scheme. They are legal entities that grant employees a legal right to pension benefits. In contrast to *Pensionskassen* and direct insurances, pension funds are not subject to quantitative investment rules, hence their risk is generally higher. Pension funds are supervised by the BaFin, and entitlements of members and beneficiaries are protected by the PSVaG in case of insolvency of the sponsoring employer. Retirement payments can be fulfilled as lifelong annuities but there is also the possibility to have a lump-sum pay-out at the beginning of the retirement phase.

According to the statistics of the German Insurance Association (see table DE2), the number of contracts managed by pension funds (0.64 million) remains much lower than the number of contracts managed by Pensionkassen (3.57 million). Nevertheless, the former increased by 89% over the past ten years, while the latter only increased by 7.4%.

Table DE2. Number of contracts for occupational pension schemes recorded by the German Insurance Association GDV (in millions)

	Direct insurance and reinsurance	Pension funds	Pensionskassen	Total
2010	9.51	0.32	3.38	13.21
2011	9.97	0.34	3.50	13.81
2012	10.40	0.46	3.61	14.47
2013	10.59	0.49	3.66	14.74
2014	10.81	0.51	3.72	15.04
2015	11.02	0.53	3.75	15.30
2016	11.23	0.47	3.74	15.43
2017	11.58	0.49	3.71	15.78
2018	11.89	0.52	3.69	16.10
2019	12.01	0.56	3.68	16.25
2020	12.15	0.60	3.63	16.38
2021	12.32	0.64	3.57	16.53

Source: Gesamtverband der Deutschen Versicherungswirtschaft e. V. (GDV) - Die deutsche Lebensversicherung in Zahlen 2022

The *Riester* support is rarely used within the framework of occupational pension schemes. It is registered in only 1-2% of cases[176].

While pure defined contribution (DC) plans cannot be found in Germany to date, a law introducing DC pension plans without guarantees, set up by collective bargaining agreements, passed legislation in the summer of 2017. This so-called "*Betriebsrentenstärkungsgesetz*" likewise allows for auto-enrolment of employees in a pension plan with voluntary opting-out

[176] Bundesministerium für Arbeit und Soziales (2012).

within a specified time frame and incorporates measures to strengthen occupational pensions for low-income workers through e.g., allowances and tax incentives.[177]

According to a proposal submitted to the Bundesrat by the ministers of the Land of Hesse in April 2018, employees not covered by a professional scheme would automatically be affiliated to an individual pension scheme created by the government.

Voluntary Personal Pensions

Over the last few years, the German government has undertaken significant communication efforts to advertise personal provisions for old age to supplement the statutory pension insurance. Since 2002, *Riester* pension savings are being promoted by the government through two different channels: subsidies and taxation reliefs. In 2005, the *Rürup* pension was introduced to specifically support the self-employed through tax exemptions.

Riester pensions

Riester[178] products are formally certified personal pension plans with the objective of building up a funded retirement pension supplement. They are subject to deferred taxation, and subscribers receive subsidies from the German state. The amount received depends on personally invested contributions. Subsidies are at their maximum if the total contributions to a *Riester* product (that is, personally invested contributions plus subsidies) reach at least 4% of the individual's previous year's income, up to a maximum of €2,100. The subsidies add up to €175 per adult (according to the pension law of summer 2017), plus €300 for each child born since 2008 and €185 for those born before 2008. Subscribers that are younger than 25 receive a bonus of up to €200 at the moment of subscription to a *Riester* product. The minimum contribution to receive the full subidies is €60 per year. If the calculated minimum contribution for a low-income earner is less than €60, this minimum contribution of 60 euros must always be paid in order to receive full support. If an individual pais less than his oder her minimum contribution (4% of the individual's previous year's income - maximum €2,100 -, less any subsidies due, but at least €60 per year), his or her subsidies are reduced proportionately.

Though rarely used in this context, the *Riester* support is also applicable to occupational pension plans for the following three types: direct insurances, *Pensionskassen* and pension funds. *Riester* subsidies and tax allowances are personal and can only be passed on to a spouse's *Riester* contract in the case of death.

Riester pension benefits can be paid out starting at the age of 62, or at the age of 60 for contracts concluded before 2012. The subscriber obtains the right to convert the invested capital into a life annuity, or a programmed withdrawal where up to 30% of the accumulated

[177] http://dip21.bundestag.de/dip21/btd/18/112/1811286.pdf (Accessed on 14 June 2017).
[178] Named after former Federal Minister for Labour and Social Affairs: Walter Riester.

savings can be paid out as a lump-sum. Furthermore, one fifth of the accumulated savings is reserved for life annuities starting at the age of 85.[179]

The following types of investments are eligible as *Riester* products:

- Bank savings plan ("*Banksparplan*"): These contracts are typical long-term bank savings plans with fixed or variable interest rates.
- Pension insurance contract ("*Rentenversicherung*"): These *Riester* plans, offered by insurance companies, exist in two forms. There are typical pension insurance contracts consisting of guaranteed returns and a participation in profits. Additionally, there are also hybrid contracts where a fraction of the retirement savings is invested in investment funds. They consist of both a guaranteed part and a unit-linked part that depends on the performance of the investment funds.
- Investment fund savings plan ("*Fondssparplan*"): Savings are unit-linked, invested into investment funds chosen by the subscriber from a pool of funds proposed by a financial intermediary. The intermediary has to at least guarantee that the invested money plus the state's subsidies are available at the moment of retirement. In the case of premature withdrawals, a loss of capital is possible.
- Home loan and savings contract ("*Wohn-Riester/Eigenheimrente*"): These contracts take the form of real estate savings agreements. This most recent type of *Riester* scheme is based on the notion that rent-free housing at old age is a sort of individual retirement provision comparable to regular monetary payments.

At the end of March 2022, 16.2 million *Riester* contracts had been subscribed. After steady increases in the early periods following its establishment, considerably fewer pension insurance contract contracts have been subscribed since 2012. The number of open contracts remained stable since 2015 and even decreased slightly every year since 2018. Suggested explanations include the current environment of low interest rates along with less favourable media coverage of *Riester* products - reinforcing a general mistrust and doubt[180] concerning funded retirement savings. It should be noted that an individual can subscribe to several *Riester* contracts at the same time, so a direct inference of the number of individuals possessing a *Riester* contract is not possible. However, State subsidies (allocations and income tax reliefs) are only possible for up to 4% of the individual gross income (maximum €2,100 per year). In fact, a small number of non-subsidised *Riester* contracts exist. This is independent from the fact that many *Riester* policy holders "forget" to ask for state subsidies, and that others do not get the complete allocations. About two-thirds of *Riester* contracts take the form of pension insurance contracts, making it by far the most important type of *Riester* investment despite a decrease of subscriptions observed since 2015. According to Federal

[179] Bundesministerium für Arbeit und Soziales (2014).
[180] Evidence of this can be found in Hagen, Kleinlein (2012).

Ministry of Labour and Social Affairs, more than one fifth of the *Riester* contracts are currently put on hold - meaning that savers are suspending their contributions.[181]

Table DE3. Number of *Riester* contracts (in thousands)					
	Pension insurance contracts	Bank savings plan	Investment fund savings plan	Home loan and savings contract	Total
2001	1 400	NA	NA	0	1 400
2002	2 998	150	174	0	3 322
2003	3 451	197	241	0	3 889
2004	3 557	213	316	0	4 086
2005	4 524	260	574	0	5 358
2006	6 388	351	1 231	0	7 970
2007	8 194	480	1 922	0	10 596
2008	9 285	554	2 386	22	12 247
2009	9 995	634	2 629	197	13 455
2010	10 484	703	2 815	460	14 462
2011	10 998	750	2 953	724	15 425
2012	11 023	781	2 989	953	15 746
2013	11 013	805	3 027	1 154	15 999
2014	11 030	814	3 071	1 377	16 292
2015	10 996	804	3 125	1 564	16 489
2016	10 931	774	3 174	1 691	16 570
2017	10 881	726	3 233	1 767	16 607
2018	10 827	676	3 288	1 810	16 601
2019	10 773	627	3 313	1 818	16 531
2020	10 687	592	3 297	1 793	16 369
2021	10 672	546	3 263	1 730	16 211
2022 Q1	10 672	539	3 241	1 705	16 157

Source: Federal Ministry of Labour and Social Affairs

Rürup Pensions

Introduced in 2005, the *Rürup*[182] pension (or "*Basisrente*") is the most recent form of pension provision and, next to occupational pension plans and *Riester* pension plans, the third type of private pension that is supported by the German state through tax exemptions. The *Rürup* pension actually has similar characteristics to the statutory pension insurance. Contributions are utilised for monthly life annuities, starting with the retirement phase at the age of 62 (or at the age of 60 for contracts concluded before 2012), and there is no possibility of lump-sum payments. The benefits are personal, thus non-transferable, and cannot be disposed or capitalised either. Contributions are exempt from taxation up to a high deduction cap. *Rürup* pensions, specifically designed for self-employed persons and freelancers who could not benefit from state supported pension savings before its establishment, are beneficial for those

[181] http://www.bmas.de/DE/Themen/Rente/Zusaetzliche-Altersvorsorge/statistik-zusaetzliche-altersvorsorge.html (data extracted on 9 July 2022)
[182] Named after German economist Bert Rürup.

with higher revenues because of the high tax-exempt savings amount. They take the form of pension insurance contracts that are, in contrast with *Riester*, irredeemable, for which invested funds cannot be regained before the retirement phase. It is also possible to subscribe to *Rürup* insurance contracts that invest in investment funds through savings plans. Such contracts can be designed with or without capital guarantees[183].

Table DE4. Number of Rürup pension (or "Basisrente") contracts recorded by the German Insurance Association GDV (in millions)	
2005	0.148
2006	0.296
2007	0.608
2008	0.863
2009	1.080
2010	1.277
2011	1.490
2012	1.655
2013	1.763
2014	1.883
2015	1.975
2016	2.058
2017	2.136
2018	2.251
2019	2.322
2020	2.396

Source: Gesamtverband der Deutschen Versicherungswirtschaft e. V. (GDV)

Life insurance and pension insurance contracts

Retirement provision in Germany is also carried out through classic pension insurance products or life insurance products, possibly the ones that are unit-linked. However, if not certified within the framework of the *Riester* pension, the *Rürup* pension or as an occupational pension plan, these contracts do not benefit from initial tax deductions or allowances. Nonetheless, they do play an important role in personal retirement provisions with about 63.7 million contracts concluded at the end of 2020[184]. These contracts are of a diverse nature. They usually start paying out at the moment of retirement, though there are also contracts that pay immediately after conclusion ("*Sofortrente*"). It is possible to redeem both via lump-sums and annuities.

While the pension law of summer 2017 mainly aimed at strengthening occupational pensions, personal pensions are likewise impacted as the basic allowances for *Riester* contracts increased from €154 to €175 from early 2018.

[183] http://www.bundesfinanzministerium.de/Content/DE/Standardartikel/Themen/Steuern/Weitere_Steuerthemen/Produktinformationsblatt/2016-12-12-Produktinformationsblatt-Basisrente.html

[184] https://www.gdv.de/de/zahlen-und-fakten/versicherungsbereiche/renten--und-kapitalversicherungen-24038

Charges

Information on the multifaceted types of charges for private pension products are rather hard to obtain and often non-transparent for individuals, which complicates the decision-making process.

Within Pillar II, due to the DB character of pension schemes, employers have an interest in cost-efficient pension provision, and the competition among different financing methods creates pressure on costs. In the case of book reserves and support funds, an employer has to meet the specified retirement commitments agreed upon, thus charges will not be discussed within the scope of these two types of occupational pension.

One of the main advantages of occupational pension schemes is that charges are usually lower than for personal pension plans because they are spread over larger groups. Employers often receive quantity discounts or customised rates with lower administrative charges. This is especially the case if rates are defined for whole industry sectors.

The following operating expenses data for autonomous occupational pension funds (*Pensionskassen* and pension funds) are available in the OECD Pension indicators database[185] and are provided by the Federal Financial Supervisory Authority (BaFin). Charges are expressed as a percentage of the funds' total assets. We did not find any charges data shown separately for occupational direct insurances. We did not find any data on acquisition costs which are opaque in the case of occupational schemes and even prohibited by law for traditional *Pensionskassen*.

Operating expenses comprise all costs arising from the general administration of the plan/fund that are treated as plan/fund expenses (i.e., investment management costs and administrative costs):

- Investment expenses shall comprise all costs arising from investment management, such as: internal investment personnel costs; investment management fees (paid to external asset managers); trading expenses; legal fees (investment management related); custodian, accounting and performance measurement fees; property maintenance costs; asset consultant fees; other investment expenses.
- Administrative costs shall comprise all administrative costs, such as: interest expense; actuary fees; directors/trustees fees and expenses; personnel costs (excluding investment managers); external sales agents; total fees paid to audit firm; IT expenditures; rental costs; other legal fees (excluding those related to investment management); other administrative costs.

[185] http://www.oecd.org/daf/fin/private-pensions/globalpensionstatistics.htm (data extracted on 9 July 2021)

Table DE5. Operating expenses as a % of total assets for autonomous occupational pension funds			
	Investment expenses	Administrative costs	Total
2002	0.132	0.122	0.254
2003	0.393	0.363	0.756
2004	0.509	0.471	0.980
2005	0.304	0.281	0.585
2006	0.222	0.205	0.427
2007	0.163	0.151	0.314
2008	0.144	0.133	0.277
2009	0.139	0.119	0.258
2010	0.128	0.110	0.238
2011	0.118	0.101	0.219
2012	0.118	0.093	0.211
2013	0.114	0.094	0.208
2014	0.111	0.086	0.197
2015	0.122	0.088	0.210
2016	0.111	0.083	0.194
2017	0.108	0.077	0.185
2018	0.113	0.096	0.209
2019	0.104	0.091	0.195
2020	0.104	0.087	0.191

Source: Data extracted on 10 Jul 2022 from OECD.Stat - Funded Pensions Indicators

Table DE6. Life insurance expense ratios		
	Acquisition charges (as % of total premiums for new policies)	Administrative charges (as % of investments)
2000	5.6	0.40
2001	5.5	0.39
2002	5.4	0.38
2003	5	0.37
2004	4.5	0.35
2005	5.6	0.35
2006	4.9	0.33
2007	5.2	0.31
2008	4.9	0.30
2009	5.2	0.29
2010	5.1	0.27
2011	5	0.25
2012	5	0.25
2013	5.1	0.24
2014	5	0.23
2015	4.9	0.22
2016	4.8	0.21
2017	4.7	0.20
2018	4.6	0.20
2019	4.4	0.19
2020	4.5	0.18
2021	4.5	0.18

Source: Gesamtverband der Deutschen Versicherungswirtschaft e. V. (GDV)

Charges for *Riester* products are often the topic of negative media coverage. It is frequently stated that the charges consume almost all of the state's subsidies. Especially challenging for individuals is the complicated cost structure and the lack of transparency of some *Riester* contracts. For instance, there are internal costs, like acquisition costs, distribution costs and administrative costs, that are derived from differing and sometimes ambiguous determination bases, as well as external costs if parts are invested into investment funds. Recently, charges on capital withdrawals in the retirement phase have been at the centre of criticism. This opacity has created a curious situation where even providers with favourable charges are unable to properly set themselves apart from those more expensive. From a legal standpoint, until 2016, the German legislator only dictated that acquisition costs of *Riester* products had to be spread over at least 5 years to alleviate the initial cost burden.

Calculations by the German government in the early 2000s estimated the total charges to be 10% of the yearly savings premium, and this has become the standard for *Riester* charges calculations ever since[186]. Our own research shows that estimations of total charges of, on average, 10% to 12% of the yearly savings premium can be assumed. However, one can observe an enormous cost span from 2.5% to 20% for insurance contracts[187].

However, the criticism of an excessively high and non-transparent cost structure does not apply to all Riester contracts: since their introduction, residential Riester contracts have been recommended by consumer advocates as low-cost and interest-secure financing components for home ownership. Beyond the building society-specific acquisition fee required by the German supervisory authority for building society contracts, Wohn-Riester contracts hardly have any fees. One of the reasons for this is that the Federal Court of Justice considers all fees for consumer loans to be invalid and only the interest on the loan to be permissible.With regard to the less-used *Rürup* contracts and their shorter history, information is even harder to obtain. For a long time, there has been very little transparency regarding the cost structure, as there was no obligation by law for detailed disclosures. In contrast to *Riester* products, there is no obligation to spread the initial acquisition and distribution charges over a defined period[188], but application of the same conditions as for *Riester* products is common. The total charges for *Rürup* pensions expressed as percentages of the yearly savings premium are estimated by practitioners to be a little lower than for *Riester* pensions. Other personal retirement provisions, such as classic pension insurance and life insurance contracts, are likewise often stated to have slightly lower total charges than *Riester* products.

Since 1 January 2017, in order to increase transparency and comparability, every consumer receives corresponding product information sheets before the subscription to a *Riester* or *Rürup* contract. These information sheets are standardised and contain, along with details of individual charges, actual costs illustrating a reduction in yield ratio which should allow for a

[186] Rürup–Kommission (2003).
[187] Gasche, Bucher-Koenen, Haupt, Angstmann (2013).
[188] ZEW (2010).

better comparison among products of the same risk type. Also enforced from this date are charges arising from changes by *Riester* or *Rürup* providers for contracts after 1 January 2017, now subject to hard caps such as distribution cost application to only 50% of the transferred subsidised capital[189].

Average effective costs are not available for the periods under review within this study, hence for our calculations we only consider two types of charges at our disposal: acquisition and administrative charges. For the years 2016 and 2017, *Assekurata*[190] calculated average effective costs of about 0.8%[191] per year, which would lead to a heavier charge burden than what our calculations can capture.

Taxation

A reorganisation of retirement savings taxation has been instructed by a Federal Constitutional Court decision from 2002. This revision came into effect in 2005 whereupon taxation is based on a model that divides the different forms of retirement savings according to three groups.

The statutory pension insurance and the *Rürup* pension belong to the first group. Funded pension schemes like occupational pensions and the *Riester* pension belong to the second group. The third group covers the standard pension insurance or life insurance products due to their likewise existent function as investment products.

Contributions to products from the third group always have to be paid from taxed income. The products from the first two groups are subject to deferred taxation. Contributions up to a deduction cap are exempt from taxation and generally subject to tax in its entirety during the pay-out phase.

While products from the second group have already been partially subject to deferred taxation before 2005, this has not been the case for products from the first group. A transitional phase towards complete deferred taxation started in 2005 and since then, every year, higher amounts of contributions can be deducted from taxation and consequently the amount of retirement pay-outs subject to taxation rises. In 2025, pension savings for up to €20,000 for individual insurees and €40,000 for spouses will be exempt from initial taxation. 60% of the maximal amount was tax deductible in 2005 which means the percentage rises 2% each year until the maximum is attained in 2025. The 50% contribution by employers is already tax

[189] http://www.bundesfinanzministerium.de/Content/DE/Monatsberichte/2013/07/Inhalte/Kapitel-3-Analysen/3-4-die-gefoerderte-private-altersvorsorge.html (Accessed on 17 July 2018).
[190] "ASSEKURATA Assekuranz Rating-Agentur GmbH" (www.assekurata.de) is a private company specialized in the quality assessment of insurance companies from a customer's perspective providing rating and analysis services. For instance, ASSEKURATA is the only rating agency incorporating policy holder's opinions on their insurers gathered from customer surveys directly into their verdicts. ASSEKURATA, as a licensed European rating agency, is supervised by the European Securities and Markets Authority (ESMA). Calculations by Assekurata are renowned and utilised by governmental, corporate and consumer structures.
[191] Assekurata (2017).

exempt, so in 2016, 32% of an employee's total contributions to retirement savings were tax exempt.

The percentage of retirement pay-outs subject to taxation was 50% in 2005. Since then, for each year following, the percentage of retirement pay-outs subject to taxation for new retirees rises at a rate of 2%. This means that in 2020, new retirees will pay taxes on 80% of their retirement pay-outs. From 2020 onwards, the rate will rise at 1% annually and consequently retirees from 2040 onwards will have to pay full taxes on their retirement pay-outs[192].

Voluntary Occupational Pensions

For occupational pension plans in 2013, and for commitments starting from 2005 on, the following taxation rules apply for the individual types of occupational pension schemes:

Book reserves and support funds

Book reserve and support fund contributions through deferred compensation are fully tax exempt while up to 4% of a variable contribution cap is exempt from social security contributions. Benefits are taxed as income at the personal rate.

Direct insurances, Pensionskassen and pension funds

Direct insurances, *Pensionskassen* and pension funds are treated identically according to taxation legislation. In 2017, contributions through deferred compensation were tax exempt for up to €4,848 (4% of the 2017 contribution cap, €1,800) and exempt from social security contributions for up to €3,048 (4% of the 2017 contribution cap)[193]. Investment income is tax exempt while benefits are subject to taxation.

Voluntary Personal Pensions

Riester pensions

Since 2008, total contributions to a *Riester* product of at most €2,100 are exempt from initial taxation even if this amount is more than 4% of the previous year's income. An automatic review by fiscal authorities within the framework of the income tax statement assures further fiscal relief on the difference originating if the tax deductions exceed the state's subsidies. During the savings accumulation period, investment income is likewise tax exempt, while benefits are taxed in the retirement phase but exempt from social security contributions.

[192] Deutsche Rentenversicherung (2017).
[193] If the limits have not already been reached by employers' contributions.

Rürup pensions

Contributions to *Rürup* pensions will be exempt from taxation for up to €20,000 per adult in the year of 2025. In the year of 2005, 60% of this ceiling was exempt from taxation and during a transitional phase, the percentage rises at a rate of 2% each year.

Table DE7. Tax exemptions for *Rürup* contributions							
Year of contribution	2005	…	2016	…	2020	…	2025
Tax deductible	60%	…	82%	…	90%	…	100%

Source: Bundesministerium der Finanzen (2016)

Table DE8. Taxation of *Rürup* benefits							
Year of benefit	2005	…	2016	…	2020	…	2040
Tax deductible	50%	…	72%	…	80%	…	100%

Source: Bundesministerium der Finanzen (2016)

Benefits from *Rürup* pensions are taxed in the retirement phase at the personal income tax rate. In 2005, 50% of the benefits were subject to deferred taxation. Until the year 2020, the taxable part of each year increases at 2%. From then on, the proportion will increase by 1% each year until finally, from the year 2040 on, benefits will be fully taxed[194].

Life insurance and pension insurance contracts

Other retirement savings products that are not particularly promoted by the German state are taxed as follows for all contracts subscribed to since 1 January 2005:

Contributions are no longer tax deductible as special expenses and have to be made from taxed income. Benefits are taxed at the personal income tax rate on corresponding earnings (the difference between contributions and total pay-outs) in the retirement phase. Furthermore, one has to differentiate whether the insurance benefit is carried out as a one-time lump-sum payment or if a lifetime annuity payment is chosen. In the case of lump-sum pay-outs, if the contract runs for at least 12 years and the insured is older than 60 years, or 62 years (for contracts subscribed to after 31 December 2011), only 50% of the earnings are subject to taxation. If these conditions are not met, the full earnings are taxed. In the case of life annuities, even further tax reliefs are possible depending on the age of the first retirement pay-out, as defined in the tax table. For instance, if the retiree is 60 years old, 22% of the earnings are subject to taxation and at the age of 65 only 18%.

Pension Returns

Pension return calculations are not performed for book reserves and support funds. These are individual commitments to employees that will not increase or decrease depending on asset performances. The commitments are protected by the PSVaG; hence employees can estimate

[194] Bundesministerium der Finanzen (2016).

the exact amount they can expect in the retirement phase. Furthermore, we do not have data on performance or charges available for the 2nd pillar direct insurances – thus we cannot perform real return calculations for this occupational financing vehicle either.

These drawbacks should be kept in mind when interpreting real returns, as well as the impact of subsidies, such as allowances.

Voluntary Occupational Pensions

Pensionskassen and pension funds

The following table shows real return calculations for Pillar II aggregate *Pensionskassen* as well as pension funds supervised by BaFin.

Table DE9. Average annual rate of investment returns for autonomous occupational pension plans (in %)

	Nominal return* before administrative costs, inflation and tax	Nominal return after charges and before tax, inflation	Real return after charges and inflation and before taxes	Real return after charges and inflation and after taxes
2000				
2001				
2002	2.81	2.68	1.56	1.22
2003	4.58	4.20	3.07	2.54
2004	4.94	4.45	2.11	1.55
2005	4.89	4.60	2.42	1.84
2006	4.60	4.39	2.96	2.41
2007	4.16	4.01	0.90	0.40
2008	1.62	1.49	0.38	0.19
2009	4.76	4.64	3.73	3.15
2010	4.94	4.82	2.93	2.32
2011	3.01	2.91	0.66	0.29
2012	4.82	4.73	2.59	2.00
2013	4.29	4.20	2.94	2.41
2014	4.61	4.52	4.42	3.85
2015	3.37	3.27	3.07	2.65
2016	3.81	3.72	2.08	1.61
2017	3.76	3.68	2.16	1.70
2018	1.91	1.81	0.16	-0.07
2019	4.69	4.60	3.02	2.44
2020	2.94	2.85	3.53	3.17
Avg / Year	**3.92**	**3.76**	**2.35**	**1.87**

** Nominal return after investment management costs*

Source: OECD Pension Markets in Focus (2021) for Norminal Returns; OECD Pension Indicators database (Accessed on 10 July 2022) for charges; Eurostat; OEE calculation.

To simulate the impact of taxation on the real return of *Pensionskassen* and pension funds, the average income tax rate for retirees (18%) has been applied to the 70% of the pay-outs that were subject to deferred taxation in the year of 2015.

Since German pension funds and *Pensionskassen* are currently exclusively offered as DB or hybrid plans (see Pension Vehicles), employees bear minor risks when investments perform poorly[195].

Voluntary Personal Pensions

Information on the performance of personal pension plans is hard to obtain and there are considerable controversies surrounding the proper estimation method, notably for *Riester* insurance contracts.

Calculations of real returns for Voluntary Personal Pensions are only executed for insurance contract types since information on returns and charges is not consistently available for other types of personal pension plans. Nonetheless, this provides an important insight into the most important part of promoted personal pension plans since about two-thirds of all *Riester* pensions are designed as pension insurance contracts, as are all *Rürup* pensions.

The following real return estimations are based on average return rates calculated by *Assekurata*. One has to keep in mind that the calculations made by *Assekurata* are based on voluntary participations. For instance, in 2022, 46 insurance companies responded to the survey, reflecting a market share of 73% (against 69% in the previous year) in terms of premium income. This may lead to a bias based on voluntariness. The return rates provided by *Assekurata* are composed of a guaranteed interest part ("*Höchstrechnungszins"* or "*Garantiezins*"), set and capped by the German Federal Ministry of Finance, and a surplus sharing part ("*Überschussbeteiligung*")[196]. Furthermore, the return figures provided are related to the investment part of the gross premium which is only about 60% to 90% of the total premium depending on not only deductions of distribution and administrative charges, but also risk premium[197].

Though already introduced in 2002, data on investment return rates has only been available since 2005 for *Riester* pensions, just like for *Rürup* pensions which were introduced that year. Return rates for classic pension insurances are available for a 21-year period. For our real return estimations, we assumed that acquisition charges are spread over five years for all

[195] OECD (2016)

[196] Terminal bonuses and participation in valuation reserves are not included in these calculations as they are difficult to compare and not equally applied. Terminal bonuses are usually paid on the maturity of the policy or on death. Similarly, valuation reserves only apply to about 5% of policy holders. One has to keep in mind that they account for, on average, 20% of the total return.

[197] In life insurers' advertisements, the return percentage figures that are published are always linked to the investment part of the premiums and, very often, the insurers do not differentiate between the gross premium and the investment part of the premium which is misleading from a consumer's perspective.

insurance contract types. Consequently, the charge burden in the first five years is more severe.

Riester pension

Table DE10. Riester pension insurances' average annual rate of investment returns (in %) - Including acquisition charges

	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax	Real return after charges and inflation and after taxes
2000				
2001				
2002				
2003				
2004				
2005	4.24	2.84	0.70	0.34
2006	4.18	2.80	1.40	1.04
2007	4.18	2.82	-0.24	-0.61
2008	4.36	3.01	1.89	1.50
2009	4.27	2.93	2.04	1.66
2010	4.19	3.91	2.03	1.52
2011	4.05	3.79	1.52	1.03
2012	3.92	3.66	1.55	1.07
2013	3.56	3.31	2.06	1.63
2014	3.35	3.11	3.01	2.61
2015	3.11	2.88	2.68	2.30
2016	2.78	2.56	0.94	0.61
2017	2.50	2.29	0.80	0.50
2018	2.43	2.23	0.56	0.27
2019	2.41	2.22	0.67	0.39
2020	2.19	2.01	2.68	2.42
2021	1.95	1.77	-3.72	-3.95
Avg / Year	**3.39**	**2.83**	**1.20**	**0.83**

Source: Assekurata; Eurostat; GDV; OEE calculation

It is important to note though that for *Riester* products, subsidies which are not included in these calculations can play an important role in determining their performance. This is especially the case for low earners or for families with many children. Average and high earners benefit significantly from tax exemptions.

Rürup pension

Table DE11. Rürup pension's average annual rate of investment returns (in %) - Including acquisition charges				
	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax	Real return after charges and inflation and after taxes
2005	4.31	2.91	0.77	0.39
2006	4.20	2.82	1.42	1.05
2007	4.21	2.85	-0.21	-0.58
2008	4.37	3.02	1.90	1.50
2009	4.27	2.93	2.04	1.66
2010	4.21	3.93	2.05	1.54
2011	4.07	3.81	1.54	1.05
2012	3.90	3.64	1.53	1.06
2013	3.57	3.32	2.07	1.64
2014	3.36	3.12	3.02	2.61
2015	3.13	2.90	2.70	2.32
2016	2.81	2.59	0.97	0.64
2017	2.52	2.31	0.82	0.52
2018	2.45	2.25	0.58	0.29
2019	2.41	2.22	0.67	0.39
2020	2.19	2.01	2.68	2.42
2021	1.93	1.75	-3.74	-3.96
Avg / Year	**3.40**	**2.84**	**1.21**	**0.84**

Source: Assekurata; Eurostat; GDV; OEE calculation

As discussed in the Pension Vehicles chapter, the contributions to *Rürup* pensions are, in contrast to *Riester* pensions[198], not guaranteed and cannot be recalled or capitalised, which can lead to the following difficulty: *Rürup* pensions were especially introduced for self-employed people and freelancers whose income may vary considerably from year to year, in particular in times of crisis. If contributions can no longer be maintained, and with contracts that are concluded lifelong, ongoing administrative charges can gradually diminish invested retirement savings. Hence, consumer advice centres[199] usually only advice *Rürup* pensions if consumers are professionally established and if the payments of contributions are secured in the long run[200].

In order to simulate after-tax real returns, the average income tax rate estimation for retirees has been applied to the 72% of the pay-outs that were subject to deferred taxation in the year of 2016.

[198] Contributions (gross premiums) and state subsidies for all kinds of *Riester* contracts are guaranteed.
[199] Such as Verbraucherzentrale Hamburg e. V.
[200] Gasche, Bucher-Koenen, Haupt, Angstmann (2013).

Personal pension insurance

The classic pension insurance is not subject to deferred taxation and data is available for a longer time span so one has to be careful with the comparison of investment returns within the Pillar III. Since contributions have to be paid from taxed income, classic pension insurances are generally less favourable than *Riester* or *Rürup* pensions with regard to the tax burden. However, the complexity of taxation in all three stages (contribution phase, accumulation phase[201] and pay-out phase) could not be taken into account within this study and consequently after-tax simulations are only executed for pension products with deferred taxation schemes. The following table shows real return calculations for Pillar III pension insurance contracts.

Table DE12. *Pension insurances' average annual rate of investment returns (in %)* - Including acquisition charges

	Nominal return before charges, inflation, tax	Nominal return after charges and before tax, inflation	Real return after charges, inflation and before tax
2000	7.15	5.66	3.41
2001	7.10	5.62	4.19
2002	6.12	4.67	3.52
2003	4.84	3.41	2.29
2004	4.43	3.03	0.72
2005	4.31	3.94	1.78
2006	4.24	3.90	2.48
2007	4.25	3.93	0.83
2008	4.39	4.08	2.94
2009	4.28	3.98	3.08
2010	4.20	3.92	2.04
2011	4.07	3.81	1.54
2012	3.91	3.65	1.54
2013	3.61	3.36	2.11
2014	3.40	3.16	3.06
2015	3.16	2.93	2.73
2016	2.86	2.64	1.02
2017	2.61	2.40	0.91
2018	2.47	2.27	0.60
2019	2.46	2.27	0.72
2020	2.29	2.11	2.78
2021	2.13	1.95	-3.55
Avg. / Year	**4.00**	**3.48**	**1.84**

Source: Assekurata; Eurostat; GDV; OEE calculation

[201] It can be considered that the contribution and the accumulation phases in reality are the same since the beneficiary is contributing normally for the whole duration of his professional career, but for the purpose of our study we are considering money-weighted returns and therefore we distinguish between the moment when the contribution is made, the period of the investment and finally the moment when the investment is redeemed.

The very favourable nominal returns in the early 2000s raise the annual average of classic pension insurances. Return figures from 2005 on resemble those of *Riester* and *Rürup* pensions.

Conclusions

The year 2021 was marked by a strong performance of stock markets: the MSCI World Index increased by 20,1% and the DAX Index increased by 15,8%. It should have been a very good year for the performance of German pension products. Nevertheless, the year was also marked by the return of inflation and poor performance of debt markets. The Bond Index Barclays Euro Aggregate (Total Return) decreased by 2.85%, while it increased by 4.05% in 2020 and by 5.98% in 2019.

In that context, we observed, for the first time since 2007, a relatively strong negative performance in real terms of pension products.

In 2021, the real return after charges, inflation and taxes was:

- -3.95% for *Riester* products;
- -3.96% for *Rürup* products; and
- -3.55% for classic pension insurance products.

Over a 3-year span, the real performance became negative for all these Voluntary Personal Pension products. This will not help to attract new subscribers to those products that were already suffering from low interest rates environment and criticisms about the level of fees.

We don't have yet the data for the year 2021 for *Pensionskassen* and pension funds, but we anticipate that the inflation will also offset the relatively good performance that was observed in the previous years. German Voluntary Occupational Pensions are currently exclusively offered as DB or hybrid plans but pension reforms, including the introduction of DC pension vehicles as early as January 2018, are under way. It remains to be seen if the abandonment of traditional guarantees which has already created much debate and uncertainty among employees and providers can boost participation in occupational pensions, in particular for SMEs.

Policy Recommendations

Instead of trying to introduce new forms of old-age provisions, efforts should be focused on improving the existing products. The "Riester" product, with its licensing process, its strict legal framework, its exclusive number of categories and its comparability, is already an existing standardised private product. Nevertheless, the contracts are often criticised for their high costs.

There is a lot of potential for reform within all three systems of old-age provision. Whereas the public pension system should be focused on its core purpose, both company and private pension schemes could be revamped by reducing excess bureaucracy, abandoning contradictory legislation and further enhancing transparency.

Proposals have been made by different stakeholders. It is up to the legislator to take them into consideration and to propel legislation to increase penetration and to make old age provision more sustainable.

The discussion on "Riester" should take into account the fact that more than 16 million people have concluded Riester contracts and trust in this form of private old-age provision. Statutory reforms should therefore retain the current Riester scheme. The aim should be to maintain the current Riester-product diversity, to open it up to all citizens and at the same time to simplify the Riester support and make it more transparent, easier to understand and more attractive for citizens.

An education effort should also be made to encourage people (notably young people) to save for retirement and to promote existing products. A recent survey among young people highlighted that a decreasing number of young adults save for their old age, but an increasing number supports a stronger role of government in additional pension schemes. This obvious contradiction reveals a lack of knowledge regarding the pension system, options already available and the necessity to take responsibility for oneself.

Pension Savings: The Real Return

2022 Edition

Country Case: Italy

Sommario

Il sistema pensionistico italiano ha avuto una spesa pubblica del 17% del PIL nel 2020, 0,2 p.p. aumento rispetto al 2019 (16,8% del PIL). La riforma del sistema pensionistico italiano nel 2011 ha creato un solido regime di primo pilastro, con un tasso di sostituzione aggregato delle pensioni del 73% nel 2019, uno dei più alti tra i casi nazionali presi in esame in questo Rapporto. Considerando anche il tasso di partecipazione relativamente basso delle famiglie italiane ai mercati dei capitali, l'incentivo a indirizzare il reddito disponibile verso il risparmio previdenziale privato oi prodotti di investimento è basso. Complessivamente il 67,3% dei pensionati italiani percepisce una sola pensione e il 24,7% percepisce due pensioni (quindi pensioni pubbliche e private). Ciò risulta evidente se si considera la percentuale del patrimonio dei fondi pensione italiani, pari al 10% del PIL, nonché il tasso di copertura del secondo pilastro del 20% e del terzo pilastro del 14,2% della forza lavoro.

Per quanto riguarda le performance, i fondi pensione contrattuali hanno restituito x% annuo in media negli ultimi 21 anni (2000-2020). I fondi pensione aperti hanno restituito in media x% annuo nello stesso periodo., PIP (Piani Individuali Pensionistici) con utili realizzati in media x% annuo negli ultimi 13 anni, mentre i PIP unit-linked hanno registrato % annua in media nello stesso periodo. Tutti i rendimenti sono espressi al netto di oneri e inflazione.

Summary

The Italian general government's public expenditure on old-age pensions increased over the last 21 years from 11.4% to 15.1% of GDP. The Italian pension system reform in 2011 created a strong Pillar I scheme, with an aggregate replacement ratio for pensions of 72% in 2020 (second highest of the country cases analysed in this report) and 77% in 2021 (highest based on available data). Considering also the relatively low participation rate of Italian households in capital markets – which however increased over 2020 and 2021 - the incentive to direct available income to the private retirement savings or investment products is low. A total of 67.3% of Italian pensioners receive just one pension, and 24.7% received two pensions (meaning public and private pension income). This becomes apparent when looking at the percentage of Italian pension funds' assets, of 10% of GDP, as well as the coverage ratio for Pillar II of 20% and Pillar III of 14.2% of the labour force.

With regards to performances, contractual pension funds returned x% annually on average over the past 21 years (2000-2020). Open pension funds returned -% annually on average over

the same period., PIP (*Piani Individuali Pensionistici*) with-profits experienced % annually on average over the past 13 years, while PIP unit-linked experienced % annually on average over the same period. All returns are expressed net of charges and inflation.

Introduction

The Italian Pension System is divided into three pillars:

- Pillar I – the public (state) pension scheme;
- Pillar II – the occupational (mandatory) pension arrangements;
- Pillar III – the individual (voluntary) pension schemes.

Pillar I – State Pension

The first pillar (state and mandatory) is the main pension vehicle in Italy and is made up of two tiers: the zero and first tier. The zero tier consists of a social pension ensuring a minimum level of income for the elderly. The first-tier covers employed individuals and it constitutes a notional defined contribution system for all future generations.[202]

The Italian pension system used to be a Defined Benefit system. Since 1995, it is based on a Notional Defined Contribution system. The Italian state pension system went through intensive reforms. The year 1995 can be seen as a turning point, moving from a defined benefits system towards a defined contribution system. The Dini reform (law 335/1995) is one of the most important reforms towards the restructuring of the Italian pension system. As a result, all workers entering the job market after 1995 have been accruing their pension entitlement according to a defined contributions method, while before 1995 pension entitlements were computed according to an earnings-related system.

The next pension reform came on the background of an ageing population and a massive pension expenditure (relative to the GDP). In 2011, the minister of Welfare and Social Policy under the Monti Government, Elsa Fornero, implemented a state pension reform (law n.214) to bring the system closer to equilibrium. Under the new system, pension eligibility is based on working years rather than age. Earlier retirement is possible, but subject to penalties. The public pension system was thus sustainable. Nevertheless, the Italian Constitutional Court stated in April 2015 that the suppression of indexation of pensions on inflation included in the "Fornero law" was unconstitutional. The indexation of pensions on inflation was estimated to €500 million in unforeseen costs to the first pillar.

Further followed the "Quota 100" measure, which means that if the sum of the age and number of years worked is 100, the worker can retire. Since January 1st, 2019, the new measure offers the opportunity for workers aged at least 62 with 38 years of contributions to retire earlier than the normal retirement age of 67 years. The "Quota 100" was modified to

[202] Since the structural reform implemented by Minister Dini in 1995, the Italian pension system has been re-designed according to the Notional Defined Contribution system, in order to guarantee the stability of public finances.

"Quota 102" in 2022 to increase the minimum retirement age to 64 (thus, 64+38) but will cease to operate as of 31st December 2022 (as well as "Ape Sociale" and "Opzione Donna").

Reforms in the Italian pension system are foreseen for this year on the background of a new Government that will be formed after the 25 September elections and the expiry of the three aforementioned instruments. To the date of publication, we do not know exactly how the form will look like.

Pillar II – Occupational pensions

The second pillar is made up of collective complementary pension plans. These can be contractual occupational pension funds (managed by social partners with Collective Bargaining Agreements) or open pension funds linked to collective affiliations (managed by financial institutions).[203]

The Trattamento di Fine Rapporto (TFR) is also part of the second pillar. The TFR is a deferred indemnity. Each year the employer has to put aside (by law) part of the worker's salary which will be returned to the employee upon termination of the employment contract.

Pillar III – Voluntary (individual) pension

The third pillar is made up of voluntary contributions to individual complementary pension schemes, *Individual Pension Plans* (PIP). Individuals can also make contributions to open funds in the case of individual affiliations. Given the strong component of mandatory contributions within the state pension system, both collective and individual complementary pension funds play a small role in the financing of future retirees' income. While the savings in collective complementary pension funds are rather small, private savings are still consistent. If all pension contributions and home ownership were transformed into an annuity, the corresponding stream of generated income at retirement would be very high.

To summarise the information of the pension system set-up and to obtain a basic overview of the pension system in Italy, the table below presents key data on the multi-pillar pension system.

[203] Igor Guardiancich, 'Current Pension System: First Assessment of Reform Outcomes and Output' (2009) European Social Observatory Country Report on Italy, 2009
http://www.ose.be/files/publication/2010/country_reports_pension/OSE_2010_CRpension_Italy.pdf

Introductory table. Multi-pillar pension system in Italy		
PILLAR I	**PILLAR II**	**PILLAR III**
State Pension	Private, voluntary and collective funded system	Private, voluntary and individual savings
	Legislative Decree 124/93 on complementary pension plans implemented in 1993 Reform on complementary pension (Legislative Decree 252/2005)	
National Social Security Body (INPS)	Pension accumulation companies	Insurance companies
Mandatory	Voluntary	Voluntary
Publicly managed	Privately managed pension funds	Privately managed pension funds
PAYG	Partially or fully funded	Fully Funded
Notional Defined Contribution system (NDC)	DC (Defined Contribution scheme)	
Quick facts		
Number of old-age pensioners: 9,368,107	Funds: 277	Funds (new PIP): 72
Average old-age pension: €1,393	AuM: €131.9 bn.	Old & new PIP, AuM: €51.3 bn.
Monthly household average income (net): €2,492	Participants in 2021: 5.7 million	Participants in 2021: 3.8 million
Aggregate pension replacement rate (2021): 77%	Coverage ratio: 22.8%	Coverage ratio: 15.1%

Source: BETTER FINANCE composition based on COVIP Annual Report 2021 and INPS data for 2020

The real net returns (before taxes) of the main retirement provision vehicles in Italy are presented below based on 6 recommended holding periods: 1 year (2021), 3 years (2019-2021), 7 years (2015-2021), 10 years (2012-2021), and since the earliest data available (22 years for pension funds, 2000-2021, and 14 years for PIP, 2008-2021).

Summary Table – Real net returns of Italian pension vehicles (before tax)				
	Contractual pension funds	**Open pension funds**	**PIP with profits**	**PIP unit-linked**
2021	0.72%	2.16%	-2.74%	6.57%
2019-2021	3.57%	4.35%	0.00%	6.00%
2015-2021	1.70%	1.95%	0.28%	2.93%
2012-2021	1.90%	2.05%	0.77%	3.51%
2008-2021	1.86%	1.65%	1.16%	5.14%
2000-2021	1.29%	0.41%	n.a.	n.a.

Source: Tables IT5 and IT6

Pensions Vehicles

Collective and individual complementary pension funds

Complementary pension funds were introduced in 1993 and are composed of contractual funds, open funds and individual pension plans provided by life insurance companies. The main features of complementary pension plans are:

i. voluntary membership;
ii. funded;
iii. managed by banks, financial institutions and insurance companies;
iv. supervised by Commissione di Vigilanza sui Fondi Pensione (Individual Pension Funds Supervisory Commission - COVIP).

Following the signature of an agreement, all complementary pension funds are managed by an external financial institution that can only be an insurance company, a bank or a registered asset management company (Legislative Decree 252/2005). All complementary pension funds now operate on a defined contribution (DC) basis, as this is the only permitted type of pension plan. Defined benefit (DB) plans are restricted to pre-existing funds.

At the end of 2020, the total workers enrolled into collective and individual pension plans (Pillar II and III) amounted to 8.45 million[204]. The number of individuals covered by a pension plan represents 33% of the labour force, compared to 31.4% in 2019. The increase in membership was driven by an increase in the number of affiliates to all categories of schemes except pre-existing closed pension funds whose membership remained quite stable in 2020.

Table IT1. Number of subscribers in Complementary Pension Funds (in thousands)

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Pillar II: Collective complementary pension plans									
Contractual Pension Funds	1,951	1,944	2,419	2,561	2,763	2,949	3,095	3,184	3,369
Open Pension funds	985	1,057	1,150	1,230	1,343	1,429	1,516	1,590	1,694
Pre-existing Closed Pension Funds	655	645	646	620	611	613	618	616.6	622
Pillar III: Private and individual complementary pension plans									
New PIP	2,134	2,357	2,601	2,759	2,969	3,130	3,264	3,349	3,445
Old PIP	505	467	434	411	390	370	354	338.8	321.9
Total	**6,204**	**6,585**	**7,235**	**7,786**	**7,585**	**7,953**	**8,264**	**8,445**	**8,771**

Source: COVIP Annual Report 2021

The budget law of 11 December 2016 allows members of complementary defined contribution pension funds, who are close to retirement age, to receive early retirement

[204] Covip, 2019 Annual Report.

income from their accumulated savings in a whole or in part (*Rendita integrativa temporanea anticipata* or RITA). Eligible employees are those who benefit from a similar provision in the first pillar (Anticipo finanziario a garanzia pensionistica or APE).

To be eligible to RITA, an individual must:

- cease his / her professional activity;
- reach the requirements necessary to receive the old-age pension in their mandatory regime within the next five years or to be unemployed for more than 24 months;
- have contributed at least 20 complete years to the mandatory regime; or / and have completed five years in the pension scheme.

The individual determines the amount of the accrued capital to use until his / her official retirement. In 2019, 8,200 individuals benefitted from RITA: 6,900 individuals drawn out their entire accrued position. In 2018, the first year of application of this package 2,200 individuals benefited from RITA and 400 individuals drawn out their entire accrued position.

Pillar II

Contractual funds or Closed funds *(Net assets at the end of 2021: €65.3 billion)*

Contractual funds are also called closed funds as only certain groups of people can join. These are professional occupational funds. Amongst employees, subscription is reserved only to those whose contracts are regulated by a collective bargaining agreement (CBA). For the self-employed, contractual agreements are usually provided by professional associations. Thus, only their members can subscribe to dedicated contractual pension funds.

Contractual pension funds are defined contribution schemes and the contribution amount is established by the fund's bylaws.[205] These funds are independent legal entities, with their own capital. Their governance is based on the principle of equal representation among employers and employees.

The Board of Directors is responsible for the investment strategies and chooses the investment manager, as well as the depositary bank and the designated entity dealing with administration. The fund must report on an annual basis, at least. Given the long-term characteristic of funds, managers' mandates are usually five years, or even longer for certain types of assets.

Open funds *(Net assets at the end of 2021: €28.97 billion)*

In contrast to closed funds, membership is not restricted to certain groups. An open fund is not a legal entity. They can be established for collective or individual members, or both.

[205] Paci S., P. Contaldo, C. Fiorentino, G. Nocera, L. Spotorno, F. Vallacqua, 'Carefin Report: Pension Funds in Italy' (2010) Bocconi University.

Like contractual funds, open funds are defined contribution funds. Alike closed funds, a depositary bank is required, and administration costs can be outsourced.

The number of subscribers to open funds were 1,694,029. It increased by 6.5% over a year with 144,116 new subscribers.

At the end of 2021, assets managed by open funds amounted €28.966 billion with €2.641 billion of contributions.

The TFR, Severance Payment

During his/her whole career, an employee perceives severance payments, which are paid upon work termination. The severance payments are collected in a specific vehicle for pension asset accumulation, also known as *Trattamento di Fine Rapporto* (TFR). The TFR is computed on an annual basis and is equal to 6.91% of employee's annual remuneration. The TFR rate of return was 3.6% in 2021. It is mandatorily saved and returned upon termination of employment (such as retirement, the most common form).

The TFR can also be partially drawn on (70%) before the employee ends his / her professional activity, but only under very special circumstances, including health problems, first-house purchases and parental leave. Moreover, the stability law of 2015 enabled employees in the private sector to receive their severance payments in advance with a state guarantee on bank loans to companies.

The TFR represents a huge savings pot, and its management underwent heavy changes from January 2007. Each worker can opt to accumulate their TFR by joining a complementary pension fund. If a worker does not make such a decision, tacit consent applies for the TFR to be transferred to a collective contractual pension fund when it exists for specific sectors.

This change represented a small cultural revolution in the Italian pension structure, where pensions had previously been provided by the public sector, with no active role by workers in choosing how much to invest. Workers have mandatorily contributed a conspicuous amount of their income, through the first pillar State system, with no involvement in where to invest their savings. With the TFR law, workers are now offered the possibility to choose to join any complementary pension fund[206] among contractual pension funds, open pension funds or even PIPs (Individual Pension Plans). When opting for PIPs, workers can decide the amount they contribute, a new element in the Italian framework, with no discretion in terms of pension contributions.

If an employee decides to opt-out from complementary pension funds and belongs to a company with more than 50 employees, his / her accumulated amount of severance payments is transferred to INPS (National Institute for Social Security), which manages the severance payment according to the law. For an employee who works in firms with less than 50

[206] Cannata and Settimo, 2007

employees and who does not opt for complementary pension funds, his / her TFR remains in the firms he / she works in and represents a debt for the company.

Third Pillar

PIP, individual pension funds *(Net assets at the end of 2021: €51.3 billion)*

They are subscribed on an individual basis only, as insurance contracts in the legal framework of complementary pension funds. Within PIPs policies, two types of insurance contracts are offered: with-profits or unit-linked. A combination of the two types of contracts is possible with a more flexible risk-profile.

The with-profits policies guarantee a minimum rate of return (guaranteed and consolidated in the company's accounts) which is added to a quota related to the financial performance. The unit-linked policies do not have a guarantee. Their performance depends on the value of the units in which contributions are invested.

Public employees

The coverage of public employees by specific retirement products is very limited, as the law introducing pension funds excluded them. Contractual pension funds are only possible for individuals working in National Education (Espero), in the National Health and in a regional or local authority (Perseo and Sirio). These contractual pension funds were implemented in 1993.

There are pension funds implemented before 1993 that are semi-autonomous in their management and can collect money directly from subscribers without intermediaries. These pension funds are more numerous than those implemented in 1993.

Asset allocation of complementary pension plans

Law no.703, that regulates complementary pension funds' asset allocation, has been approved at the end of 2014. It allows more flexibility, moving from a quantitative approach to a principle-based one. Short selling remains prohibited, and funds should allocate a minimum of 70% to listed products.

Looking at the portfolio composition of the complementary pension system as a whole (both pillar II and III), low-risk assets constituted the majority of holdings. In 2021, Sovereign bonds were still the main investment and their share in total portfolio, however, it decreased slightly at 35.5% (against 41.7% in 2018). The weight of Italian corporate bonds continued to decrease in 2021 (from 21.2% in 2018 to 18.2%). The share of direct holdings of equities increased from 17.7% in 2018 to 18.9% in 2019 and 22.6% in 2021. Nevertheless, altogether, fixed income securities make up for a too large part of portfolios, i.e., 53.7%.

According to COVIP calculations, considering equities held through investment funds and derivative instruments, the equity exposure increased to 26.7% in 2019 (against 23.4% in 2018).

Table IT2. Asset allocation of pension funds (in %)						
	2016	2017	2018	2019	2020	2021
Treasury bonds	41.5%	41.5%	41.7%	40.3%	37.2%	35.5%
Corporate bonds	16.6%	16.6%	17.1%	17.7%	18.9%	18.2%
Equities	17.7%	17.7%	16.5%	18.9%	19.6%	22.6%
Mutual funds	14.4%	12.6%	13.8%	14.8%	15.5%	13.3%
Real estate	1.6%	1.4%	1.2%	1.0%	0.7%	0.6%
Other	0.9%	3.0%	2.6%	0.8%	1.5%	3.0%
Cash	7.2%	7.2%	7.1%	6.5%	6.6%	6.7%

Source: COVIP Annual Reports

Charges

COVIP calculates a synthetic indicator of cost for a member who contributes €2,500 every year with a theoretical annual return of 4%. The calculation methodology of the indicator was revised by COVIP in order to eliminate distortions between the categories of funds. Since 2014, the tax rates on investment revenues depend on the underlying assets of the funds. Since March 2015, the cost indicator is no longer calculated net but gross of the tax paid by pension funds on their revenues.

In 2021, the average cost indicator remained stable over time and thus is quite similar to that of preceding years, on which we noticed small decreases. In general, the minimum and maximum costs observed remain stable. The cost indicator decreases with the membership period, with initial fix costs being progressively amortised.

However, there is a great variation in complementary pension funds costs. In closed pension funds, the indicator cost is 1.11% for two years of participation, while it drops to 0.32% after 35 years of participation. With respect to PIP, it drops from 3.79% to 1.81%.

There are significant differences between each category of funds, depending on the distribution channels of the products and the fees paid to distributors. Economies of scale lead lower costs for closed funds while no such impact can be observed on new PIP and open funds, according to a review of individual figures by COVIP.

Table IT3. Average costs at the end of 2021 (in %) *				
	2 years	5 years	10 years	35 years
Closed Funds				
Mean	**1.11**	**0.63**	**0.45**	**0.32**
Min	*0.21*	*0.15*	*0.13*	*0.08*
Max	*3.00*	*1.49*	*1.28*	*1.13*
Open Funds				
Mean	**2.32**	**1.56**	**1.36**	**1.23**
Min	0.55	0.55	0.55	0.55
Max	4.73	3.20	2.58	2.31
New PIP				
Mean	**3.80**	**2.64**	**2.18**	**1.82**
Min	1.04	0.85	0.58	0.38
Max	6.44	4.82	4.07	3.44

Source: COVIP Annual Report 2021

Taxation

The taxation regime of pension savings in Italy is essentially an ETT regime (exempt, taxed, taxed), corresponding to the following three stages over time: contribution, accumulation and payment.

In the first phase, employee contributions to private pension funds benefit from a favourable tax treatment. An employee can deduct his / her contributions from his / her taxable income up to a ceiling of €5,164.57 per year. Employer contributions are considered as employment income and are thus subject to tax and social security contributions.

Until 2014, in the second phase a tax rate of 11.5% was applied on the accrued capital gains paid by complementary pension funds. From 1 January 2015, this tax rate increased to 20%, except for accrued capital gains generated by investments in Government Bonds which are taxed at a rate of 12.5%. The difference in taxation rates of bonds and equities is an incentive to change the asset allocation towards the former, a trend that is likely to lower the returns of pension products in the future. The budget law of 31 December 2016 foresaw that assets invested in European equities or European investment funds (up to 5% of the fund's total assets) were exempted from income tax.

In order to avoid double taxation, benefits are taxed only on the corresponding shares that were not taxed during the accumulation phase. Contributions that were not deducted, and thus already taxed, won't be taxed again.

In the third phase the corresponding benefits are taxed at a rate varying from 9% to 15% depending on the length of membership in the private pension funds. Income received before retirement age in the framework of the RITA scheme is taxed at 15%, reduced by 0.3% for each year over the fifteenth year of participation in supplementary pension schemes, with a maximum reduction limit of six percentage points. If years of enrolment in the supplementary pension scheme are prior to 2007, those years can be considered up to a maximum of 15 years.

The tax rate of pension benefits that come from TFR varies between 9% and 15%, depending on the length of enrolment in the complementary pension funds.

Pensions Returns

The following tables (IT4 A and B) provide the returns broken down by type of complementary private pension funds. Returns are calculated net of taxes paid by the pension funds on investment revenues.

After the drops in returns since 2015, as a consequence of historically low interest rates paid on bonds, the aggregate returns, net of management costs and taxes, were on average positive for all complementary pension forms and for all types of sectors in 2020.

In 2020, complementary pension schemes achieved largely positive results thanks also to the sustained rise in equity prices and the rise in bond yields. For each type of pension form, the best results were observed in the schemes with a greater exposure to equities.

Table IT4(A). Nominal returns net of charges and taxes on investment revenues by type of funds

	Contractual PFs	Guar.	Bonds Only	Bonds Mixed	Bal.	Equity	Open PFs	Guar.	Pure Bonds	Mixed	Bal.	Equity
2005	**7.5**	-	2.1	6.9	7.9	14.9	**11.5**	2.9	3.3	6.4	11.4	16.2
2006	**3.8**	-	2.6	2.7	5.6	8.2	**2.4**	1.0	-0.2	1.0	2.4	3.7
2007	**2.1**		2.2	2.1	2.4	1.3	**-0.4**	1.9	1.6	0.3	-0.3	-1.6
2008	**-6.3**	3.1	1.6	-3.9	-9.4	-25.0	**-14.0**	1.9	4.9	-2.2	-14.2	-28.0
2009	**8.5**	4.6	2.9	8.1	10.4	16.1	**11.3**	4.8	4.0	6.7	12.6	17.7
2010	**3.0**	0.2	0.4	3.6	3.6	6.2	**4.2**	0.7	1.0	2.6	4.7	7.2
2011	**0.1**	-0.5	1.7	1.1	-0.6	-3.0	**-2.4**	-0.3	1.0	0.4	-2.3	-5.3
2012	**8.2**	7.7	3.0	8.1	9.2	11.4	**9.1**	6.6	6.4	8.0	10.0	10.8
2013	**5.4**	3.1	1.2	5.0	6.6	12.8	**8.1**	2.0	0.8	3.6	8.3	16.0
2014	**7.3**	4.6	1.2	8.1	8.5	9.8	**7.5**	4.3	6.9	8.0	8.7	8.7
2015	**2.7**	1.9	0.5	2.7	3.2	5.0	**3.0**	0.9	0.9	2.2	3.7	4.2
2016	**2.7**	0.8	0.2	3.2	3.2	4.4	**2.2**	0.7	1.3	1.4	2.7	3.2
2017	**2.6**	0.8	-0.2	2.6	3.1	5.9	**3.3**	0.6	-0.3	0.4	3.7	7.2
2018	**-2.5**	-1.1	-0.6	-2.4	-2.8	-5.3	**-4.5**	-1.8	-0.8	-1.8	-4.8	-8.0
2019	**7.2**	2.0	0.7	7.6	8.6	12.2	**8.3**	3.0	3.7	4.2	9.2	14.9
2020	**3.1**	1.0	0.7	3.5	3.3	5.6	**2.9**	1.1	2.2	1.3	3.6	3.9
2021	**4.9**	0.3	-0.3	5.3	5.3	11.1	**6.4**	0.0	-1.5	0.9	6.9	14.8

Source: COVIP Annual Report 2021; *PFs = pension funds; Guar. = guaranteed; Bal. = balanced*

Table IT4(B). Nominal returns net of charges and taxes on investment revenues by type of funds					
	New PIP with profits - Separate management	Unit-linked	*Bonds*	*Balanced*	*Stocks*
2008	3.1	-22	2.4	*-8.3*	*-32*
2009	3.1	14.5	3.7	*7.8*	*20.6*
2010	3.2	4.7	0.6	*2.5*	*6.7*
2011	3.2	-5.2	0.8	*-3.5*	*-7.9*
2012	3.3	7.9	4.9	*6.4*	*9.6*
2013	3.2	10.9	-0.3	*5.8*	*17.2*
2014	2.9	6.8	3.3	*8.2*	*7.1*
2015	2.5	3.2	0.6	1.9	4.5
2016	2.1	3.6	0.4	1.5	6
2017	1.9	2.2	-0.7	2.3	3.2
2018	1.7	-6.5	-1.4	-5.9	-8.9
2019	1.6	12.2	2.2	9.2	18.8
2020	1.4	-0.2	0.7	1	-1.3
2021	1.3	11	-0.8	7.5	18.8

Source: COVIP Annual Report 2021

Contractual pension funds

The Italian pensions supervisor reports the annual returns of supplementary pension products net of charges and taxes on returns (capital gains tax). As explained in the section above, and in the third table of the Executive Summary, the Italian private pension system is among the very few analysed in this report that has an E-T-T regime, meaning that both investment returns and pension pay-outs are taxed. Although unclear from the COVIP Report – that forms the main source of data for this country case – whether the returns "net of costs and substitute tax" means that the investment performance is calculated after deducting tax on benefits, our analysis points to the fact that it is net of tax on returns, after charges, but gross of tax on benefits. Therefore, to obtain the real net returns after tax on benefits, the research team applies the lowest tax rate by product (9% and 12.5%) on the average annual nominal net return obtained by 2020.

Table IT5(1) reports the gross nominal, net nominal and real net returns, before tax on benefits, for closed pension funds. The calculation starts from the nominal net returns, as reported by COVIP. To obtain the gross returns, we re-inflate the nominal net returns with the annual management cost reported by COVIP – which is only available for contractual pension funds. To obtain the real net returns, before tax on benefits, we adjust the nominal net returns reported by COVIP with the annual inflation rate (HICP) for Italy. The averages of each type of returns represent a geometric mean of individual returns.

IT5.1 Gross, Nominal and Real Returns of contractual pension funds in Italy (%)								
2000	Gross returns	4.18	3.46	Nominal return after charges, before inflation and taxes	3.50	3.09	Real return after charges and inflation and before taxes	0.74	1.29
2001		0.07			-0.50			-2.70	
2002		-2.87			-3.40			-6.21	
2003		5.47			5.00			2.41	
2004		5.06			4.60			2.21	
2005		7.97			7.50			5.34	
2006		4.24			3.80			1.64	
2007		2.55			2.10			-0.66	
2008		-5.87			-6.30			-8.46	
2009		8.90			8.50			7.32	
2010		3.36			3.00			0.92	
2011		0.41			0.10			-3.50	
2012		8.49			8.20			5.49	
2013		5.68			5.40			4.77	
2014		7.55			7.30			7.30	
2015		2.94			2.70			2.60	
2016		2.94			2.70			2.19	
2017		2.85			2.60			1.60	
2018		-2.27			-2.50			-3.63	
2019		7.44			7.20			6.68	
2020		3.38			3.10			3.40	
2021		5.22			4.90			0.72	

Source: Own calculations based on Table IT4, COVIP, Eurostat data

Italian contractual pension funds have quite low fees – as many other occupational pension plans – which makes the difference between the gross and net returns small. However, taking into account inflation, more than half of the net returns is eroded, leaving savers with less than half of the nominal net return after 22 years. However, the deflation recorded in Italy in 2020 (-0.3%) slightly improved the real net returns of all products, which was severely reversed in 2021 when returns dropped almost 4.2% in real terms.

We further calculate the average annual rate of investment returns on different holding periods to enable comparison with other products. Then, we provide a hypothetical average nominal and real return after taxation on benefits as well. Normally, the tax rate on benefits is 15%, but it can be reduced by 0.3% for each year after 15 years of contributions until 35 years of contribution, thus reaching a potential tax reduction of 6%.

IT5.2 Annualised performances of contractual pension funds			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	5.22%	4.90%	0.72%
3-years	5.33%	5.05%	3.57%
5-years	3.27%	3.01%	1.70%
7-year	3.18%	2.92%	1.90%
10-years	4.38%	4.12%	3.07%
2000-2021	3.46%	3.09%	1.29%

Source: Table IT5.1

Assuming a worker started saving at the end of 1999 and reaches retirement age at the end of 2022, his average nominal returns after tax on benefits would equal 2.68% (equivalent of 13.2% tax), which in real terms would be equal to 0.88%. Otherwise, after deducting a tax of 15% from the net returns, the return would be 2.63% and the real net return would be 0.83%.

Open pension funds

The same methodology as for contractual pension funds is used to calculate the returns of open funds, with the difference that for open pension funds there is no annual cost data available, but instead we have the *synthetic cost indicator* for 35 years calculated by COVIP. Although, on long-terms, this cost indicator dilutes cost, it is the only proxy we can use to obtain the gross returns. For 22-year holding period (2000-2021), the annual average real return of open funds after deduction of charge and inflation was positive at 0.41%. The return is higher and reached 3.5% for 10-year holding period (2012-2021).

IT6.1 Gross, Nominal and Real Returns of open pension funds (%)								
2000	Gross returns	4.20	3.44	Nominal return after charges, before inflation and taxes	3.00	2.20	Real return after charges and inflation and before taxes	0.16	0.41
2001		-4.70			-5.60			-7.69	
2002		-12.30			-13.10			-15.63	
2003		6.90			5.70			3.09	
2004		5.46			4.30			1.91	
2005		12.74			11.50			9.26	
2006		3.54			2.40			0.27	
2007		0.71			-0.40			-3.09	
2008		-13.04			-14.00			-15.98	
2009		12.54			11.30			10.09	
2010		5.36			4.20			2.09	
2011		-1.31			-2.40			-5.91	
2012		10.31			9.10			6.37	
2013		9.30			8.10			7.45	
2014		8.70			7.50			7.50	
2015		4.25			3.00			2.90	
2016		3.44			2.20			1.69	
2017		4.55			3.30			2.68	
2018		-1.28			-2.50			-5.61	
2019		9.65			8.30			7.78	
2020		4.14			2.90			3.20	
2021		7.63			6.40			2.16	

Source: own composition based COVIP Annual Reports

IT6.2 Annualized performance of open pension funds			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	7.63%	6.40%	2.16%
3-years	7.08%	5.84%	4.35%
5-years	4.51%	3.27%	1.95%
7-year	4.31%	3.07%	2.05%
10-years	5.84%	4.60%	3.54%
2000-2021	3.44%	2.20%	0.41%

Source: Table IT6.1

The real net return, after taxation, for open pension funds between 2000-2021 turned positive again (after being negative last edition) at 0.41%. Taking into account the tax on benefits (same as for contractual funds), we obtain a nominal return, net of charges and tax, of 1.96% and 0.24% in real terms.

Individual Pension Plans

Individual Pension Plans (PIP) have the highest costs on the pension product market in Italy. The synthetic cost indicator calculated for PIPs was 1.81% for long-term subscribers in 2020 and it slightly increased to 1.82% in 2020.

The performance of the PIPs depends on the type of contracts. With-profits contracts have a comparable performance to contractual pension funds, while unit-linked PIPs have a lower average return on the market comparable to open pension funds.

However, performances are highly volatile, potentially associated with the relatively short timeframe considered, in fact corresponding to the financial crisis years. Moreover, given the shorter timeframe, the high variability could lead to misleading conclusions. In 2018, the returns of unit-linked PIPs decreased once again and was even negative at -7.6%.

IT7.1 Gross, Nominal and Real Returns of PIP with profits (%)								
2000		-			-		-	
2001		-			-		-	
2002		-			-		-	
2003		-			-		-	
2004		-			-		-	
2005		-			-		-	
2006		-			-		-	
2007		-			-		-	
2008		4.91			3.10		0.72	
2009		4.91		Nominal return after charges, before inflation and taxes	3.10		Real return after charges and inflation and before taxes	1.98	
2010	Gross returns	5.01	4.27		3.20	2.46		1.11	1.06
2011		5.01			3.20			-0.51	
2012		5.11			3.30			0.71	
2013		5.01			3.20			2.58	
2014		4.71			2.90			2.90	
2015		4.31			2.50			2.40	
2016		3.91			2.10			1.60	
2017		3.71			1.90			0.90	
2018		3.51			1.70			0.52	
2019		3.41			1.60			1.11	
2020		3.21			1.40			1.69	
2021		3.12			1.30			-2.74	

Source: COVIP Annual Report 2021

IT7.2 Annualized performance of PIP with profits			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	3.12%	1.30%	-2.74%
3-years	3.25%	1.43%	0.00%
5-years	3.39%	1.58%	0.28%
7-year	3.60%	1.78%	0.77%
10-years	4.00%	2.19%	1.16%
2008-2021	4.27%	2.46%	1.06%

Source: Table IT7.1

The average real net return before taxes of PIP with profits stood at 1.06% in the last 14 years. By deducting the tax rate on benefits for PIPs (12.5%), we obtain a return on the longest period available of 2.24% and 0.84%, in nominal and real terms.

The return computations for individual pension plans (unit-linked) are presented in the following Table IT8.1.

IT8.1 Gross, Nominal and Real Returns of PIP unit linked (%)								
2000		-			-		-	
2001		-			-		-	
2002		-			-		-	
2003		-			-		-	
2004		-			-		-	
2005		-			-		-	
2006		-			-		-	
2007		-			-		-	
2008		-18.90			-20.71		-22.54	
2009		18.05			16.24		14.98	
2010	Gross returns	8.10	5.78	Nominal return after charges, before inflation and taxes	6.29	3.96	4.14	2.54
2011		-1.95			-3.76		-7.21	
2012		11.35			9.54		6.80	
2013		14.40			12.59		11.92	
2014		10.24			8.43		8.43	
2015		6.90			5.09		4.99	
2016		7.31			5.50		4.98	
2017		5.88			4.07		3.05	
2018		-2.95			-4.76		-5.86	
2019		14.01			12.20		11.66	
2020		1.61			-0.20		0.09	
2021		12.82			11		6.57	

Source: COVIP Annual Report 2019

Table IT8.2. Annualized performance of PIP unit-linked			
Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	12.82%	11.00%	6.57%
3-years	9.33%	7.52%	6.00%
5-years	6.08%	4.26%	2.93%
7-year	6.37%	4.56%	3.51%
10-years	8.02%	6.21%	5.14%
2008-2020	5.78%	3.96%	2.54%

Source: Table IT8.1

The average real net return, after taxes, of PIP unit-linked pension products in the last 14 years (2008-2021) stood at 3.46%. After deducting taxes on benefits, the nominal net return stood at 3% and the real net return at 2.05%.

Conclusion

The Italian Pension System has a strong State component, which – if anything – does not strongly encourage private pension savings. The notional defined contribution (NDC) system puts the Italian public pension system under pressure. After all, the higher aggregate replacement rate (out of the countries analysed in this report) is in Italy at 77%, which alone – at the moment – achieves pension adequacy. However, the population ageing trend is set to mushroom the old-age dependency ratio from 37.1% as it stood for 2021 to 61.5% by 2050. In other words, the 3 workers that pay today's pension to one retiree will turn to less than two in thirty years.

The mandatory contribution rate amounts to 33%. As the system is pre-funded, contributions to the pension system will translate one to one to future pension incomes. In this scenario the second and third pillar are likely to only develop slowly. Moreover, Italy had the second highest level of retirement and social protection expenses in percentage of the GDP among OECD countries (15.6% in 2019, more recent data is unavailable from OECD). According to Eurostat, pension expenses elevated at 11.3% of the GDP in 2020 (up from 10.2% in 2019), representing the equivalent of €195.2 billion.

Even if the number of employees enrolled in private pension funds increased, it remained quite low. 8.65 million individuals are enrolled in private pension funds, representing 34.7% of the labour force. Experiences from the automatic enrolment implemented by labour agreements in 2015 and 2016 did not fundamentally change the framework, as employers' contributions were still low, and few employees voluntarily contributed to the new schemes. In addition, women and young people are under-represented in pension funds. The government has to play a role in encouraging all profile among employees to save for the retirement in pension funds.

The complementary pension funds can be of three types: contractual occupational pension funds (managed by Social Partners), open funds managed by financial institutions and Individual Pension Plans (PIP), split into with-profits and unit-linked policies.

Over the period 2000-2021, we calculated the annualized real return associated to open funds and contractual pension funds. Since 2000, contractual pension funds recorded a positive annualized real return (+1.29%), while open pension funds recorded a positive one of 0.41%.

Over the fourteen-year period (2008-2021), we calculated the annualized real returns of both unit-linked and with profits PIP contracts, which experienced annualized positive returns respectively 1.06% and 2.54%.

Private pension funds in Italy offer lower real returns after inflation and taxation, even negative for open pension funds on a long period (22 years). Sovereign bonds remained the most important assets on average (35.8% in 2021) in the asset allocation of private pension funds. This percentage dropped once again in 2021 while the percentage of the exposure to equities (direct holdings and through investments funds) increased to reached 22.6% of the

total asset allocation. The private pension funds have to elaborate other investment strategies which could provide higher returns to pensioners.

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Pension Savings: The Real Return

2022 Edition

Country Case: Latvia

Summary

Funded pension schemes have experienced negative average returns during their existence even the portfolio of pension funds in mandatary pension pillar is conservatively oriented. Pillar II pension funds recorded on average exceptional annual nominal return of 10.11% in year 2021, while Pillar III funds delivered also on average positive nominal return of 6.89%. A positive development could have been seen on the Pillar II market, where the introduction of passively managed funds contributed to further decrease of fees. The fees have decreased also in the Pillar III, however, complex fee structure and still higher fees of Pillar III pension funds play a significant role on the expected accumulated benefits.

Kopsavilkums

Fondēto pensiju shēmas savas pastāvēšanas laikā ir piedzīvojušas negatīvu vidējo ienesīgumu, pat ja pensiju fondu portfelis obligāto pensiju pīlārā ir konservatīvi orientēts. II pīlāra pensiju fondi 2021 gadā uzrādīja vidēji nelielu gada nominālo ienesīgumu 10.11% apmērā, savukārt III pīlāra fondi uzrādīja arī vidēji pozitīvu nominālo ienesīgumu 6.89% apmērā. Pozitīva attīstība bija vērojama II pīlāra tirgū, kur pasīvi pārvaldīto fondu ieviešana veicināja turpmāku komisijas maksu samazināšanos 2020. gadā. Maksa ir samazinājusies arī III pīlārā, tomēr III pīlāra pensiju fondu sarežģītā maksu struktūra un joprojām augstākas maksas būtiski ietekmē gaidāmos uzkrātos ieguvumus.

Introduction

Latvia is currently operating a multi-pillar pension system based on three pension pillars. The reform followed World Bank recommendations on creating a pension system with unfunded PAYG and funded pension pillars. Since 2001, the Latvian multi-pillar pension system includes:

- Pillar I (state compulsory PAYG pension scheme);
- Pillar II (mandatory state funded pension scheme) which is financed by a part of the social insurance contributions diverted from Pillar I;
- Pillar III (voluntary private pension scheme).

The introduction of the multi-pillar pension system has aimed its overall functionality on a different approach to each pension pillar operation, but with the overall objective of ensuring

an adequate pension for individuals under the demographic risks of an aging society, as well as the pension system's overall future financial stability.

The reform of the Latvian pensions system started in 1995, when it was decided to implement the three-pillar pension system. Firstly, the shift from the old Soviet-styled PAYG pension system to the notional defined contribution pension scheme (NDC PAYG Pillar I) was carried out. The new law on state pensions was adopted by the Parliament in November 1995 and came into force on 1 January 1996. The state mandatory-funded pension scheme (Pillar II) started operating in July 2001. The private pension funds (Pillar III) have been operating since 1998.[207]

From the point of view of individual savers, the Latvian pension system combines two aspects: personal interest in building wealth (based on a level of contributions and the length of the saving period) and intergenerational solidarity.

The Latvian NDC PAYG-based pension Pillar I has been effectively introduced by a partial reform in January 1996 and represents a mandatory scheme for all economically active persons who make social insurance contributions calculated from a monthly gross salary (income). Paid contributions are used for the payment of old age pensions to the existing generation of pensioners. Pillar I is organized as a NDC scheme, where the notional value of career contributions is recorded on each contributor`s personal account. Prior to claiming pension benefits, the pension capital recorded on individual NDC account is recalculated in accordance with the laws and regulations at the time when the individual accesses his/her pension.

Pension Pillar II is in fact a state-organized 1bis pillar, meaning that part of the individually paid social contributions are channelled to Pillar II and recorded on individual pension accounts. Monthly contributions are invested into individually chosen investment plans (pension funds) managed by private pension fund management companies. Pillar II was launched in July 2001 and completed the multi-pillar-based pension reform in Latvia.

Pillar III was launched in July 1998 and is organized as a private voluntary pension scheme. It accumulates individual contributions, as well as employer contributions made on the behalf of individual employees, to the selected voluntary pension fund.

[207] Groduma, M. 2002. Social insurance in Latvia: Seeking balance between financial stability and equity. In: European regional meeting "New and revised approaches to social protection in Europe". Budapest, 13 - 15 November 2002. [Online] Available: http://www.issa.int/html/pdf/budapest02/2groduma.pdf

Table LV 1: Multi-pillar pension system in Latvia		
Pillar I	**Pillar II**	**Pillar III**
State Pensions	**State Funded pensions**	**Voluntary private pensions**
Mandatory	Mandatory	Voluntary
NDC PAYG	Funded	Funded
Financed by social insurance contributions	DC	DC
Benefits paid via State Social Insurance Agency	Financed by social insurance contributions	Privately managed two types of pension plans:
Publicly managed	Individual pension accounts	1. open (individual),
	Privately (and publicly) managed pension funds	2. closed (quasi occupational)
Coverage: generally, all population	Coverage: generally entire working population	Coverage: Cannot be calculated due to missing information about number of participants

Gross replacement ratio: 30% (1,435 € average wage; 432 € average old-age pension)
Source: Own elaboration, 2022

Pillar I – State Pension Insurance

State old-age pension (Pillar I) should guarantee the minimum income necessary for subsistence. It is based on an NDC PAYG principle of redistribution, i.e., the social tax paid by today's employees covers the pensions of today's pensioners. However, the amount of paid contributions for each saver are recorded on individual accounts.

The state old-age pension is paid out of the social insurance contributions. Total level of social insurance contributions is 34.09% of gross salary for employees (employers contributes 23.59% and employees 10.5%; self-employed persons pay 27.52%). Of the total contribution, 14% funded the Pillar I NDC pension and 6% was redirected to the individual's account under Pillar II. The remaining portion of contributions financed social security elements such as disability pension, sickness and maternity benefits, work injury benefits, parent's benefits, and unemployment benefits.

The **statutory retirement age**[208] in Latvia in 2021 is 64 years both for men and women. However, the law stipulates a gradual increase of the retirement age by three months every year until the general retirement age of 65 years is reached in 2025. Early pension is possible in Latvia if two conditions are met: 1) an individual in 2021 reaches the age of at least 62 years (gradually rising by three months a year until 2025) and 2) an individual contributed for a period of at least 30 years.

[208] https://latvija.lv/en/PPK/socialie-pakalpojumi/sociala-apdrosinasana/p311/ProcesaApraksts

Old-age pension is based on the insured's contributions, annual capital growth adjusted according to changes in the earnings index, and average life expectancy. Old age pension is calculated by considering two parameters:

1. K - accumulated life-time notional pension capital, which is an accrued amount of paid contributions since the introduction of NDC system (1 January 1996) until the pension granting month. However, during the transition period to a full the NDC system, these two aspects are also taken into account:
    a. average insurance contribution wage from 1996 until 1999 (inclusive);
    b. insurance period until 1 January 1996;
2. G – cohort unisex life-expectancy at the time of retirement.

Annual old-age pension (P) is calculated as follows:

$$P = \frac{K}{G}$$

It can be said that the Latvian NDC PAYG Pillar I has shifted in a direction where the average gross replacement ratio is lower than 35%. The average income replacement ratios for old-age pension in Latvia are shown in the table below.

Table LV 2. Latvian NDC PAYG pillar statistics

Indicator / Year	Average Old-age pensions	Average Gross Monthly Wages and Salaries	Gross Replacement Ratio	Average Net Monthly Wages and Salaries	Net Replacement Ratio
2003	92	274	34%	196	47%
2004	101	300	34%	214	47%
2005	115	350	33%	250	46%
2006	137	430	32%	308	44%
2007	158	566	28%	407	39%
2008	200	682	29%	498	40%
2009	233	655	36%	486	48%
2010	250	633	39%	450	56%
2011	254	660	38%	470	54%
2012	257	685	38%	488	53%
2013	259	716	36%	516	50%
2014	266	765	35%	560	48%
2015	273	818	33%	603	45%
2016	280	859	33%	631	44%
2017	289	926	31%	676	43%

2018	314	1004	31%	742	42%
2019	340	1076	32%	793	43%
2020	367	1143	32%	841	44%
2021	432	1435	30%	1050	41%

Source: Own calculations based on Central Statistical Bureau of Latvia (http://data.csb.gov.lv), 2022
https://stat.gov.lv/lv/statistikas-temas/darbs/alga/tabulas/dsv030c-stradajoso-menesa-videja-darba-samaksa-pa-darbibas

Average monthly earnings of employees by type of activity (euro) (gross & net)
https://stat.gov.lv/lv/statistikas-temas/darbs/alga/tabulas/dsv040-stradajoso-menesa-videja-darba-samaksa-regionos-eiro

Average monthly earnings of employees in regions (euro)

A **Minimum old-age pension** mechanism is effective in Latvia. The minimum amount of the monthly old-age pension cannot be less than the state social security benefits (€80 monthly since January 2020) with an applied coefficient tied to the years of service (insurance period):

1. persons with insurance period up to 20 years - 1.1;
2. persons with insurance period from 21 to 30 years - 1.3;
3. persons with insurance period from 31 to 40 years - 1.5;
4. persons with insurance period starting from 41 years - 1.7.

The minimum old-age pension is calculated using the basic state social security benefit multiplied by the respective coefficient that is tied to the number of service (working) years (see table below).

Table LV 3: The amount of the minimum old-age pension according to the year of each insurance period in Latvia

Years of service (Insurance period)	Minimum old-age pension since January 2021 (in €)
Insurance length 15 years	149.60
Insurance length 30 years	190.40
Insurance length 40 years	217.60
Insurance length 50 years	244.80

Source: Own elaboration based on Ministry of Welfare data, 2022 (www.lm.gov.lv/lv/vecuma-pensija)

Starting from 1 January 2021, the amount of the minimum old-age pension shall be determined by applying a coefficient of 1.1 to the minimum old-age pension calculation base of 136 euros (for persons with disabilities from childhood - 163 euros) and for each subsequent year exceeding the established old-age pension. the required length of insurance (currently at least 15 years), increasing the amount by two percent of the minimum old-age pension calculation base.

The amount of the minimum old-age pension is determined on the day of granting (recalculation) the pension, as well as by reviewing the calculation basis of the minimum old-age pension.

Pillar II –State Funded Pensions

Pillar II of the pension scheme was launched on 1 July 2001. As of that date, a portion of every individual's social contribution is invested into the financial market and accumulated on their Pillar II personal account. Everyone who is socially insured is entitled to be a participant of the Pillar II scheme as long as the person was not older than 50 years of age on 1 July 2001. Participation in the 2nd tier is compulsory for those who had not reached the age of 30 on 1 July 2001 (born after 1 July 1971).

Gradually all employees will participate in Pillar II. Persons who were between the ages of 30 and 49 (born between 2 July 1951 and 1 July 1971) at the time when the scheme was launched could and still can join the system voluntarily. Administration of Pillar II contributions are made by the State Social Insurance Agency, which collects and redirects 20% old-age pension insurance contributions between the NDC and FDC pillar pension scheme individual accounts. According to the Law on State Funded Pension, the State Social Insurance Agency also performs additional tasks connected to the Pillar II administration.

The Ministry of Welfare, according to the Law on State Funded Pension, performs the supervision of the funded pension scheme and has the right to request and receive an annual account from the State Social Insurance Agency regarding the operation of the funded pension scheme.

Total redistribution of old-age pension contributions between Pillar I and Pillar II of the pension scheme are shown in the table below.

Table LV 4. Redistribution of the old-age pension contributions between pillar I and pillar II

Years	Pillar I (NDC)	Pillar II (FDC)
2001-2006	18%	2%
2007	16%	4%
2008	12%	8%
2009-2012	18%	2%
2013-2014	16%	4%
2015	15%	5%
2016 and ongoing	14%	6%

Source: https://www.manapensija.lv/en/pension-system/qa/, 2022
Source: https://www.vsaa.gov.lv/en/services/for-employees/2-nd-tier-mandatory-state-funded-pension-scheme/, 2022

Contributions into Pillar II were raised continuously with the adopted reforms. However, during the financial crisis, the contributions into Pillar II were reduced to 2% with gradual growth since 2012. It should be mentioned that the largest part of contributions (8% of salary) had flown into the pension fund in 2008, right at the top and before the crash of financial markets. This has significantly influenced the performance of funds, which is analysed in the sub-section dedicated to Pension Returns. Investing is performed by a third party: licensed fund managers.

Upon retiring, Pillar II participants will be able to make a choice: either add the accumulated pension capital to Pillar I and receive both pensions together or to entrust the capital accumulated in Pillar II to the insurance company of their choice and buy a single annuity.

Several changes have been made in the management of accumulated savings on personal accounts of Pillar II participants. Until 1 January 2003, there was only one public fund manager for the funds of Pillar II, the State Treasury. They invested the funds exclusively into the Latvian state bonds and into the deposits of the largest and safest Latvian banks. As of 1 January 2003, the private fund managers were involved, but today participants of Pillar II are in the position to choose their fund manager themselves. The private fund managers offer to invest the pension capital and into corporate bonds, shares and foreign securities. Participants of the system are entitled to change their fund manager once a year and, in addition, investment plans within the frame of one fund manager can be changed twice a year. Operation of private fund managers is supervised by the Finance and Capital Market Commission.

In 2019, the Parliament has adopted changes in Pillar II, where since January 2020, a saver could define any person, to which the accumulated capital on personal account can be inherited directly.

Pillar III – Voluntary private pensions

Voluntary private pension scheme, or pension Pillar III, was launched in July 1998, and it gives the opportunity to create additional voluntary savings in addition to the state organized Pillar I and II. Contributions that individuals and/or the employer regularly pay into the pension fund are invested in different securities, depending on the chosen investment strategy.

The Law on Private Pension Funds foresees that Latvian commercial banks, insurance companies and legal persons have the right to establish a private fund. Assets are invested by private pension funds with the aim not only to maintain the value of savings, but to increase it over a long-time period. There are generally two types of voluntary private pension funds in Latvia:

1. open pension funds (15 operational in Latvia in 2021)
2. closed pension funds (only one operating in Latvia in 2021).

Pension scheme participants can subscribe to a pension scheme by entering directly into a contract with an open pension fund or via their employer. Pension scheme participants can participate in a pension scheme through the intermediation of their employer if the employer has entered into a collective contract with an open or closed pension fund. A collective contract with a closed pension fund may be entered into only in such cases when the relevant employer is also one of the founders (stockholders) of the same closed pension fund. Acknowledging the fact that employers might enter into collective agreement with employees and establish the pension scheme, voluntary private pension funds might be recognized as a collective pension scheme.

According to the Law on Private Pension Funds, accumulated pension capital in private pension funds can be accessed by individuals when they reach the age of 55. In order to receive the Pillar III accrued pension, an individual must submit an application to the respective pension fund. The supervisory authority for all voluntary private pension funds in Latvia is the Financial and Capital Markets Commission.

Pension Vehicles

Pillar II – State Funded Pensions

Pension funds are the only pension vehicles allowed by the Law of State Funded Pensions for state-funded pension scheme. The law states that a funded pension scheme is a state-organized set of measures for making contributions, administration of funds contributed and payments of pensions which (without increasing the total amount of contributions for old age pensions) - provides an opportunity to acquire additional pension capital by investing part of the pensions' contributions in financial instruments and other assets in accordance with the procedures specified in the Law.

Currently (as of 31 December 2021), 28 state-funded pension schemes have been operational on the Pillar II market. There were several fund closures and new openings during 2021, which signals consolidation pressure on the fund providers. New funds fucus on active management and solely on equities. There is no specific legal recognition of types of pension funds based on their investment strategy, nor any legal requirement to provide a specific investment strategy for pension funds. It is up to a pension fund manager to provide an in-demand type of pension fund in order to succeed on the market. However, every fund manager is required to develop a systematic set of provisions, according to which funds are managed. They are presented in a prospectus of the relevant pension fund and in a key investor information document (KIID, specific for UCITS funds, but with particular features) for participants of the scheme. The prospectus of a pension fund and the key information document for participants are an integral part of the contract entered into between the Agency and the manager of pension funds. Pension fund prospectus must clearly define the risk-reward profile and indicate proposed investment strategy of the respective expected portfolio structure.

Although there is no legal recognition of types of pension funds, they can be divided into three types based on their risk/return profiles:

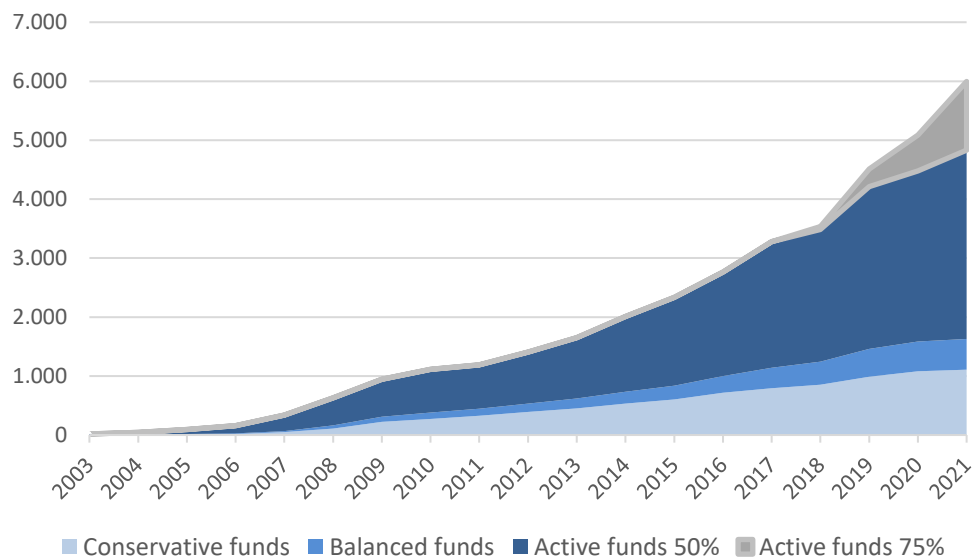
1. Conservative funds, with no equity exposure and a 100% share of bonds and money market instruments;
2. Balanced funds with bonds and money market instrument share of at least 50%; in addition, a maximum of 15% of the funds' balances can be invested in equities;
3. Active funds with an equity share (resp. investments in capital securities, alternative investment funds or such investment funds that may make investments in capital securities or other financial instruments of equivalent risk) of up to 100% (since 2021) and no limits on investments in bonds and money market instruments.

The legislation sets relatively strict quantitative investment limits for pension funds, trying to supplement the prudent principle.

Overall asset allocation in Latvia is fairly conservative despite the possibility of choosing a plan according to risk preference. The chart below presents the amount of Assets under Management for types of pension funds according to their investment strategy.

Contrary to many other CEE countries running mandatory pension systems, there is no requirement for pension funds to guarantee a certain minimum return. On the contrary, doing so is explicitly forbidden.

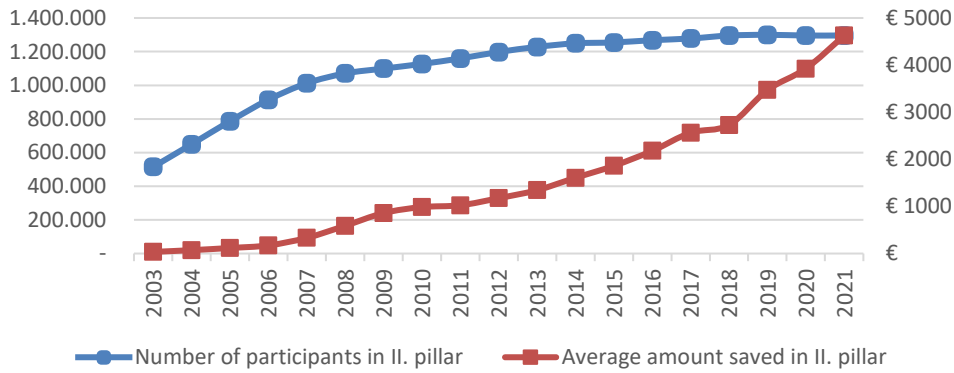
Graph LV I. Assets under Management in State Funded Pension Scheme pension vehicles (in mln. €)



Source: Own calculations (http://www.manapensija.lv/en/2nd-pensionpillar/statistics/data), 2022

As the State Funded Pension scheme is mandatory for all economically active individuals in Latvia, the number of savers (as well as the average amount of accumulated assets on individual accounts) is rising. The chart below indicates that the Pillar II market is starting to be saturated in terms of the number of participants.

Graph LV II. Number of participants and average size of individual accounts in Latvian II pillar



Source: Own calculations (http://www.manapensija.lv/en/2nd-pension-pillar/statistics/data), 2022

The number of Pillar II participants has almost encompassed the entire working population. Further growth of Pillar II savings will therefore be driven by the amount of contributions and pension funds´ performance.

There are 28 pension funds operating by 9 providers (table below).

Table LV 5. List of State Funded Pension Funds

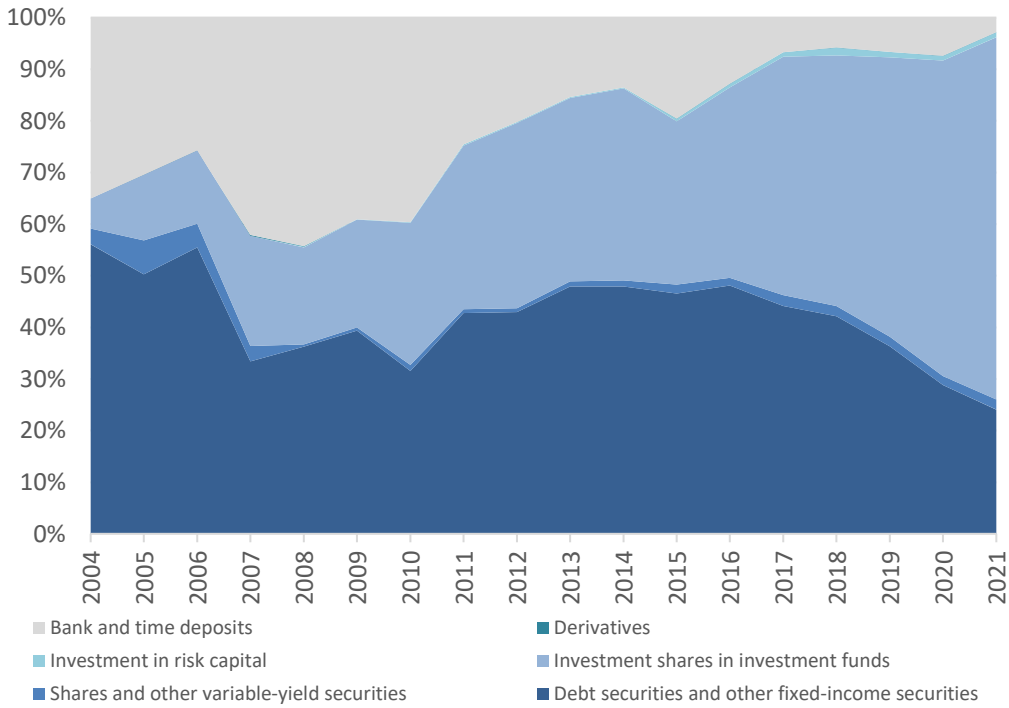
Pension Fund Name	Investment style of the pension plan	Inception day
CBL Aktīvais ieguldījumu plāns	Active 50	7.1.2003
CBL Universālais ieguldījumu plāns	Conservative	7.1.2003
Luminor Sabalansētais ieguldījumu plāns	Balance	21.2.2005
Ieguldījumu plāns „INVL Ekstra 47+”	Active 50	8.8.2006
Ieguldījumu plāns „INVL Komforts 53+”	Balance	8.8.2006
Ieguldījumu plāns „INVL Konservatīvais 58+”	Conservative	7.1.2003
Luminor aktīvais ieguldījumu plāns	Active 50	2.2.2009
Luminor konservatīvais ieguldījumu plāns	Conservative	2.2.2009
SEB aktīvais plāns	Active 50	7.1.2003
SEB konservatīvais plāns	Conservative	26.5.2003
SEB sabalansētais plāns	Balance	7.1.2003
Swedbank pensiju ieguldījumu plāns "Dinamika"	Active 50	7.1.2003
Swedbank pensiju ieguldījumu plāns "Stabilitāte"	Conservative	7.1.2003
Ieguldījumu plāns "INDEXO Izaugsme 47-57"	Active 50	21.6.2017
ABLV ACTIVE INVESTMENT PLAN	Active 50	2.8.2017
CBL dzīves cikla plāns Millennials	Active 75	24.4.2018

Ieguldījumu plāns "INDEXO Jauda 16-50"	Active 100	18.1.2018
Ieguldījumu plāns "INVL MAKSIMĀLAIS 16+"	Active 100	5.11.2018
Luminor Progresīvais ieguldījumu plāns	Active 75	6.4.2018
SEB dinamiskais plāns	Active 100	5.3.2018
SEB indeksu plāns	Active 100	5.3.2018
Swedbank ieguldījumu plāns 1990+	Active 100	9.2.2018
Ieguldījumu plāns "INDEXO Konservatīvais 55+"	Conservative	4.4.2018
Swedbank ieguldījumu plāns 1970+	Active 100	8.1.2019
Swedbank ieguldījumu plāns 1980+	Active 100	8.1.2019
CBL Ilgtspējīgu iespēju ieguldījumu plāns	Active 100	13.5.2019
Luminor indeksu ieguldījumu plāns Ilgtspējīgā nākotne	Active 100	3.6.2021
Swedbank ieguldījumu plāns Dinamika Indekss	Active 100	5.8.2021

Source: http://www.manapensija.lv/en/2nd-pension-pillar/statistics/, 2022

The portfolio structure of Pillar II pension funds (figure below) shows that debt and other fixed income securities as well as investment funds (UCITS funds) remain the dominant investments. There is only limited direct investment into equities.

Graph LV III. Pillar II pension funds´ portfolio structure



Source: Own elaboration based on Financial and Capital Market Commission data, 2022 (available at: https://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/).

Pillar III – Voluntary private pensions

There are two types of private pension funds in the Latvian voluntary private pension pillar:

1. closed, for fund founders' (corporate) staff;
2. open, of which any individual may become a participant, either directly or through an employer.

This distinction between private pension funds is rather significant, as closed private pension funds (only one operating in Latvia in 2021) could be recognized as a typical occupational pension fund. However, open private pension funds are more personal ones.

The law on Private Pension Funds provides a wide range of possibilities to organize and manage private pension funds. The law prescribes the accumulation of pension benefits (both in the specified contribution scheme and in the specified pay-out scheme), the types of private pension funds, the basis for activities thereof, the types of pension schemes, the rights and duties of pension scheme participants, the management of funds, the competence of holders of funds, and state supervision of such activities.

Pension vehicles (pension funds) can be created only by limited types of entities in Latvia, namely:

1. employers entering into a collective agreement with a pension fund, technically become founders of a closed pension fund;
2. for an open pension fund, two types of institutions can establish a fund:
    1) bank (licensed credit institution);
    2) life insurance company.

These founders usually hire a management company, who creates a different pension plan managed under one pension fund and manages the investment activities. Pension scheme assets can be managed only by the following commercial companies:

- a credit institution, which is entitled to provide investment services and non-core investment services in Latvia;
- an insurance company, which is entitled to engage in life insurance in Latvia;
- an investment brokerage company, which is entitled to provide investment services in Latvia;
- an investment management company, which is entitled to provide management services in Latvia.

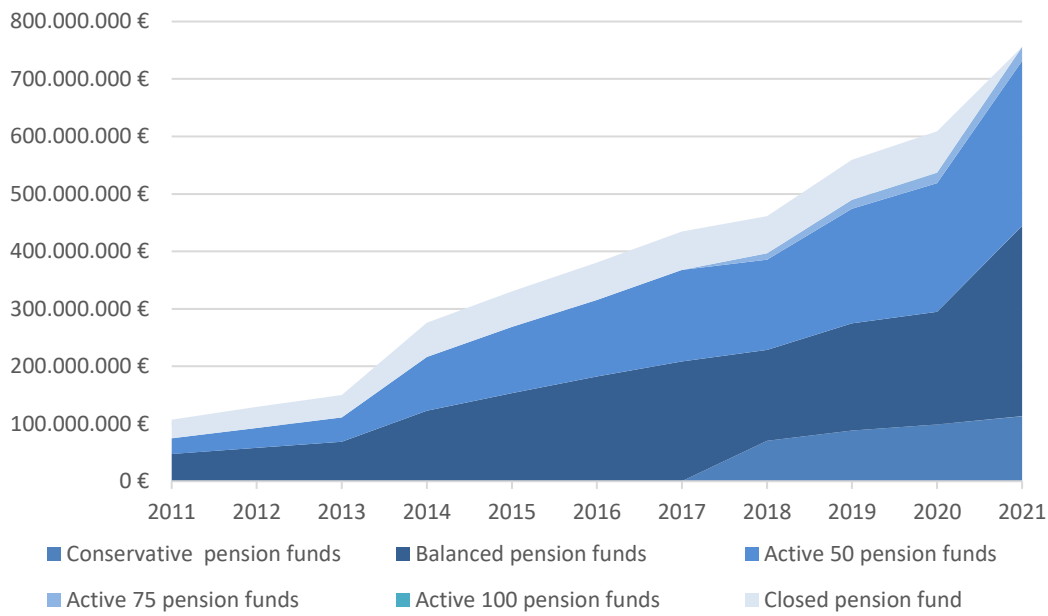
The level of transparency in providing publicly available data for private pension funds before the year 2011 is rather low. Therefore, the analysis of the market and main pension vehicles has been performed with publicly available data starting from 31 December 2011. Currently (as of 31 December 2021), 15 open private pension funds and one closed private pension fund exist on the market.

Table LV 6. List of Pillar III Supplementary pension funds		
Pension Fund Name	Investment style of the pension plan	Inception day
Swedbank pensiju plāns Stabilitāte+25	Conservative opened pension funds	14.7.2003
CBL Sabalansētais	Balanced opened pension funds	30.9.1999
Luminor sabalansētais pensiju plāns	Balanced opened pension funds	18.10.2011
"SEB - Sabalansētais" pensiju plāns	Balanced opened pension funds	31.7.2000
CBL Aktīvais	Active 50 opened pension funds	21.3.2000
"SEB Aktīvais" pensiju plāns	Active 50 opened pension funds	15.9.2004
Swedbank pensiju plāns Dinamika+60	Active 75 opened pension funds	1.8.2003
Swedbank pensiju plāns Dinamika+100	Active 100 opened pension funds	27.12.2006
CBL Aktīvais USD	Active 50 opened pension funds	1.4.2006
Swedbank pensiju plāns Dinamika+(USD)	Active 75 opened pension funds	14.7.2003
Luminor progresīvais pensiju plāns	Active 75 opened pension funds	18.10.2011
INVL MAKSIMĀLAIS 16+	Active 100 opened pension funds	8.10.2015
"Pirmais Pensiju Plāns"	Closed pension fund	1.12.1999
SEB Indeksu pensiju plāns	Active 100 opened pension funds	22.2.2021
Luminor Indeksu pensiju plāns	Active 100 opened pension funds	25.5.2021
Swedbank Dinamika Indekss	Active 100 opened pension funds	7.9.2021

Source: Own elaboration based on www.manapensija.lv, 2022

The structure of the pension vehicles according to the type of the fund and investment strategy offered is presented in the figure below.

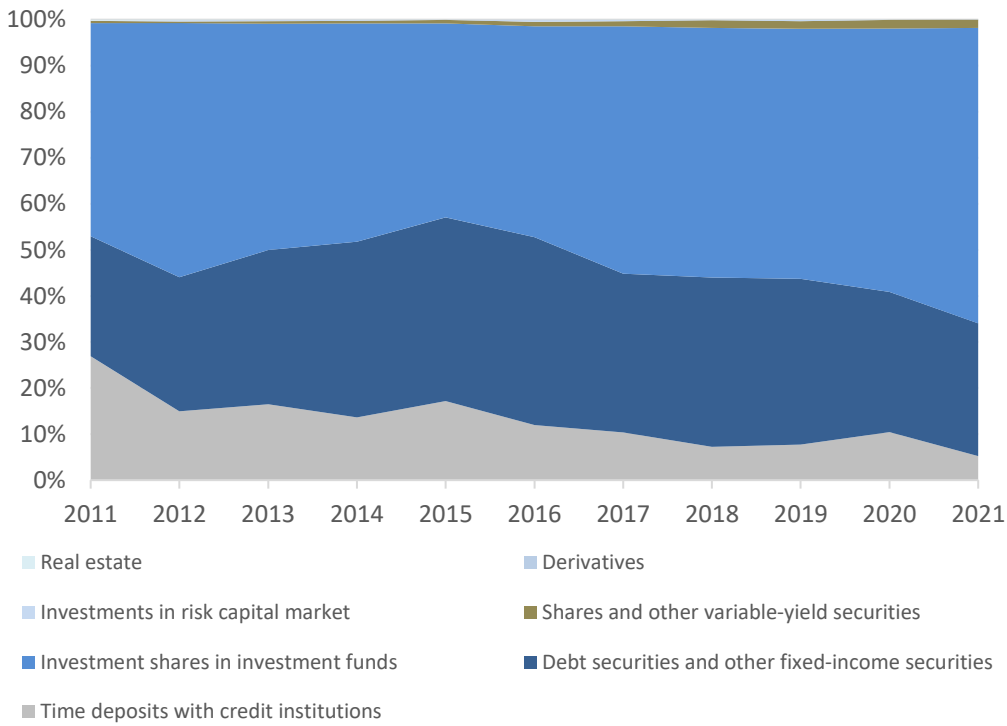
Graph LV IV. Type of pillar III pension funds based on assets under management



Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2022

The portfolio structure of Pillar III pension funds is presented in the figure below. Generally, Pillar III pension funds invest predominantly into debt securities, bank deposits and UCITS funds. Direct investment into equities, real estate or other long-term riskier investment constitute for less than 1% of total portfolio.

Graph LV VI. Pillar III pension funds´ portfolio structure



Source: Own elaboration based on Financial and Capital Market Commission data, 2022 (available at: https://www.fktk.lv/en/statistics/pension-funds/quarterly-reports/).

Charges

Pillar II – State Funded Pensions

Latvia has adopted the cap on fees within Pillar II, which forces that the maximum amount of payment for the management of investment plan (including the fixed and variable parts of payment, calculating for the last 12-month period) to not exceed:

1) 1.50% of the average value of investment plan assets to the investment plans, where the investment plan prospectuses do not provide for any investments in the shares of commercial companies, other capital securities and other equivalent securities;

2) 2.00% of the average value of investment plan assets of all other investment plans.

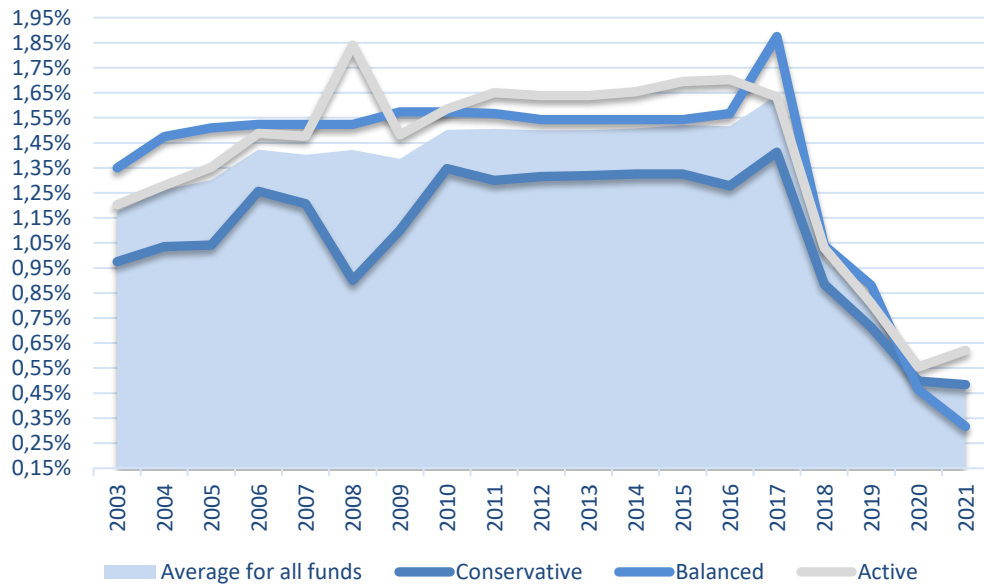
Fees that can be charged to pension funds by fund managers are recognized by law as having a fixed and variable part. The law stipulates that payment for the management of an investment plan shall include:

a) fixed component of payment, which is 1% of the average value of investment plan assets per year and includes payments to the manager of the funds, custodian, as well as payments to third persons, which are performed from the funds of the investment plans (except expenses which have arisen upon performing transactions by selling the assets of the investment plan with repurchase);

b) variable component of payment, which is remuneration to the manager of funds of the funded pension scheme for performance of investment plan, with its amount depends on the return of the pension plan.

The year 2021 brought stabilization and diversification of fees based on the fund´s strategy. Introduction of low-cost passively managed pension funds has spurred price battle after 2018, however divergence between the fees started to emerge in 2021 with an average fee level of 0.54% p.a.

Graph LV VII. Pillar II Pension Funds' Charges



Source: Own elaboration based on the funds´ documentations, 2022

Pillar III – Voluntary private pensions

It cannot be said that such a positive trend seen in Pillar II charges is observed in Pillar III. Complex fee structure and high fees preserve in Latvian Pillar III even if slight decrease in custodian fees can be observed in Pillar III.

Voluntary private pension funds have typically lower level of transparency when it comes to fee policy. In most cases, only current fees and charges are disclosed. Historical data is almost impossible to track via publicly accessible sources. Charges of voluntary private pension funds for the last 5 years are presented in the table below. Administration cost, Fund Manager´s Commission, and Custodian bank´s commission are based on the assets under management. Funds managed by Nordea and Swedbank use mixed Administration costs, which are a combination of entry fees (fees on contributions paid) and ongoing charges (AuM based). CBL funds also use a performance fee if the fund returns outperform the benchmark (12-month RIGIBID).

Table LV 7. Voluntary Private Pension Funds´ Fees and Charges

Voluntary Private Pension Funds	Type of the Charges	Year 2021
CBL Aktīvais	Administration Cost	0.20% - 1.50%
	Fund Manager´s Commission	0,80%
	Custodian bank´s commission	0.15%
	Performance fee	10.00%
CBL Aktīvais USD	Administration Cost	0.20% - 1.50%
	Fund Manager´s Commission	0,80%
	Custodian bank´s commission	0.15%
	Performance fee	10.00%
CBL Sabalansētais	Administration Cost	0.20% - 1.50%
	Fund Manager´s commission	0.70%
	Custodian bank´s commission	0.15%
	Performance fee	10.00%
INVL KOMFORTS 53+	Administration Cost	0.99%
	Fund Manager´s commission	0.50%
	Custodian bank´s commission	0.00%
INVL Klasika	Administration Cost	0.99%
	Fund Manager´s commission	0.50%
	Custodian bank´s commission	0.00%
INVL EKSTRA 47+	Administration Cost	0.00%
	Fund Manager´s commission	0.00%
	Custodian bank´s commission	0.00%
	Fee from contributions during the first year of participation	30.00%, max €200
INVL MAKSIMĀLAIS 16+	Administration Cost	0.00%
	Fund Manager´s commission	0.00%
	Custodian bank´s commission	0.00%

	Fee from contributions during the first year of participation	30.00%, max €200
Luminor progresīvais pensiju plāns	Administration Cost	0.45% per year from average assets.
	Fund Manager´s commission	0.43%
	Custodian bank´s commission	0.07%
Luminor sabalansētais pensiju plāns	Administration Cost	0.45% per year from average assets.
	Fund Manager´s commission	0.43%
	Custodian bank´s commission	0.07%
"Pirmais Pensiju Plāns"	Administration Cost	1.50%
	Fund Manager´s commission	1.30%
	Custodian bank´s commission	0.20%
"SEB Aktīvais" pensiju plāns	Administration Cost	0.12% - 0.85%
	Fund Manager´s commission	0.35% - 0.40%
	Custodian bank´s commission	0.07%
"SEB - Sabalansētais" pensiju plāns	Administration Cost	0.12% - 0.85%
	Fund Manager´s commission	0.35%-0.40%
	Custodian bank´s commission	0.07%
Swedbank pensiju plāns Dinamika+(USD)	Administration Cost	0.26%
	Fund Manager´s commission	0.34%
	Custodian bank´s commission	0.09%
Swedbank pensiju plāns Dinamika+100	Administration Cost	0.26%
	Fund Manager´s commission	0.34%
	Custodian bank´s commission	0.09%
Swedbank pensiju plāns Dinamika+60	Administration Cost	0.26%
	Fund Manager´s commission	0.34%
	Custodian bank´s commission	0.09%
Swedbank pensiju plāns Stabilitāte+25	Administration Cost	0.26%
	Fund Manager´s commission	0.34%
	Custodian bank´s commission	0.09%
INDEXO AKCIJU PLĀNS	Administration Cost	0.21%
	Fund Manager´s commission	0.30%
	Custodian bank´s commission	0.14%
INDEXO OBLIGĀCIJU PLĀNS	Administration Cost	0.21%
	Fund Manager´s commission	0.30%
	Custodian bank´s commission	0.14%
LUMINOR INDEKSU PENSIJU PLĀNS ILGTSPĒJĪGĀ NĀKOTNE	Administration Cost	0.45%
	Fund Manager´s commission	0.25%
	Custodian bank´s commission	0.07%
SEB-INDEKSU PLĀNS	Administration Cost	0.12% - 0.85%
	Fund Manager´s commission	0.25%
	Custodian bank´s commission	0.05%
SWEDBANK PENSIJU PLĀNS DINAMIKA INDEKSS	Administration Cost	0.26%
	Fund Manager´s commission	0.22%
	Custodian bank´s commission	0.09%

Source: Own research based on http://www.manapensija.lv/en/3rd-pension-pillar/funds/ data and supplementary pension funds´ Prospectuses and Terms, 2022

When comparing the charges applied to the voluntary private pension funds and to state-funded pension funds, the level of charges in Pillar III pension funds are significantly higher and the structure of fees is more complex. This limits the overall understanding of the impact of fees on the pension savings for an average saver. The total cost ratio of Pillar III funds starts at 0.8% p.a. and can reach as high as 3% p.a. on managed assets.

There are neither limitations nor caps on fees in the law. The legislative provisions only indicate that at least the following should be disclosed: general information on maximum fees and charges applied, procedures for covering the expenses of the scheme, information regarding maximum payments to the management of the pension scheme and to the manager of funds, and the amount of remuneration to be paid out to the holder of funds, as well as the procedures by which pension scheme participants shall be informed regarding such pay-outs of the scheme.

Taxation

Pillar II – State Funded Pensions

Latvia is applying an "EET" taxation regime for Pillar II with some specifications (deductions) to the pay-out regime taxation, where generally the "T" regime is applied for the pay-out phase in retirement.

Taxation of contributions

Contributions paid to the state funded pension scheme are made via social insurance contributions redirection. As such, these contributions are personal income tax deductible items, so the contributions are not subject to additional personal taxation.

Taxation of the Fund

The Corporate Income tax rate in Latvia is 15%. However, income or profits of the fund (investment fund as a legal entity) are not subject to Latvian corporate income tax at the fund level. Latvia applies a general principle for all investment and savings-based schemes to levy the income taxation on the final beneficiaries and not on the investment vehicles.

Taxation of pension benefits

Latvia has one of the lowest levels of income redistribution among EU countries. Personal income tax rate is 23% and the pension benefits paid from the NDC PAYG scheme (Pillar I) and state-funded pension scheme (Pillar II) are considered taxable income. As such, pension benefits are subject to personal income tax. Latvia applies a non-taxable minimum, which is recalculated and announced every year by Cabinet regulation.

Pillar III – Voluntary private pensions

Latvian tax legislation stipulates the use of the "EET" regime (like Pillar II) for voluntary private pension schemes as well, where the contribution by individuals is treated in a slightly different way. Payments made to private pension funds established in accordance with the Republic of Latvia Law on Private Pension Funds or to pension funds registered in another Member State of the European Union or the European Economic Area State shall be deducted from the amount of annual taxable income, provided that such payments do not exceed 10 % of the person's annual taxable income. However, there is a limit on total income tax base deductible payments. The total of donations and gifts, payments into private pension funds, insurance premium payments and purchase costs of investment certificates of investment funds may not exceed 20% of the amount of the payer's taxable income.

Pension Returns

Pillar II – State Funded Pensions

Pension funds´ performance is closely tied to the portfolio structure defined by an investment strategy (as well as investment restrictions and regulations) applied by a fund manager. Investment regulations differ, depending on whether pension plans are managed by the State Treasury or by private companies. The State Treasury is only allowed to invest in Latvian government securities, bank deposits, mortgage bonds and deposit certificates. Moreover, it can only invest in financial instruments denominated in the national currency. In contrast, private managers are allowed to invest in a much broader range of financial instruments. The main investment limits include the following:

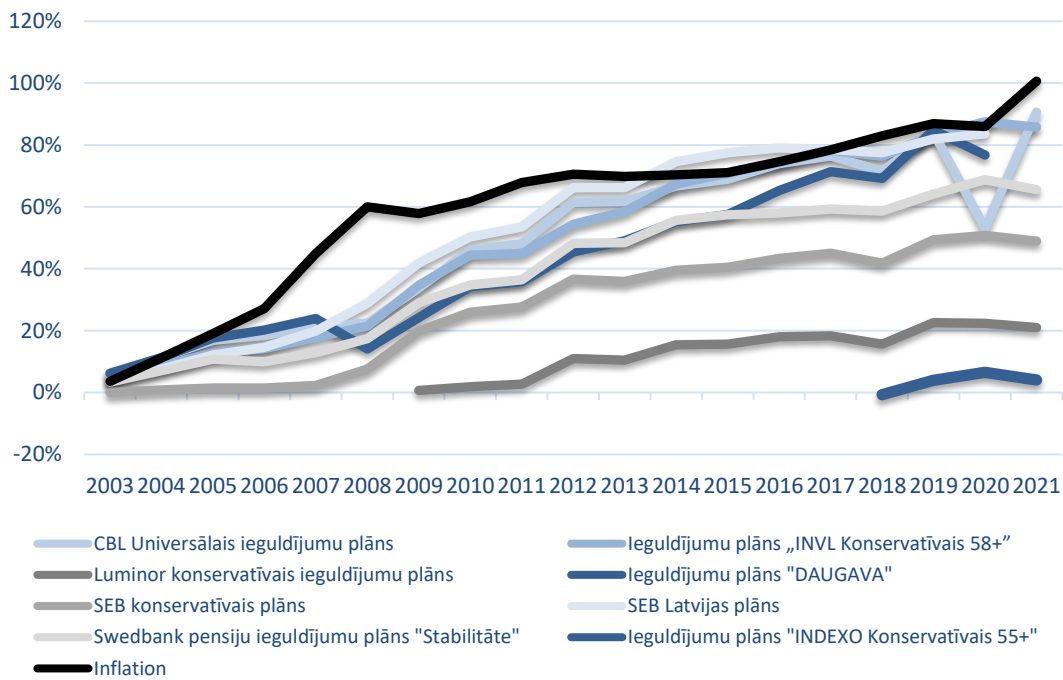
- 35% for securities guaranteed by a state or international financial institution;
- 5% for securities issued or guaranteed by a local government;
- 10% for securities of a single issuer, except government securities; for deposits at one credit institution (investments in debt and capital securities of the same credit institution and derivative financial instruments may not exceed 15%); and for securities issued by one commercial company (or group of commercial companies);
- 20% for investments in non-listed securities;
- 5% for investments in a single fund (10% of the net assets of the investment fund).

There is no maximum limit for international investments so long as pension funds invest in securities listed on stock exchanges in the Baltics, other EU member states, or the European Free Trade Area. However, the law stipulates a 70% currency matching rule. There is also a 10% limit for each non-matching currency. Investments in real estate, loans, and self-investment are not permitted.

All data presented on the pension funds' returns are presented in net values, i.e., after all fees charged to the fund portfolio. The graphs contain also inflation on an annual as well as cumulative basis.

Conservative mandatory pension funds' performance on a cumulative basis compared to the inflation is presented below.

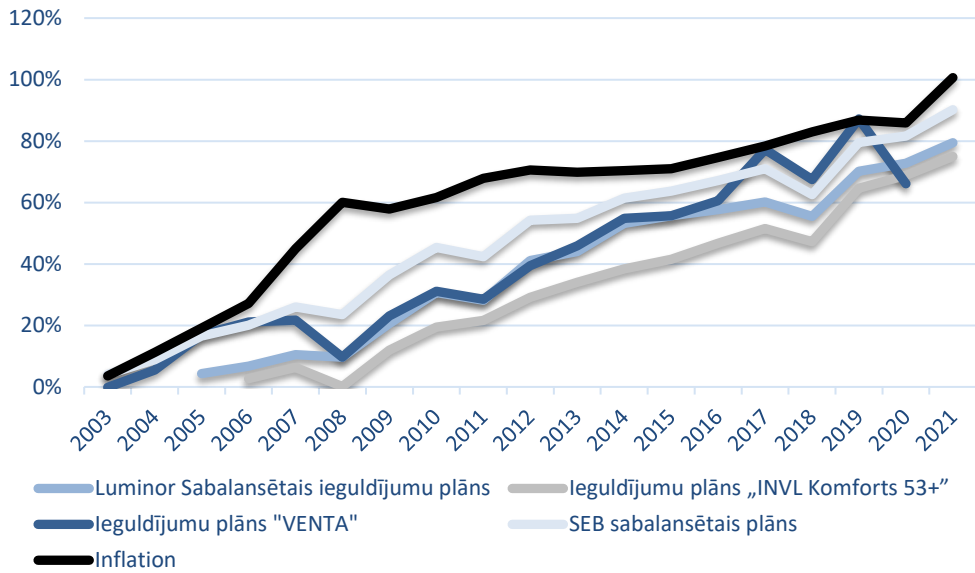
Graph LV VIII. Conservative Pension Funds´ Cumulative Performance



Source: Own calculation based on http://www.manapensija.lv/en/2nd-pension-pillar/statistics/ and supplementary pension funds´ Prospectuses and Terms, 2022

Balanced mandatory pension funds' performance on a cumulative basis compared to the inflation is presented below.

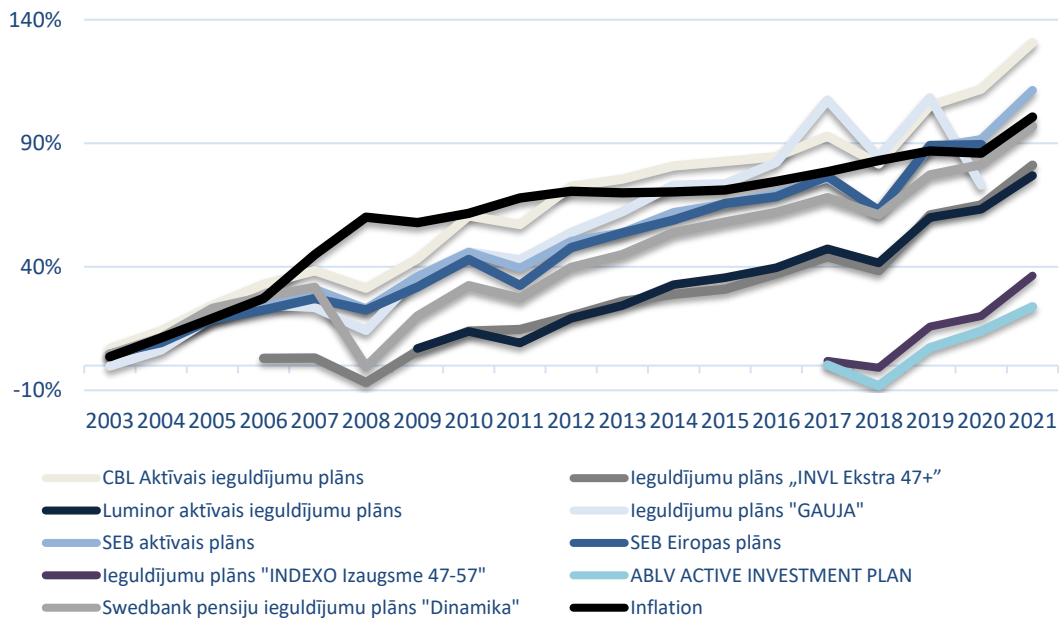
Graph LV IX. Balanced Pension Funds´ Cumulative Performance



Source: Own calculation based on http://www.manapensija.lv/en/2nd-pension-pillar/statistics/ and supplementary pension funds´ Prospectuses and Terms, 2022

Active pension funds' performance on a cumulative basis compared to the inflation is presented in the graphs below.

Graph LV X. Active 50 Pension Funds' Cumulative Performance

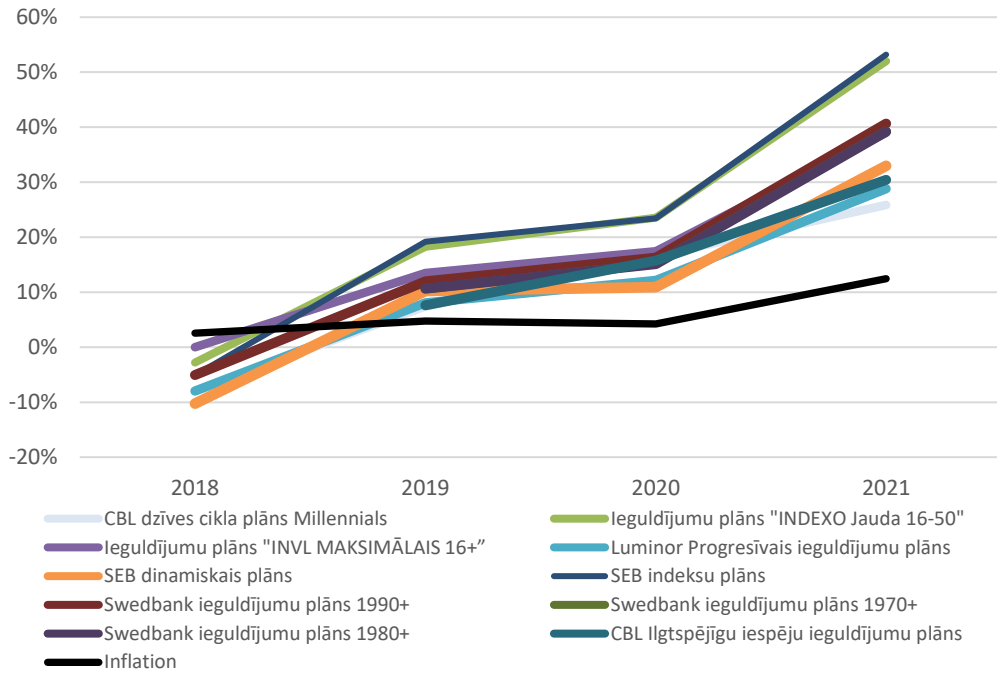


Source: Own calculation based on http://www.manapensija.lv/en/2nd-pension-pillar/statistics/ and supplementary pension funds´ Prospectuses and Terms, 2022

It should be noted that only few of the actively managed pensions were able to "beat" the inflation, and thus able to deliver the positive real returns to the savers.

In 2018, the Active 75 pension funds started operating on the market that invests major proportion of assets into the equities. Their cumulative performance is presented below.

Graph LV XI. Active 75 Pension Funds' Cumulative Performance



Source: Own calculation based on http://www.manapensija.lv/en/2nd-pension-pillar/statistics/ and supplementary pension funds' Prospectuses and Terms, 2022

It should be noted that during the year 2021 several fully equity funds emerged (Luminor indeksu ieguldījumu plāns Ilgtspējīgā nākotne (Active 100) has started its operation since June 2021, Swedbank ieguldījumu plāns Dinamika Indekss (Active 100) in August 2021). Some of existing Active 75 increased their equity share are assigned as Active 100 showing rising risk appetite of savers.

Nominal as well as real returns of state funded pension funds in Latvia weighted by AuM are presented in a summary table below.

Table LV 8. Nominal and Real Returns of State Funded Pension Funds in Latvia					
2003	Nominal return after charges, before inflation and taxes	4.86%	4.00%	Real return after charges and inflation and before taxes	1.28%
2004		5.69%			-1.65%
2005		8.93%			1.80%
2006		3.91%			-2.83%
2007		3.51%			-10.52%
2008		-10.04%			-20.44%
2009		13.51%			14.88%
2010		8.45%			6.05%
2011		-2.10%			-5.98%
2012		9.06%			7.47%
2013		2.32%			2.72%
2014		5.25%			4.97%
2015		1.93%			1.53%
2016		2.02%			-0.08%
2017		3.23%			1.07%
2018		-4.09%			-6.64%
2019		10.79%			8.65%
2020		1.44%			1.94%
2021		10.11%			2.21%

0.05%

Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/2nd-pension-pillar/statistics/), 2022

Another view on the performance of the Pillar II pension funds allowing the comparison across EU pension schemes is using the holding period approach.

Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	10.11%	2.21%
3-years	7.36%	4.22%
5-years	4.14%	1.33%
7-year	3.07%	1.15%
10-years	4.11%	2.30%
Since inception	4.00%	0.05%

Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/2nd-pension-pillar/statistics/), 2022

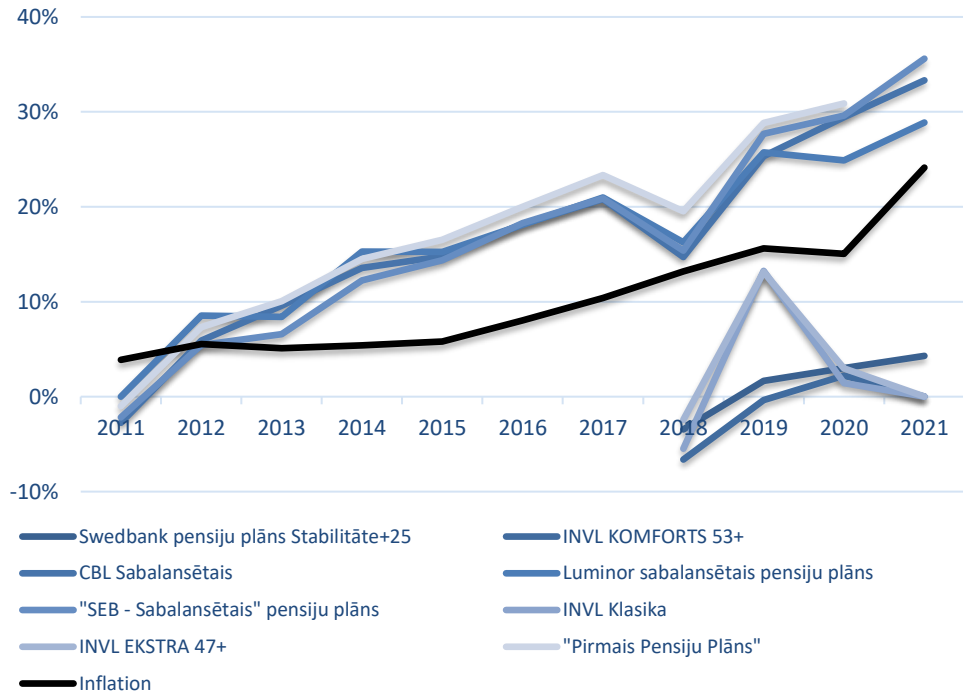
Pillar III – Voluntary private pensions

The analysis of voluntary pension funds' performance uses annual approaches as well as cumulative approaches, peer comparison and inflation.

Investment rules for private pension funds are similar to those for state-funded schemes but are more flexible. For example, investment in real estate is permitted (with a limit of 15%), the currency matching rule is only 30%, and limits for some asset classes are higher. Considering the structure of voluntary pension funds' portfolios in Latvia, a larger proportion is invested in structured financial products (mainly equity based UCITs funds) and direct investment in equities and bonds is decreasing.

Due to the lack of publicly available data before 2011, the performance of voluntary pension funds on an annual and cumulative basis starting from the year 2011 is presented in the charts below.

Graph LV XII. Balanced and conservative voluntary open and closed pension funds´ cumulative performance

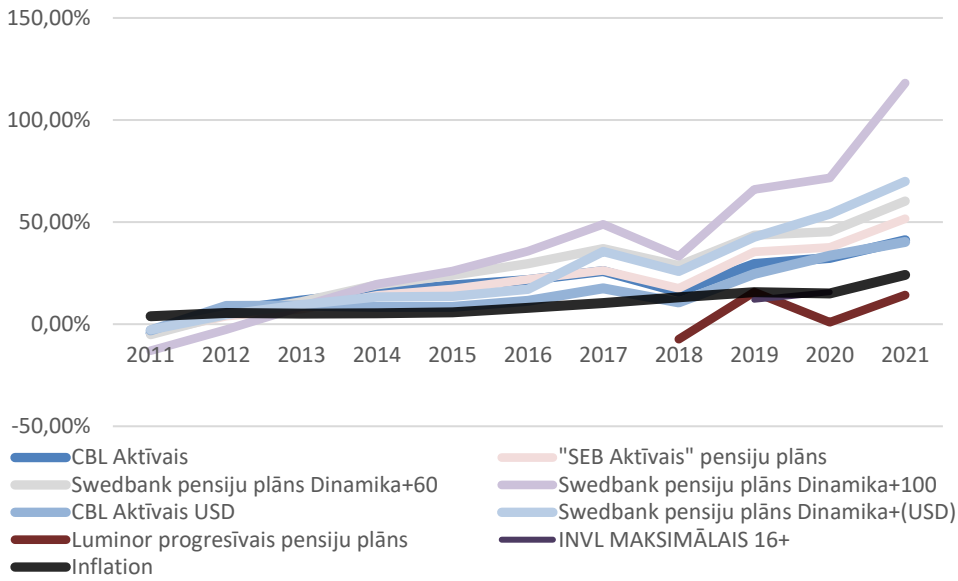


Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2022

Contrary to balanced Pillar II funds, balanced Pillar III funds all provide positive real returns (outperform inflation). Balanced Pillar III funds have a more aggressive portfolio structure. However, short historical data does not allow for a comprehensive conclusion to be drawn. There is a backward pressure of charges which might reverse the trend in future.

The performance of Latvian active voluntary private pension funds differs significantly, and the dispersion of annual returns and cumulative returns is higher. Performance of analyzed voluntary private pension funds on a cumulative basis is presented on the chart below.

Graph LV XIII. Active 50, 75 & Active 100 voluntary pension funds´ cumulative performance



Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2022

Pillar III market experienced introduction of 3 new equity funds - Active 100 (SEB Indeksu pensiju plans (22.2.2021), Luminor Indeksu pensiju plans (25.5.2021) and Swedbank Dinamika Indekss (7.9.2021)) in 2021.

Nominal as well as real returns of voluntary pension funds in Latvia weighted by AuM are presented in a summary table below.

Table LV 9. Nominal and Real Returns of Voluntary pension funds in Latvia					
2011	Nominal return after charges, before inflation and taxes	-2.70%	2.90%	Real return after charges and inflation and before taxes	-6.58%	1.63%
2012		8.77%			7.18%	
2013		3.08%			3.48%	
2014		5.56%			5.29%	
2015		2.28%			1.87%	
2016		3.35%			1.24%	
2017		3.62%			1.46%	
2018		-5.12%			-7.67%	
2019		10.80%			8.66%	
2020		1.64%			2.14%	
2021		6.89%			-1.01%	

Source: Own calculation based on Manapensija data (http://www.manapensija.lv/en/3rd-pension-pillar/history-and-statistics/), 2022

Additionally, we provide data on Pillar III (Voluntary) pension funds´ performance according to various holding periods.

Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	6.89%	-1.01%
3-years	6.38%	3.18%
5-years	3.43%	0.58%
7-year	3.25%	0.59%
10-years	4.00%	2.17%
Since inception	3.37%	1.34%

Source: Own calculation based on Manapensija data, 2022

Conclusions

Latvia has managed to build a sustainable pension system over the last decade with impressive growth in Pillar II funds. Acceptance of voluntary pension savings in Pillar III is still weak, but this trend has changed after the financial crisis. Pillar III pension funds have enjoyed high inflow of new contributions despite rather weak performance and high fees.

Latvian Pillar II experienced drop in charges starting from 2019 and diversification of fees as well as funds´ investment strategies in 2021 driven by a competition from low-cost passively managed funds and ability to charge the fees based on the riskiness of the strategy. Pillar III funds managers enjoy smaller decrease in charges, but Pillar III charges remain relatively high. Delivered real returns on the other hand are negative. Most of the Pillar II pension funds were not able to beat the inflation. One of the reasons is also the relatively conservative risk/return profile of most funds. Pillar III vehicles in Latvia suffer not only from significantly high fees charged by fund managers, but also from low transparency.

Pension fund managers of both pillars have started to prefer packaged investment products (investment funds) and limit their engagement in direct investments. Thus, the question of potential future returns (when using financial intermediaries multiplied by high fee policy) in both schemes should be raised.

Policy Recommendations

Latvia has improved significantly its mandatory part of funded pension system. Together with its NDC scheme for pay-as-you-go pillar, mandatory funded part as well as NDC part form a well-designed pension system that motivates individuals to contribute as there is a clear connection between paid contributions and expected pension benefits. However, voluntary part of the pension system still suffers from very complicated fee structure, high fees and low transparency.

These limits, despite a generous fiscal stimulus, larger participation in voluntary pension scheme. Regulators should seek for modern fee policies that would on one hand decrease the fee structure and on the other hand introduce success fee tied to the market benchmark. Applying high-water mark principle could limit the risk appetite of asset managers as they will start to prefer low-risk investments where constant fee revenue could be expected. If the benchmarking principle is applied, where the asset manager is rewarded by higher fee when the market benchmark has been outperformed and penalized by lower fees if the fund performance is lower than the market benchmark, savers could benefit more and start trusting the voluntary pension providers on a larger scale.

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- Law on Private Pension Funds
- Law on State Social Insurance

Pension Savings: The Real Return

2022 Edition

Country Case: Lithuania

Santrauka

Lietuva priėmė tipišką Pasaulio banko daugiapakopę sistemą, kurioje PAYG pakopa (valstybinė pensija, I pakopa) vis dar atlieka dominuojantį vaidmenį užtikrinant senatvės pensininkų pajamas. Nuo 2019 m. II pakopos santaupų kaupimas vyksta gyvenimo ciklo pensijų fonduose, kurie patys keičia investavimo riziką pagal dalyvių amžių. Nuo 2019 m. palaipsniui mažinamas valdymo mokestis už kaupimą II pakopos gyvenimo ciklo fonduose. 2019 m. jis sudarė 0,8 proc. ir 2020 m. tapo 0,65 proc. Nuo 2021 m. metinis turto valdymo mokestis dar labiau sumažintas iki 0,5 proc. Turto išsaugojimo fondui turto valdymo mokestis sudarys tik 0,2 proc.

Apskritai 2021 m. abiejų pakopų pensijų fondų veiklos rezultatai visose turto klasėse buvo gražiai teigiami, tačiau pensijų fondų, kurių rizikos ir grąžos profiliai buvo skirtingi, grąža gerokai skyrėsi.

Summary

Lithuania adopted the typical World-Bank multi-pillar system, where the PAYG pillar (state pension, Pillar I) still plays the dominant role in ensuring the income for old-age pensioners. As of 2019, accumulating savings in Pillar II takes place in life-cycle pension funds, which change investment risk themselves on the basis of participants' age. Since 2019, management fee for accumulating in Pillar II life-cycle funds is being gradually reduced. In 2019 it was 0.8 per cent and in became 0.65 per cent in 2020. From the year 2021 the annual asset management fee was further decreased to 0.5 per cent. For the asset preservation fund, the management fee will be just 0.2 per cent.

Overall, pension funds' performance in both pillars were nicely positive in 2021 across all asset classes, however there were significant differences among the pension funds´ returns with different risk-return profiles.

Introduction

Lithuania has undertaken a pension reform in 2004, which was renewed in 2013. This was the reason to establish private pension funds. Currently, the Lithuanian pension system provides three distinct sources of accumulation for retirement funds – so-called pension pillars:[209]

- **1st pillar (Pillar I)** – State social insurance funds organized as a PAYG pension scheme. State social pension is financed from social insurance contributions paid by people who are currently working.
- **2nd pension pillar (Pillar II)** – funded pension scheme mandatory for all economically active citizens under the age 40 with opt-out operated by the private pension accumulation companies offering life-cycle pension funds in form of personal savings scheme. The part of State social insurance fund is redirected from PAYG scheme (until 2019). On top of social insurance contributions, savers are obliged to co-finance the individual retirement accounts with additional contributions tied to their salary.
- **3rd pension pillar (Pillar III)** – voluntary private funded pension scheme. Accumulation can be managed by private funds or life-insurance companies.

Lithuania's statutory social insurance pension system is financed at a general rate of 39.5% (without Social insurance for accidents at work and occupational diseases insurance), while 25.3 percentage points (22.3 p.p. + 3 p.p. employee) is paid towards the Social insurance for pensions (Pillar I).

The State social insurance pension system was reformed in 1995 introducing the insurance principle, extending the requirement for contributory years, abolishing early retirement provisions and increasing the retirement age. However, Pillar II was introduced by law in 2002 and started functioning effectively in 2004 when the first contributions of participating individuals started to flow into the pension funds.

Supplementary voluntary pension provision (Pillar III) is possible through either pension insurance or special voluntary pension funds (these started operating in 2004, although the law was adopted in 1999). The voluntary pillar can take two different forms: defined-contribution (DC), if supplemental contributions are invested into pension funds or unit-linked life insurance or defined-benefit (DB) when purchasing a classic life insurance product. Contributions to the system may be made by the individual or his employer.

Basic data on the pension system set-up in Lithuania is presented in the table below.

[209] BITINAS, A. (2011). Modern pension system reforms in Lithuania: Impact of crisis and ageing. Jurisprudence, 18(3), 1055–1080.

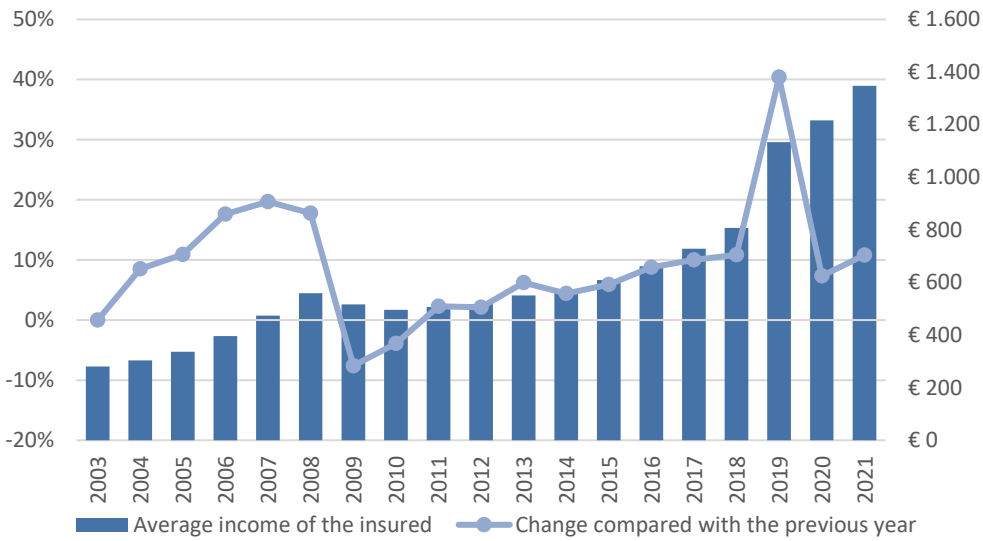
Table LT 1: Multi-pillar pension system in Lithuania		
PILLAR I	PILLAR II	PILLAR III
State Pension	Funded pension	Voluntary pension
Law on State Social Insurance Pensions	Law on the Reform of the Pension System; Law on Pension Accumulation	Law on the Supplementary Voluntary Pension Accumulation
State Social Insurance Fund institutions	Pension accumulation companies	Pension accumulation companies
Mandatory	Quasi/Mandatory	Voluntary
Publicly managed	Privately managed pension funds	Privately managed pension funds
PAYG	Funded	Funded
PS (Pointing System - Defined benefit scheme based on salary)	DC (Defined Contribution scheme)	
	Individual personal pension accounts	
Quick facts		
Number of old-age pensioners: 607,200	Administrators: 5	Administrators: 4
Average old-age pension: € 413.77	Funds: 40	Funds: 15
Average income (gross): € 1,566	AuM: € 5,909.61 mil.	AuM: € 220.27 mil.
Average replacement ratio: 26.44%	Participants: 1,387,923	Participants: 79,197
Number of insured persons: 1,455,000	Coverage ratio: 95.39%	Coverage ratio: 5.44%

Source: Own calculation based on SODRA data (http://atvira.sodra.lt/en-eur/) and Official Statistics Porta (https://osp.stat.gov.lt/en/pagrindiniai-salies-rodikliai), 2022.

The overall coverage of Pillar II, measured as a ratio between the number of participants and the economically active population (number of insured persons in Pillar I), was more than 95% in 2021, while Pillar III covered a little more than 5% of the economically active population. Thus, we can expect that future pension income stream will be influenced mostly by Pillar II pensions, while Pillar III will generate an insignificant part of individuals' income during retirement.

Regarding the income level, Lithuania´s citizens have experienced relatively high rates of income increase during the last 15 years (9.62% annually).

Graph LT1. Average income and annual changes in income of insured persons



Source: Own calculation (http://atvira.sodra.lt/en-eur/), 2022

Pillar I – State Pensions

The first pillar of the Lithuanian pension system is organized on the pay-as-you-go (PAYG) principle of redistribution, being funded on an ongoing basis, functioning on the pointing system, and taking into account the duration of the vesting period and the level of salary (insurable income) from which the contributions are paid.

The old-age pension is the main type of state social security in old age. Individuals who meet the requirements for age and for the pension social insurance record are entitled to the old-age pension, i.e.:

1) the person has reached the established old-age pension age (64 years and 4 months for men and 63 years and 8 months for women in 2021). Since 2012, the retirement age has been rising gradually by 2 months a year for men and 4 months a year for women until reaching the statutory retirement age of 65 for both men and women by 2026;
2) has the minimum record of pension social insurance established for old-age pension (has paid the pension social insurance contributions for at least 15 years).

The pension social insurance record is the period in which the obligatory pension social insurance payments are made or must be made either by the person themselves or on his/her behalf. Starting from 2018, the obligatory pension social insurance record requirement increased. In 2021, the mandatory record is at least 32 years and will be increased by 6 months every subsequent year until it reaches 35 years in 2027.

A new version of the Law on Social Insurance Pensions came into force on 1 January 2018. The pension system was reformed by changing the pension calculation structure, introducing pension points and setting the indexation rules. A social insurance pension will consist of the general (GP) and individual parts (IP). The old-age pension is equal to the sum of the general and the individual parts of pension.

The general part (GP) of the old-age pension takes into account only the duration of insured period. The general part (GP) of pension is calculated according to the formula:

$$GP = \beta \times B$$

where:

β represents the ratio of the insurance record of the person and the obligatory insurance record effective in the year of the pension entitlement (for example, if the obligatory insurance record at year of retirement is 35 years and the person´s insurance record is 40 years, then the value of β is 40/35 = 1.1429); and

B represents the basic pension (in euros).

The individual part of pension is based on pension point system. Pension points system for the determination of the individual part of pension was introduced on 1 January 2018. Each insured person will receive a certain number of pension points for the amount of pension social insurance contributions paid during the year. If the amount of pension social insurance contributions deducted from the person‘s income during the year for the individual part of pension is equal to the amount of the annual pension contribution determined on the basis of the average pay (salary) during the year, the person will acquire one pension point. A larger or a smaller amount paid will result, accordingly, in a larger or smaller number of pension points. However, the total number of pension points acquired for one year may not exceed 5. The pension points acquired will be summed up and multiplied by the pension point value. The individual part of pension is calculated according to the formula:

$$IP = V \times p$$

where:

V is the number of pension points accumulated by the person during the entire working career;

p is the pension point value (in euros).

For example, if a person´s salary during the whole career (40 years) was equal to the average salary in the economy (1 point), then the person can acquire 40 x 1 point = 40 points. If the value of one pension point at moment of retirement is, for example, €10, then the individual part of old-age pension is: 40 x 10 = 400 Eur.

Old-age pensions are indexed every year. Starting from 1 January every year, the values of the basic pension, the value of pension points and the basic amount of widows'/widowers' pensions, used for the granting and determining social insurance pensions, will be indexed based on the average 7-year wage fund growth rate.

The indexing coefficient (*IC*) is calculated on the basis of the change in the wage fund during the past three years, the year for which the *IC* is being calculated, and three prospective years. The IC is applied provided that, upon its application, the pension social insurance costs in the year of indexation do not exceed social insurance revenues and the projected pension social insurance costs for the next year do not start exceeding the social insurance revenues projected. If, without indexation, the pension social insurance revenues in the year of indexation exceed the pension social insurance costs, the *IC* is calculated in such a way that the pension social insurance expenses for pension indexing would not exceed 75% of the pension social insurance contribution surplus planned for the year of indexation in case if no indexation is performed.

Indexation of pensions will not be performed if the determined *IC* is smaller than 1.01 and/or if the change in the gross domestic product at comparative prices and/or in the wage funds, expressed in percentage terms, is negative in the year for which the *IC* is being calculated and/or for next calendar year. If no indexation is performed, the values of December of previous year are applied.

In general, we can say that the Pillar I pensions will be subject to the automatic adjustment mechanism ensuring the balance of the State Social Insurance fund over the longer period.

SoDra has launched the indicative retirement calculator, where an individual can assess his projected old-age pension including the expected (projected) Pillar II savings. The calculator web site (in Lithuanian language):
http://www.sodra.lt/lt/skaiciuokles/prognozuojamos_pensijos_skaiciuokle

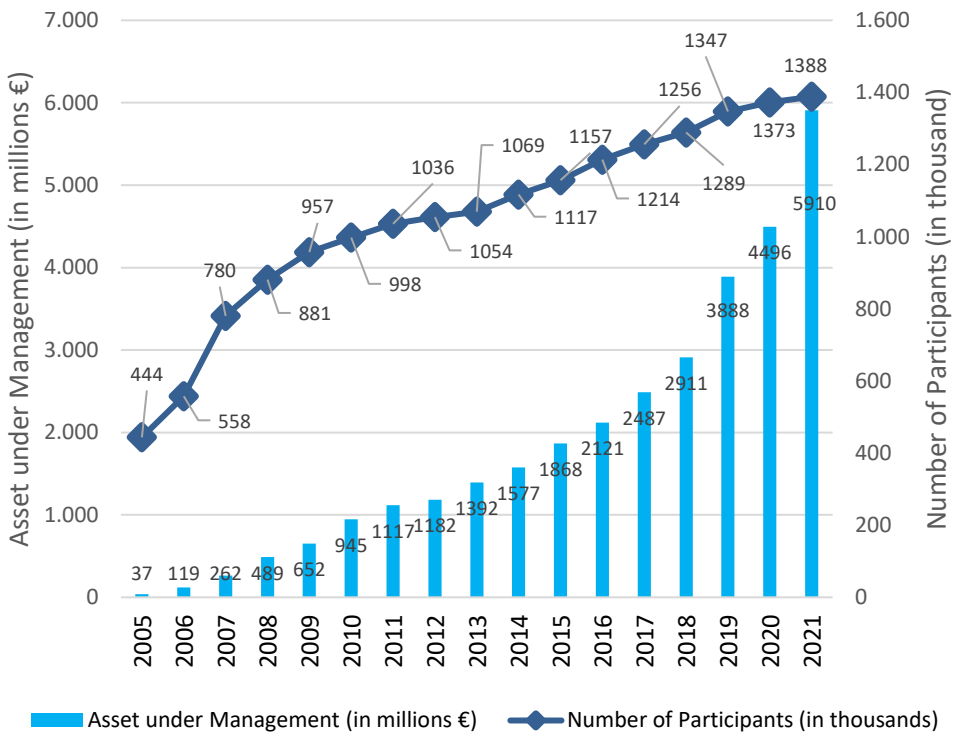
Pillar II – Funded pensions

Lithuania´s private pensions system (Pillar II) is based on the World Bank's multi-pillar model. Pillar II pension scheme can be characterized as an accumulation of a redirected part of social insurance contributions towards individual retirement accounts managed by private pension accumulation companies offering and managing private pension funds. All persons with income, from which state social insurance contributions are calculated on a mandatory basis to receive pension, and yet to reach retirement age may become fund participants. The contribution to Pillar II pension funds consists of three parts: a social-security contribution (currently paid to SoDra), salary contribution and an additional pension contribution from the State Budget.

Pillar II can be characterized as a fully funded scheme, with quasi-mandatory participation, distinct and private management of funds, based on personal accounts and on the defined contribution (DC) philosophy with no minimum return guarantees.

Since 2004, when the Pillar II was effectively launched, the number of participants as well as AuM has grown rapidly and currently, more almost 97% of working population is covered by the scheme and almost 6 billion € are managed by 5 PACs (see graph below).

Graph LT2. Pillar II – Number of participants and Assets under Management



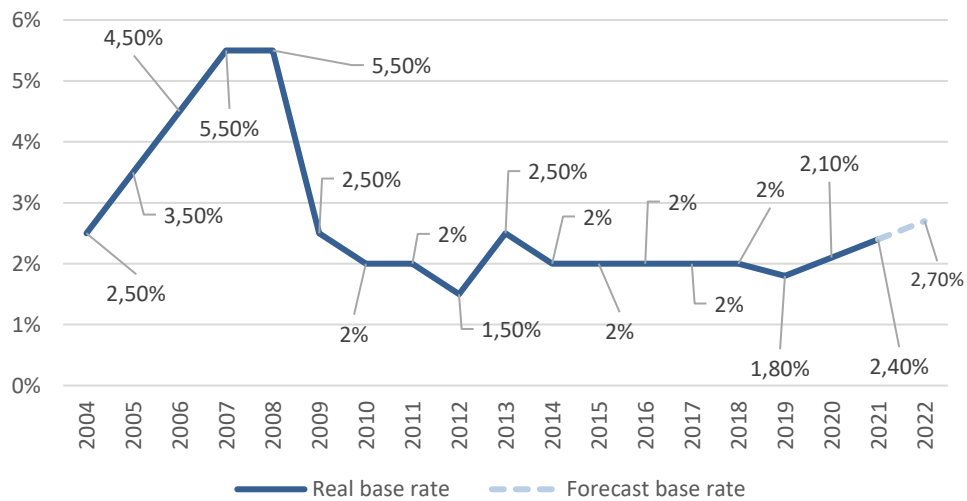
Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022.

The pension contributions towards the Pillar II are part of the participant's state social insurance contribution rate. Originally, the level of contributions ("base rate") was set at final level of 5.5% of insurable income. This level should have been reached in 2007. The base rate in 2004 was 2.5%, in 2005 - 3.5%, in 2006 it was 4.5%, and since 2007 - 5.5% of the participants' income, from which the state social insurance contributions are calculated. However, it should be noted that there have been significant changes to the Pillar II set-up because of the financial crisis and the following public finance deficits. As a result, the mechanism and level of paid contributions have changed. Since 2014, the level of contributions has remained stable, while participants have been required to match redirected contributions from the social insurance

with additional individual contributions and the state must match the individual contributions of savers from the state budget. Under the new system, the "base rate" for Pillar II contributions is 2%, and existing savers can make a further 1% in contributions, matched by a state subsidy of 1% of gross average wages. These both additional contribution rates rose to 2% a piece since 2016. Under Lithuania's current "maximum accumulation" scenario, Pillar II savings during the years of 2016 till 2019 are funded by the so-called "2+2+2" system: 2% of social security system contributions, with an additional 2% of additional payment from a salary of a saver, matched by a state contribution based on the previous year's average state wages.

Since 2019 reform, the new contribution system has been established. The formula for Pillar II pension accumulation in pension funds has changed. As of 2023, all Pillar II participants will accumulate according to the formula "3% + 1.5%" (a contribution by the participant of 3 per cent of their gross wage plus a contribution by the state of 1.5 per cent of the average wage in the country the year before last). Those who accumulated maximally will move to the new formula as of 2019 automatically, while those who accumulated minimally will in 2021 accumulate according to the formula "1.8% + 0.3%" (a participant contribution of 1.8 per cent of one's gross wage plus a state contribution of 0.3% of the average wage in the country the year before last) and then their contributions will increase gradually, by 0.3 percentage points each year, until their accumulation formula reaches "3% + 1.5%".

Graph LT3. Pillar II – Level of "base rate" contributions



Source: Own elaboration based on the Law on Reform of the Pension System, 2022.

The contributions to Pillar II are recorded on individual personal pension account at selected providers (Pension Accumulation Companies). Contributions and accumulated savings are invested by the companies into managed pension funds. Pension Accumulation Companies

(PACs) can manage multiple pension fund based on a "life-cycle" approach. PAC must obtain licenses from market regulator and supervisory body, which is the Bank of Lithuania.

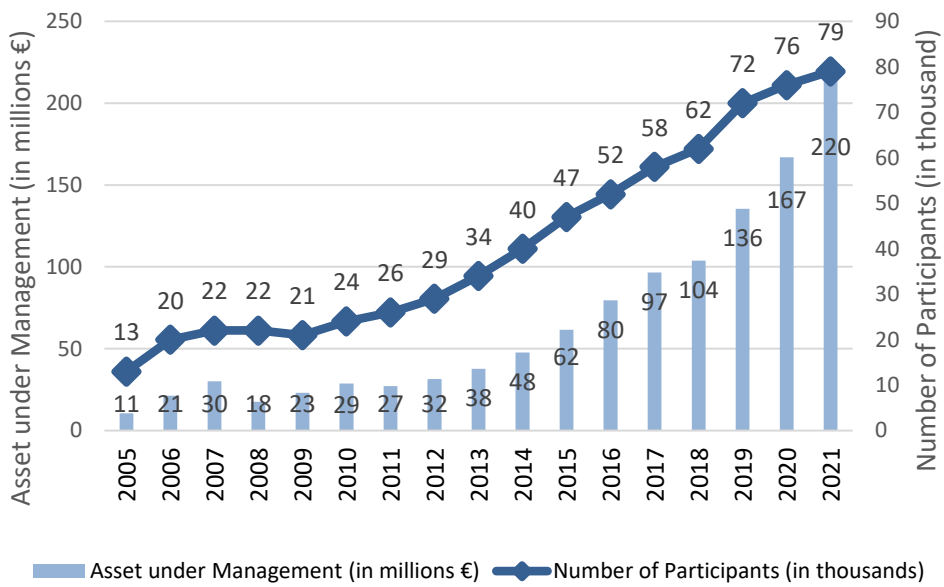
Pillar III – Voluntary private pension

Lithuania's voluntary supplementary private pensions system (Pillar III) is also based on the World Bank's multi-pillar model and effectively started in 2005. It is also a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy. Pillar III pension funds refer to supplementary voluntary pension accumulation. Funds are transferred by participants themselves or by their employers.

Even if the set-up of the pillar is very similar to the Pillar II set-up, the attractiveness of the financial products offered by supplementary pension asset managers is very low.

Number of participants (savers) and assets under management in Pillar III providers are presented in the graph below.

Graph LT4. Pillar III – Number of participants and Assets under Management



Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022.

Pillar III is organized in a way that pension providers (Voluntary Supplementary Pension Accumulation Management Companies) offer pension funds on a basis of typical mutual funds. At the end of 2020, 16 supplementary voluntary pension accumulation funds operated in Lithuania were managed by 4 managing companies as Swedbank has entered the market in 2019 by offering 3 new supplementary voluntary pension funds (2 mixed and 1 equity based)

and SEB introduced one mixed fund (SEB pensija 50+) in 2020. In 2021, assets managed by funds grew by 32% and amounted to €220 million driven by positive market returns. Number of participants accumulating their pension in Pillar III pension funds amounted to 79,000. The average value of savings per member was almost €2,785 in 2021.

Pension Vehicles

Pillar II – Funded pensions

As indicated above, each provider (PAC) has to offer 7 life-cycle funds and 1 capital preservation fund. Currently, 40 pension funds are offered by 5 management companies.

Table LT2. List of Pillar II pension Funds after reform in 2020

Investment style of the pension plan since 2019	Pension Fund Name	Inception day
Life-cycle pension funds, 1996-2002	Luminor 1996–2002 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1996–2002	2.1.2019
	SEB 1996–2002 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1996–2002	1.3.2018
	Aviva Y3 1996–2002 tikslinės grupės pensijų fondas	2.1.2019
Life-cycle pension funds, 1989-1995	Luminor 1989–1995 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1989–1995	2.1.2019
	SEB 1989–1995 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1989–1995	1.3.2018
	Aviva Y2 1989–1995 tikslinės grupės pensijų fondas	2.1.2019
Life-cycle pension funds, 1982-1988	Luminor 1982–1988 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1982–1988	2.1.2019
	SEB 1982–1988 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1982–1988	1.3.2018
	Aviva Y1 1982–1988 tikslinės grupės pensijų fondas	2.1.2019
Life-cycle pension funds, 1975-1981	Luminor 1975–1981 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1975–1981	2.1.2019
	SEB 1975–1981 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1975–1981	1.3.2018
	Aviva X3 1975–1981 tikslinės grupės pensijų fondas	2.1.2019
Life-cycle pension funds, 1968-1974	Luminor 1968–1974 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1968–1974	2.1.2019
	SEB 1968–1974 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1968–1974	1.3.2018
	Aviva X2 1968–1974 tikslinės grupės pensijų fondas	2.1.2019
Life-cycle pension funds, 1961-1967	Luminor 1961–1967 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1961–1967	2.1.2019
	SEB 1961–1967 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1961–1967	1.3.2018
	Aviva X1 1961–1967 tikslinės grupės pensijų fondas	2.1.2019

Life-cycle pension funds, 1954-1960	Luminor 1954–1960 tikslinės grupės pensijų fondas	2.1.2019
	INVL pensija 1954–1960	2.1.2019
	SEB 1954–1960 metų tikslinės grupės pensijų kaupimo fondas	28.12.2018
	Swedbank pensija 1954–1960	1.3.2018
	Aviva B 1954–1960 tikslinės grupės pensijų fondas	2.1.2019
Asset preservation pension funds	Luminor turto išsaugojimo fondas	2.1.2019
	INVL pensijų turto išsaugojimo fondas	2.1.2019
	SEB turto išsaugojimo pensijų kaupimo fondas	28.12.2018
	Swedbank turto išsaugojimo pensijų fondas	1.3.2018
	Aviva S turto išsaugojimo pensijų fondas	2.1.2019

Source: Own elaboration (https://www.lb.lt/en/fs-pension-funds), 2020.

The structure of savers, assets under management and market share of four group of pension funds according to their investment strategy is presented in a table below.

Table LT3. Pillar II Market share based on AuM and Number of participants

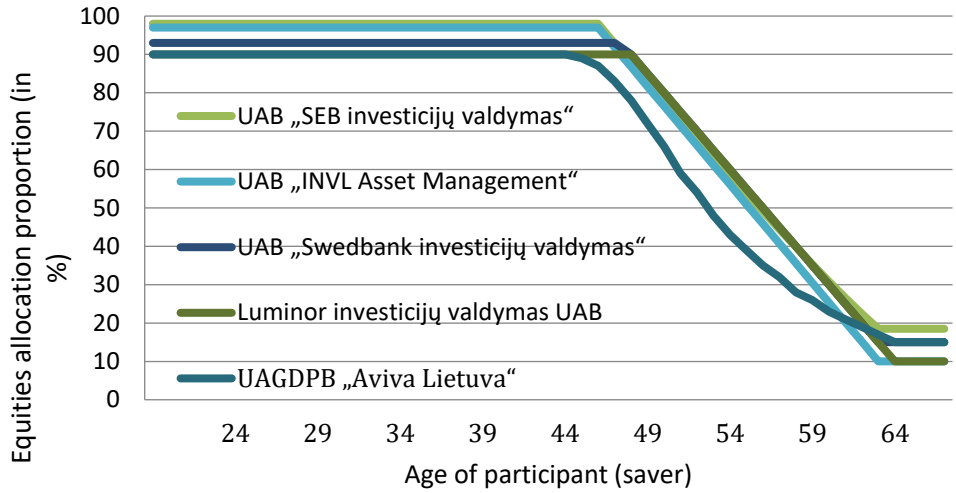
Investment strategy	AuM	Market share	Number of Participants	Market share
Life-cycle pension funds, 1996-2002	107,622,403.11 €	1.82%	100,988	7.28%
Life-cycle pension funds, 1989-1995	554,766,087.13 €	9.39%	219,324	15.80%
Life-cycle pension funds, 1982-1988	1,065,148,664.68 €	18.02%	295,262	21.27%
Life-cycle pension funds, 1975-1981	1,370,412,758.75 €	23.19%	248,713	17.92%
Life-cycle pension funds, 1968-1974	1,347,254,067.18 €	22.80%	231,964	16.71%
Life-cycle pension funds, 1961-1967	1,061,056,767.15 €	17.95%	206,655	14.89
Life-cycle pension funds, 1954-1960	326,363,579.70 €	5.52%	67,863	4.89%
Asset preservation pension funds	76,983,925.05 €	1.30%	17,154	1.24%
TOTAL	**5,909,608,252.76 €**	**100.00%**	**1,387,923**	**100.00%**

Source: Own elaboration based on Bank of Lithuania data, 2022

There are no strict quantitative limitations on financial instruments. However, the management company has to ensure risk management principles and avoid concentration risk.

Introduction of life-cycle pension funds since 2019 was accompanied by the presentation of asset allocation that follows the age of participants. Almost all pension asset management companies have introduced the same life-cycle investment strategy (see the graph below).

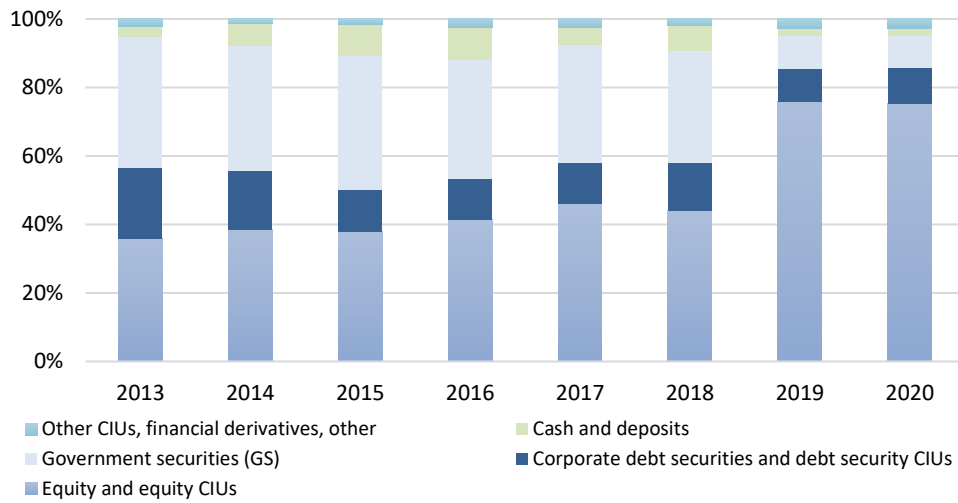
Graph LT5. Life-cycle investment strategy of Pillar II pension funds



Source: Own elaboration based on Bank of Lithuania data, 2022

The portfolio structure (data available since 2013 until 2020) of Pillar II pension funds is presented in the graph below. The reform in 2019 delivered significant increase of equities in pension fund portfolios due to the introduction of "life-cycle" strategies via target-date funds.

Graph LT6. Pillar II Portfolio structure



Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2021.

It can be seen that dominant financial instruments in Pillar II pension funds' portfolios are the equity UCITS funds (CIUs) and government bonds. The 2019 reform aimed at balancing the remaining saving horizon with the asset allocation has brought significant rise in equity-based

allocations (from 44% to 77% of all assets) and this adjusted portfolio structure should preserve rather large portion of equities in pension fund portfolios.

Pillar III – Voluntary private pensions

The Lithuanian Pillar III allows licensed asset management companies (licensing process similar to typical UCITS funds providers) to offer as many voluntary pension funds as they prefer. At its inception, there were only 5 pension funds offered by 3 providers. Currently (at the end of 2019), there are 5 providers offering 15 voluntary pension funds. The list of Pillar III pension funds is presented below.

Table LT4. List of Pillar III pension Funds

Investment style of the pension plan	Pension Fund Name	Inception day
BOND PENSION FUND	INVL STABILO III 58+ / INVL Stabilus	20.12.2004
	Luminor pensija 1 plius	7.10.2013
	SEB pensija 58+	27.10.2004
MIXED INVESTMENT PENSION FUNDS	Luminor pensija 2 plius	26.10.2004
	INVL Medio III 47+	24.9.2007
	INVL Apdairus	13.5.2013
	Luminor pensija darbuotojui 1 pllius	20.11.2014
	Luminor pensija darbuotojui 2 pllius	20.11.2014
	Swedbank pensijų fondas 30	2.12.2019
	Swedbank pensijų fondas 60	2.12.2019
	SEB pensija 50+	10.4.2020
EQUITY PENSION FUNDS	Luminor pensija 3 plius	1.10.2007
	INVL Drąsus	20.12.2004
	INVL Extremo III 16+	24.9.2007
	SEB pensija 18+	27.10.2004
	Swedbank pensijų fondas 100	2.12.2019

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

The market share according to the AuM and number of participants is presented in the table below.

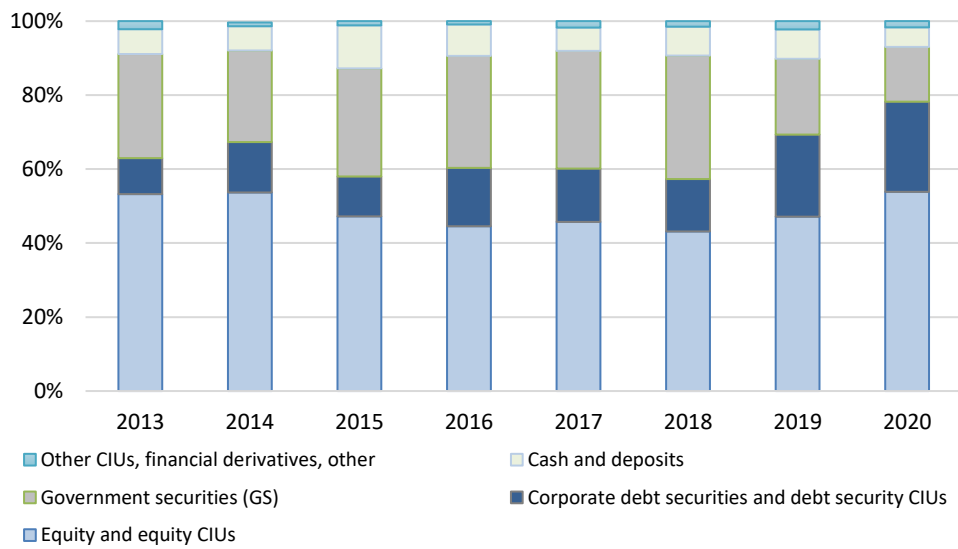
Table LT5. Pillar III Market share based on AuM and Number of participants

Investment strategy	AuM	Market share	Number of Participants	Market share
Bond Pension Fund	35,607,829.00 €	16.17%	10,168	12.84%
Mixed Investment Pension Fund	75,646,628.00 €	34.34%	34,362	45.39%
Equity Pension Fund	109,017,912.00 €	49.49%	34,667	43.77%
TOTAL	**220,272,369.00 €**	**100.00%**	**79,197**	**100.00%**

Source: Own elaboration based on Bank of Lithuania data, 2022

There are no specific quantitative limitations on financial classes or instruments. However, the investment strategy of the pension fund must include the procedure and areas for investment of pension assets, risk assessment methods, risk management principles, risk management procedures and methods used, and the strategic distribution of pension assets according to the duration and origin of the obligations relating to pension accumulation contracts. The management company must review the investment strategy of the pension fund at least every 3 years. Pillar III pension funds´ portfolio structure is presented below (data available since 2013 until 2020). Unfortunately, the Lithuanian national bank does not provide data on Pillar III pension fund portfolio structure since 2021.

Graph LT6. Pillar III Portfolio structure



Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2021.

Equities and equity based UCITS account for 47% of the Pillar III pension funds´ portfolios, while the government bonds account for almost 21%. Pillar III pension funds can be therefore characterized as a fund-of-funds.

Charges

Pillar II – Funded pensions

Major reform introduced in 2018 brought significant drop in Pillar II charges. The reform introduced instant cut in fees and gradual decrease from 1% in 2018 to 0.5% in 2020. The next table compares effective charges of Pillar II pension funds in Lithuania in 2019.

Table LT6. Pillar II Pension Funds´ Categories Average Fees and Charges		
Pension Fund Category	Type of fee	Year 2021
Life-cycle pension funds, 1996-2002	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1989-1995	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1982-1988	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1975-1981	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1968-1974	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1961-1967	Total Expense Ratio (TER)	0.50%
Life-cycle pension funds, 1954-1960	Total Expense Ratio (TER)	0.50%
Asset preservation pension funds	Total Expense Ratio (TER)	0.20%

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

Considering the asset management fee, it can be seen that pension funds charge the same level of asset management fee (0.5% in 2021) regardless of the investment strategy. The only difference is for the asset preservation funds, where the asset management fee is significantly lower (0.2% in 2021).

Pillar III – Voluntary private pensions

The fee structure of the Pillar III pension funds is more complex. Management companies charge various entry fees, in which case the calculation of the overall impact of fees on accumulated assets is harder to obtain. The table below compares fees of Pillar III pension funds in Lithuania.

Table LT7. Pillar III Pension Funds´ Fees and Charges		
Pension Fund	Type of fee	Year 2021
SEB pensija 58+	Total Expense Ratio (TER)	0.71%
SEB pensija 50+	Total Expense Ratio (TER)	0.90%
SEB pensija 18+	Total Expense Ratio (TER)	0.90%
INVL Drąsus	Total Expense Ratio (TER)	1.67%
INVL Apdairus	Total Expense Ratio (TER)	1.76%
INVL STABILO III 58+	Total Expense Ratio (TER)	1.11%
INVL Medio III 47+ Pension fund	Total Expense Ratio (TER)	0.97%
INVL Extremo III 16+ Pension Fund	Total Expense Ratio (TER)	0.96%
Luminor pensija 1 plius	Total Expense Ratio (TER)	0.74%
Luminor pensija 2 plius	Total Expense Ratio (TER)	1.07%
Luminor pensija 3 plius	Total Expense Ratio (TER)	1.09%
Luminor pensija darbuotojui 1 pllius	Total Expense Ratio (TER)	1.18%
Luminor pensija darbuotojui 2 plius	Total Expense Ratio (TER)	0.97%
Swedbank pensijų fondas 30	Total Expense Ratio (TER)	0.95%
Swedbank pensijų fondas 60	Total Expense Ratio (TER)	0.85%
Swedbank pensijų fondas 100	Total Expense Ratio (TER)	0.82%

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

** During the first 12 months after becoming a Participant, a 30% entry fee applies to pension contributions, with the total fee not to exceed € 200 during the period. This fee applies only to new Participants whose agreements took effect after the fee's introduction was announced on the website www.invl.com, and to Participants who have switched from a pension fund managed by another management company. The entry fee does not apply to Participants who have switched from one of the Management Company's other pension funds*

In most cases, additional costs, that are charged on the pension fund´s account and not directly visible to the savers are the audit fees and custodian (depository) fees. On average, they account for 0.25%, and 0.055% respectively.

Comparing the Pillar II and Pillar III pension funds´ fees, it is obvious, that even if the management and investment strategies are very similar, the fee structure and overall level of fees in Pillar III is more than double the fees in Pillar II.

Taxation

Pillar II – Funded pensions

Lithuania applies an "EEE" regime for the taxation of Pillar II pension accounts. Employee contributions are tax-deductible even if they are higher than required (3% + 1.5%). Investment income on the level of the pension fund is tax-exempt. Pension benefits paid out during retirement are tax-exempt from a personal income tax as the old-age income is considered as a part of social system.

Pillar III – Voluntary private pensions

A similar tax regime is applied on the Pillar III savings, but there are some ceilings on contributions and withdrawals.

Regarding the contribution phase, there is a tax-refund policy, which means that the contributions of up to 25% of gross earnings, the income tax (15%) is returned. Therefore, we can conclude that the contribution phase is a "E" regime.

Positive returns on accumulated savings are tax-exempt, so the investment phase is a "E" regime.

Regarding the withdrawal (pay-out) phase, pension benefits paid from Pillar III voluntary funds can be received at any age and are levied with 15% income tax, but become tax-free if a person:

1) holds savings in a pillar III pension fund for at least 5 years and reaches the age of 55 at the time of payment of the benefit (and the pension savings agreement was concluded before 31 December 2012); or
2) holds savings in a pillar III pension fund for at least 5 years and reaches the age which is five years earlier than the threshold for the old-age pension at the time of payment of the benefit (if the pension savings agreement was concluded after 1 January 2013).

Under the optimum set-up, the "EEE" tax regime can be achieved on Pillar III savings.

Pension Returns

Pillar II – Funded pensions

Pension returns of Pillar II pension funds differ according to the life-cycle investment strategy applied. As the major changes in Pillar II do not allow for direct historical comparison of returns, we present the returns for the year 2019 only where the returns of offered life-cycle funds are compared.

Table LT8. Pillar II Pension Funds´ Categories Nominal returns			
Pension Fund Category	Year 2019	Year 2020	Year 2021
Life-cycle pension funds, 1996-2002	22.68%	23.84%	23.84%
Life-cycle pension funds, 1989-1995	22.39%	23.94%	23.94%
Life-cycle pension funds, 1982-1988	22.31%	24.00%	24.00%
Life-cycle pension funds, 1975-1981	22.86%	23.95%	23.95%
Life-cycle pension funds, 1968-1974	21.77%	20.62%	20.62%
Life-cycle pension funds, 1961-1967	14.97%	11.06%	11.06%
Life-cycle pension funds, 1954-1960	7.99%	3.24%	3.24%
Asset preservation pension funds	6.19%	2.71%	2.71%

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

When inspecting particular pension funds within each group, only minor changes in performance were observed in 2019 as well as 2020. Nominal as well as real returns of Pillar II pension funds in Lithuania are presented in a summary table below.

Table LT9. Nominal and Real Returns of II. Pillar in Lithuania					
2004	Nominal return after charges, before inflation and taxes	4.71%	5.30%	Real return after charges and inflation and before taxes	1.86%	1.95%
2005		5.49%			2.50%	
2006		4.76%			0.20%	
2007		3.72%			-4.48%	
2008		-9.16%			-17.63%	
2009		8.89%			7.72%	
2010		10.19%			6.57%	
2011		-1.04%			-4.51%	
2012		8.74%			5.83%	
2013		6.24%			5.79%	
2014		6.67%			6.78%	
2015		4.92%			5.17%	
2016		4.25%			2.29%	
2017		4.01%			0.20%	
2018		-3.24%			-5.00%	
2019		17.65%			14.92%	
2020		5.09%			5.19%	
2021		16.67%			5.97%	

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

Another view on the performance is according to the holding period.

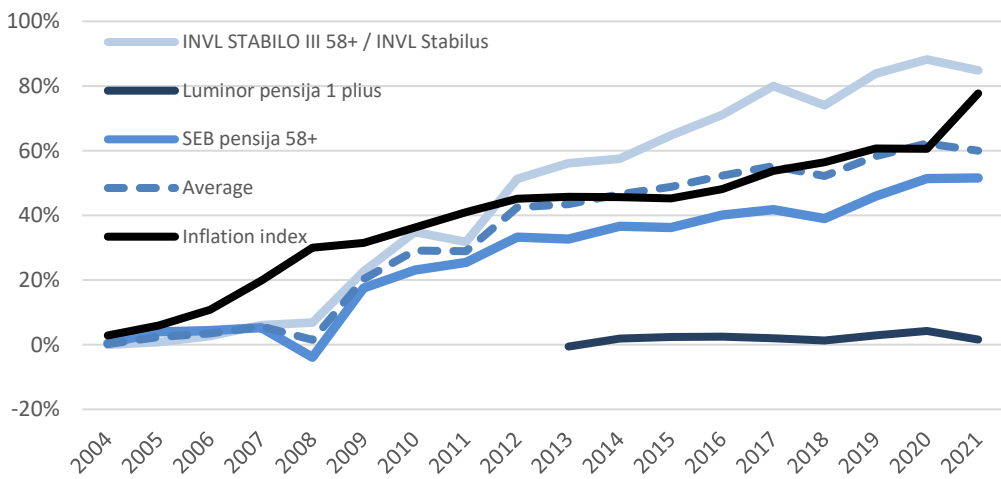
Table LT10. Performance of Pillar II Pension Funds according to the holding period		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	16.67%	5.97%
3-years	12.99%	8.60%
5-years	7.74%	4.05%
7-year	6.83%	3.95%
10-years	6.94%	4.60%
Since inception	5.30%	1.95%

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

Pillar III – Voluntary private pensions

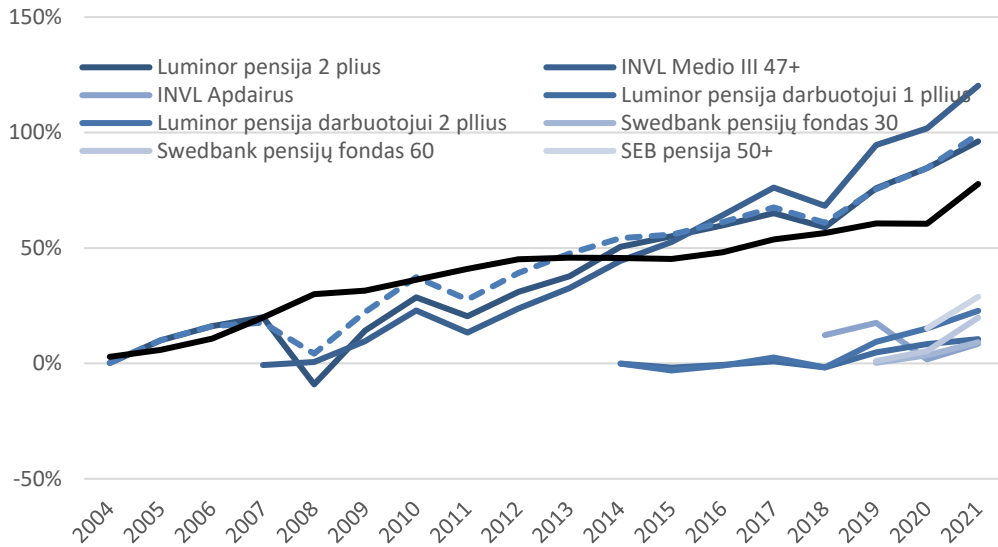
Pillar III pension funds' performance is presented according to their investment strategy, where 3 groups are formed. The graphs below present the pension funds´ performance on a nominal cumulative basis compared to inflation.

Graph LT8. Pillar III Cumulative Nominal Performance of Bond Pension Funds



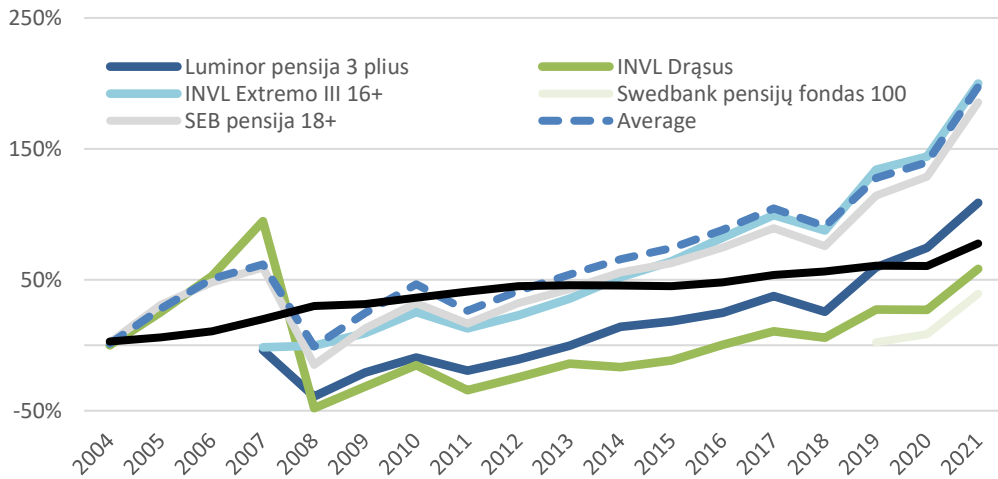
Source: Own elaboration based on Bank of Lithuania data, 2022 (https://www.lb.lt/en/pf-performance-indicators)

Graph LT9. Pillar III Cumulative Nominal Performance of Mixed Pension Funds



Source: Own elaboration based on Bank of Lithuania data, 2022 (https://www.lb.lt/en/pf-performance-indicators)

Graph LT10. Pillar III Cumulative Nominal Performance of Equity Pension Funds



Source: Own elaboration based on Bank of Lithuania data, 2022 (https://www.lb.lt/en/pf-performance-indicators)

Average annual nominal as well as real returns of Pillar III pension funds since 2011 is presented in the table below.

Table LT11. Nominal and Real Returns of III. Pillar in Lithuania						
2004		0.53%			-2.31%	
2005		13.52%			10.53%	
2006		8.64%			4.08%	
2007		4.51%			-3.68%	
2008		-23.27%			-31.73%	
2009		21.94%			20.77%	
2010		13.74%			10.12%	
2011	Nominal return after charges, before inflation and taxes	-8.73%		Real return after charges and inflation and before taxes	-12.21%	
2012		10.86%	**4.47%**		7.95%	**1.03%**
2013		5.88%			5.43%	
2014		5.19%			5.30%	
2015		2.86%			3.11%	
2016		5.09%			3.13%	
2017		5.40%			1.59%	
2018		-4.35%			-6.10%	
2019		11.45%			8.72%	
2020		4.73%			4.83%	
2021		11.24%			0.54%	

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

Again, we present the performance of Pillar III funds according to various holding period.

Table LT12. Performance of Pillar III Pension Funds according to the holding period		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	11.24%	0.54%
3-years	9.10%	4.65%
5-years	5.53%	1.80%
7-year	5.08%	2.17%
10-years	5.74%	3.37%
Since inception	18.18%	14.34%

Source: Own calculation (https://www.lb.lt/en/fs-pension-funds), 2022

Conclusions

Considering the wider factors, it is safe to say that the decreasing labour force and the implementation of the automatic balancing mechanism within the PAYG pillar will lead to a lower replacement ratio generated from Pillar I pensions. Therefore, Lithuania can be seen as a strong advocate of private pension savings where the pillars will grow on importance.

Reforms in the area of PAYG scheme supported with the funded pension schemes that have been adopted in 2018 and effective since 2019 are started shifting the preferences of the Lithuanian savers to rely more on their private funded pension schemes.

Performance of the Pillar II as well as Pillar III pension funds can be seen as satisfactory. However, the dominance of Pillar II funds opens the question on the further changes in the Pillar III, which cannot compete to the similar and cheaper peers in Pillar II.

The latest changes in the contributory mechanism, where additional individual contributions towards Pillar II are promoted and tax deductible, puts more pressure on Pillar III fund managers due to the growing crowding-out effect.

Introduction of life-cycle investment style into the Pillar II since 2019 created significant differences between the portfolio structure of pension funds within both pillars, which leads to the conclusion that Pillar III with more conservative approach will need to find its competitiveness against promoted Pillar II funds.

Lithuania has a favourable tax treatment of private pension savings, where in both cases an "EEE" tax regime is applied.

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Pension Savings: The Real Return

2022 Edition

Country Case: Poland

Streszczenie

Dodatkowy system emerytalny w Polsce, który został wprowadzony w 1999 roku, a następnie był kilkukrotnie reformowany (główne zmiany w 2004, 2012 oraz 2018 roku), składa się aktualnie z czterech elementów:

- pracowniczych programów emerytalnych (PPE),
- indywidualnych kont emerytalnych (IKE),
- indywidualnych kont zabezpieczenia emerytalnego (IKZE) oraz
- pracowniczych planów kapitałowych (PPK funkcjonujących od 1 lipca 2019 r.).

Poziom uczestnictwa w wymienionych grupowych i indywidualnych planach oszczędzania na starość (odpowiednio 3,82%, 4,75%, 2,76% i 15,18%) wskazuje, że bardzo nieliczna część Polaków zdecydowała się na oszczędzanie w oferowanych zinstytucjonalizowanych formach gromadzenia kapitału na starość.

PPE mogą być prowadzone w czterech formach: umowy z funduszem inwestycyjnym; umowy z zakładem ubezpieczeń na życie (grupowe ubezpieczenie na życie z ubezpieczeniowym funduszem kapitałowym); pracowniczego funduszu emerytalnego (PFE) lub zarzadzania zewnętrznego. Na koniec 2021 roku w PPE zgromadzono 18,929 mld zł (4,12 mld €).

PPK mogą być oferowane w formie funduszu inwestycyjnego, funduszu emerytalnego i ubezpieczeniowego funduszu kapitałowego (UFK). Ta forma dodatkowych planów emerytalnych została dopiero wprowadzona, tj. funkcjonuje od 1 lipca 2019 r. Aktywa PPK miały wartość 7,67 mld zł (1,67 mld €) na koniec 2021 roku.

IKE i IKZE mogą być oferowane w formie: ubezpieczenia na życie z ubezpieczeniowym funduszem kapitałowym; funduszu inwestycyjnego; rachunku papierów wartościowych w domu maklerskim; rachunku bankowego lub dobrowolnego funduszu emerytalnego (DFE). Aktywa zgromadzone na IKE i IKZE na koniec 2021 roku wyniosły odpowiednio 13,47 mld zł (2,9 mld €) oraz 5,98 mld zł (1,3 mld €).

Pracownicze programy emerytalne (PPE), pracownicze plany kapitałowe (PPK) i indywidualne konta emerytalne (IKE) funkcjonują w reżimie podatkowym TEE (podatek pobierany jest na

etapie opłacania składki), podczas gdy w IKZE podatek pobierany jest na etapie wypłaty środków (reżim EET).

W analizowanym okresie (2002-2021) pracownicze fundusze emerytalne (PFE) wypracowały dość wysokie stopy zwrotu sięgające 17,41% w skali roku. Straty pojawiły się jednak w latach 2008, 2011, 2015 i 2018 w czasie załamania na rynkach finansowych. Realne stopy zwrotu uwzględniające opłaty osiągnięte w 15 z 20 lat są pozytywne. Średnia realna stopa zwrotu za cały analizowany okres wyniosła 3,37%.

Dobrowolne fundusze emerytalne (DFE) osiągnęły natomiast nadzwyczajne wyniki inwestycyjne w początkowym okresie funkcjonowania, głównie z uwagi na hossę na rynku akcji w pierwszym roku ich działalności. W 2013 roku najlepsze DFE wygenerowały nominalny zysk przekraczający 50%. Wyniki te nie zostały jednak powtórzone w kolejnych latach. W 2014 roku część DFE wykazała straty, które jednak zostały pokryte przez zyski w kolejnych latach. Średnia realna stopa zwrotu z uwzględnieniem opłat za lata 2013-2021 wyniosła 3.72%.

Summary

Starting in 1999, with significant changes introduced in 2004, 2012 and 2018, the Polish supplementary pension market consists of four different elements:

- employee (occupational) pension programmes (*pracownicze programy emerytalne*, PPE),
- individual retirement accounts (*indywidualne konta emerytalne*, IKE);
- individual retirement savings accounts (*indywidualne konta zabezpieczenia emerytalnego*, IKZE) and
- employee capital plans (*pracownicze plany kapitałowe*, PPK).

The coverage ratios (3.82%, 4.75%, 2.76% and 15.18% respectively), show that only a small part of Poles decided to secure their future in old age by joining the occupational pension plan or purchasing individual pension products.

PPE can be offered in four forms: a contract with an asset management company (investment fund); a contract with a life insurance company (group unit-linked life insurance); an employee pension fund run by the employer (*pracowniczy fundusz emerytalny*, PFE) or external management. PPE assets amounted to PLN 18.929 bln (€4.12 bln) at the end of 2021.

PPK can operate as investment funds, pension funds or a unit-linked life insurance. These plans have just started to collect money (introduced in July 2019). PPK assets amounted to PLN 7.67 bln (€1.67 bln) at the end of 2021.

IKE and IKZE can operate in the form of either: a unit-linked life insurance contract; an investment fund; an account in a brokerage house; a bank account (savings account) or a voluntary pension fund (*dobrowolny fundusz emerytalny*, DFE). The total amount of IKE assets

amounted to PLN 13.47 bln (€2.9 bln) and IKZE assets amounted to PLN 5.98 bln (€1.3 bln) at the end of 2021.

PPE, PPK and IKE operate in TEE tax regime while IKZE is run in EET one.

During the period of 2002-2021 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative results appeared only in the years 2008, 2011, 2015 and 2018 when equity markets dropped significantly. Positive after-charges real returns were observed in 15 of 20 years and the average return over the 20-year period is highly positive as well (3.37%).

Voluntary pensions funds (DFE) have obtained extraordinary investment results from their start in 2012. The first years of their operation coincided with the Polish financial market recovery and allowed funds to maximise rates of return from the equity portfolios. The best DFEs reported more than 50% nominal return in 2013. But such returns were impossible to achieve in next years. In 2014, some of DFE even experienced slightly negative returns that were covered by returns in the following years. The average real rate of return after charges in years 2013-2021 amounted to 3.72%.

Introduction

The old-age pension system in Poland was introduced in 1999 as a multi-tier structure consisting with three main elements:

- Pillar I - a mandatory, Pay-as-You-Go (PAYG) system;
- Pillar II - a mandatory PAYG system with a partial opt-out for funded pension funds; and
- Pillar III - voluntary, occupational and individual pension plans.

Table PL 1. Multi-pillar pension system in Poland		
Pillar I	**Pillar II**	**Pillar III**
Mandatory	Mandatory[1]	Voluntary
PAYG	PAYG/Funded (opt-out)	Funded
NDC	NDC/DC (opt-out)	DC
Basic benefit	Basic benefit	Complementary benefit
Publicly managed:	Publicly/Privately managed:	Privately managed:
Social Insurance Institution (ZUS)	Social Insurance Institution (ZUS); in opt-out element: Open Pension Funds	Pension savings managed by different financial institutions, depending on the product form, organised by employer or individual

Source: own work

	Employee pension funds			Voluntary pension funds		
Holding Period	Gross returns	Net Nominal Returns	Real Net Returns	Gross returns	Net Nominal Returns	Real Net Returns
1-year	-	4.26%	3.55%	12.14%	8.69%	0.63%
3-years	-	5.34%	0.93%	8.74%	5.48%	0.66%
5-years	-	4.55%	2.37%	4.80%	1.87%	-1.45%
7-year	-	3.39%	2.03%	5.14%	2.31%	0.10%
10-years	-	4.57%	2.02%	-	-	-
Since inception	-	5.80%	3.37%	8.36%	5.48%	3.72%

The first part of the system is contributory and is based on a Non-financial Defined Contribution (NDC) formula. The total pension contribution rate amounts to 19.52% of gross wage (Pillar I + Pillar II) and the premium is financed equally by employer and employee. Out of the total pension contribution rate, 12.22 p.p. are transferred to Pillar I (underwritten on individual accounts of the insured), and 7.3 p.p. to Pillar II. If a person has not opted out for open pension funds (OFE), the total of 7.3 p.p. is recorded on a sub-account administered by the Social Insurance Institution (NDC system). If he/she has opted out for the funded element (open pension funds, OFE), 4.38 p.p. are recorded on a sub-account and 2.92 p.p. are allocated to an account in a chosen open pension fund.[210]

Pillar I is managed by the Social Insurance Institution (ZUS), which records quotas of contributions paid for every member on individual insurance accounts. The accounts are indexed every year by the rate of inflation and by the real growth of the social insurance contribution base. The balance of the account (pension rights) is switched into pension benefits when an insured person retires.

[210] Two years after the change in 2014 that made OFE's voluntary the insured could again decide about opt-out. After 2016 "the transfer window" is open every four years.

Pillar II of the Polish pension system consists of sub-accounts also administered by the Social Insurance Institution (NDC) and possible partial opt-out for open pension funds (*otwarte fundusze emerytalne*, OFE; funded system). Polish OFEs are just a mechanism of temporary investing public pension system resources in financial markets (financial vehicles for the accumulation phase). An insured person who enters the labour market has the right to choose whether to join an OFE or whether to remain solely in the PAYG system. When the insured chooses to contribute to the OFE, 2.92% of his/her gross salary will be invested on financial markets. If no such decision is taken, his/her total old-age pension contribution will automatically be transferred to Social Insurance Institution (ZUS). This default option resulted in a huge decrease in OFEs´ active participation in the year 2014.

The pension law establishes the contribution level and guarantees minimum pension benefits that are paid together from the whole basic system (pillar I + II) by the public institution (ZUS). The statutory retirement age is 60 for women and 65 for men.[211] Prior to retirement the member's assets gathered in OFE (if one opted out for funded element) are transferred to a sub-account administered by ZUS.[212] Pension benefits from the basic system are calculated in accordance with a Defined Contribution (DC) rule and are paid in a form of an annuity by Social Insurance Institution (ZUS).

The old-age pension from the basic system (Pillar I+II) depends solely on two components: 1) the insured person's total pension entitlements accumulated during his/her entire career (balance of an NDC account and a sub-account), and 2) the average life expectancy upon retirement. The gross replacement rate at retirement from the public pension system in Poland is 54.1% (projections for 2019 for an average earner).[213]

Pillar III supplements the basic, mandatory pension system and represents voluntary, additional pension savings. It consists of four different vehicles:

- employee (occupational) pension programmes (*pracownicze programy emerytalne*, PPE);
- individual retirement accounts (*indywidualne konta emerytalne*, IKE);
- individual retirement savings accounts (*indywidualne konta zabezpieczenia emerytalnego*, IKZE),
- employee capital plans (*pracownicze plany kapitałowe*, PPK).

[211] It started to increase in 2013 and was planned to reach 67 for both men and women (in 2020 for men and in 2040 for women) but this reform was cancelled three years later. Hence, since October 2017 the statutory retirement age in Poland is again 60 for women and 65 for men. It may result in a situation where the significant proportion of women will get a minimum pension when retiring at the age of 60.
[212] Money gathered on individual accounts in OFE is systematically transferred to the Social Insurance Institution (ZUS) during 10 years prior to retirement (before reaching the statutory retirement age).
[213] European Commission, *The 2021 Ageing Report: Economic and Budgetary Projections for the EU Member States (2019-2070)*, Luxembourg2021, p. 86, https://ec.europa.eu/info/sites/default/files/economy-finance/ip148_en.pdf.

Employee pension programmes (*pracownicze programy emerytalne*, PPE) are plans organised by employers for their employees. PPE settlement happens after an employer agrees with the representatives of the employees on the plan's operational conditions, signs the contract on asset management with a financial institution (or decides to manage assets himself) and registers a programme with the Financial Supervisory Commission (Komisja Nadzoru Finansowego, KNF). The basic contribution (up to 7% of an employee's salary) is financed by the employer but an employee must pay personal income tax on this. Participants to the programme can pay in additional contributions deducted from their net (after-tax) salaries. There is a yearly quota limit for additional contribution amounting to 4.5 times the average wage (PLN 26,649 - €5,797.17[214] - in 2022). PPE's returns are exempt from capital gains tax. Benefits are not taxable and can be paid as a lump sum or as a programmed withdrawal after the saver reaches 60 years. PPEs cover 641.4 thousand employees which represents only 3.82%[215] of the working population in Poland.

Employee capital plans (*pracownicze plany kapitałowe*, PPK) are also organised by employers but they use auto-enrolment and matching defined contribution mechanisms. They started to operate in 2019 and their full implementation was staggered in accordance with the given below dates and depending on the company size:

- since 1 July 2019 – companies employing at least 250 people;
- since 1 January 2020 – companies with at least 50 employees,
- since 1 July 2020 – companies having at least 20 employees,
- since 1 January 2021 – remaining companies, including the entities financed from state budget.

The employee contribution amounts to 2-4% of the gross salary. The minimum matching contribution financed by employer is 1.5% of the gross salary but can be higher on a voluntary basis (up to 4%). People earning 120% or less of the average income can save less, namely minimum 0.5% of the gross salary. In order to encourage individuals to save in PPK, the state budget offers the PLN 250 kick-start payment (€ 54.38) and a regular annual state subsidy amounting to PLN 240 (€52.21). The employee and employer contributions are taxed while the state subsidies remain exempt from taxation both at accumulation and decumulation stage. PPK's returns are exempt from capital gains tax. Benefits can be paid as a lump sum (max. 25% of the accumulated capital) and programmed withdrawal when a saver reaches 60 years. Savings can be partially withdrawn (25% of the capital) in the case of the serious disease of the saver, his/her spouse or a child. The accumulated money can be also borrowed from the account (100% of the capital) to finance an individual commitment when taking a

[214] For the conversion of PLN to euros, the report uses the "Euro foreign exchange reference rates" provided by the European Central Bank (the exchange rate used for the data is the one of 31st December 2021: 1 EUR = PLN 4.5969),
https://www.ecb.europa.eu/stats/policy_and_exchange_rates/euro_reference_exchange_rates/html/eurofxref-graph-pln.en.html

215 The coverage was calculated according to Statistics Poland (GUS) data on the number of employed Poles at the end of 2021 (GUS 2022).

mortgage. PPKs covered 2.55 mln employees at the end of 2021, which represents ca. 15.18% of the working population.

Individual retirement accounts (*indywidualne konta emerytalne*, IKE) were introduced in 2004, offering people the possibility to save individually for retirement. They are offered by various financial institutions such as asset management companies, life insurers, brokerage houses, banks and pension societies. An individual can only gather money on one retirement account at the time but is free to change the form and the institution during the accumulation phase. Contributions are paid from the net salary with a ceiling of 3 times the average wage (PLN 17,766 - €3,864.78 - in 2022). Returns are exempt from capital gains tax and the benefits are not subject to taxation. When a saver reaches 60 years of age (or 55 years, if he/she is entitled by law to retire early), money is paid in a form of a lump sum or a programmed withdrawal. At the end of 2021 only 796.5 thousand Polish citizens had an individual retirement account (IKE) which represents 4.75% of the working population.

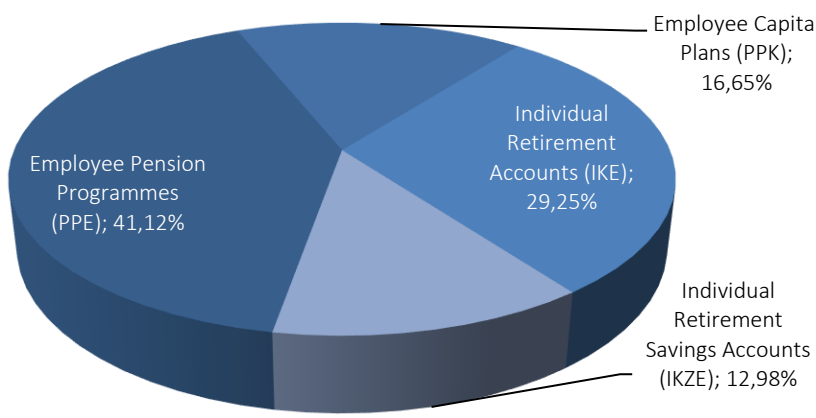
Individual retirement savings accounts (*indywidualne konta zabezpieczenia emerytalnego*, IKZE) started to operate in 2012 and are offered in the same forms as individual retirement accounts (IKE) but have other contribution ceilings and offer a different form of tax relief. Premiums paid to the account can be deducted from the personal income tax base. Contributions and returns are exempt from taxation, but the benefits are subject to taxation at a reduced rate. Savings accumulated in IKZE are paid to the individual as a lump sum or as a programmed withdrawal after the saver reaches the age of 65. The limit for IKZE contributions is 120% of the average wage (PLN 7,106.40 [216]- €1,545.91 in 2022). Only about 2.76% of the Polish working population (2021) is covered by this type of supplementary old-age provision.

[216] Since 2021 there is also a special limit of contributions for self-employed that amounts to 180% of the average wage (PLN 10,659.60 - € 2318.87 in 2022).

Table PL 2. Architecture of voluntary pension system in Poland (pillar III) at the end of 2021				
Name of the pension system element	**Employee Pension Programmes (PPE)**	**Employee capital plans (PPK)***	**Individual Retirement Accounts (IKE)**	**Individual Retirement Savings Accounts (IKZE)**
Types of pension vehicles	· Unit-linked life insurance · Investment fund · Employee pension fund	· Unit-linked life insurance · Investment fund · Pension fund	· Unit-linked life insurance · Investment fund · Account in the brokerage house · Bank account · Voluntary pension fund	· Unit-linked life insurance · Investment fund · Account in the brokerage house · Bank account · Voluntary pension fund
Assets under management in PLN bln	18.93	7.67	13.47	5.98
(€ bln)	€ 4.12	€ 1.67	€ 2.93	€ 1.30

* This vehicle started to operate in 2019.
Source: own work based on (UKNF 2022b).

Chart PL1. Market share of Polish voluntary pension system elements by assets under management as of 31 December 2020



Source: own work based on (UKNF 2022b).

The efficiency of the supplementary old-age pension system in Poland is rather satisfactory when considering the operation of voluntary pension funds (DFE) and employee pension funds (PFE, a form of PPE). Since inception they offered a positive nominal annual rate of return amounting to 7.89% and 5.88% respectively.

Pension Vehicles

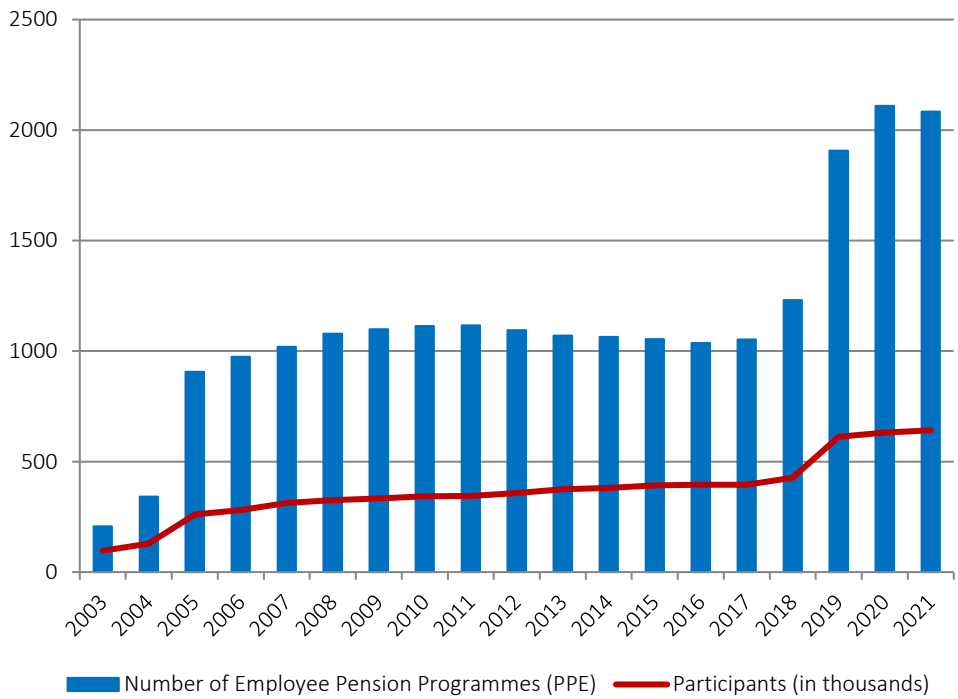
Employee pension programmes

PPEs can be offered in four forms:

- as a contract with an asset management company (an investment fund);
- as a contract with a life insurance company (a group unit-linked insurance);
- as an employee pension fund run by the employer; or
- through external management.

Employee pension programmes started to operate in 1999. The development of the market was very weak during the first five years of operation. Thereafter, due to changes in PPE law, many group life insurance contracts were transformed into PPEs at the end of 2004 and in 2005. In 2021, the number of programmes reached 2,038 (see Graph PL1 below), mainly due to significant increase in 2019 and 2020 being the direct response to the new law that allowed employers to be exempt from the obligation to create PPK when they offer PPE.

Graph PL1. Number of Employee Pension Programmes and the number of PPE participants in 1999-2021



Source: own work based on UKNF (2022b).

The most popular forms of PPE are investment funds that represent 72.7% of PPEs (see table below) and manage71% of total PPEs' assets. Their share is even higher when taking into consideration the number of participants (81.4%).

Table PL 3. Number and assets of Employee Pension Programmes (PPE) by form of the programme in 2021						
	Number of PPE	Market share (as % of PPE number)	Number of participants (thousand)	Market share (as % of participants)	Assets (PLN million)	Market share (as % of PPE assets)
Unit-linked life insurance	542	26.0%	89.1	13.9%	3,363.9	17.8%
Investment fund	1514	72.7%	521.8	81.4%	13,443.9	71.0%
Employee Pension Fund	27	1.3%	30.5	4.8%	2,121.5	11.2%
Total	2,083		641.4		18,929.3	

Source: own work based on (UKNF 2022b).

PPE assets amounted to PLN 18.93 bln (€4.12 bln) and the average account balance equalled PLN 29,512 (€ 6,420) at the end of 2021. No data is available on the average percentage level of contributions paid to the programmes. The highest balance was observed in employee pension funds while the lowest in investment funds.

Employee capital plans (PPK)

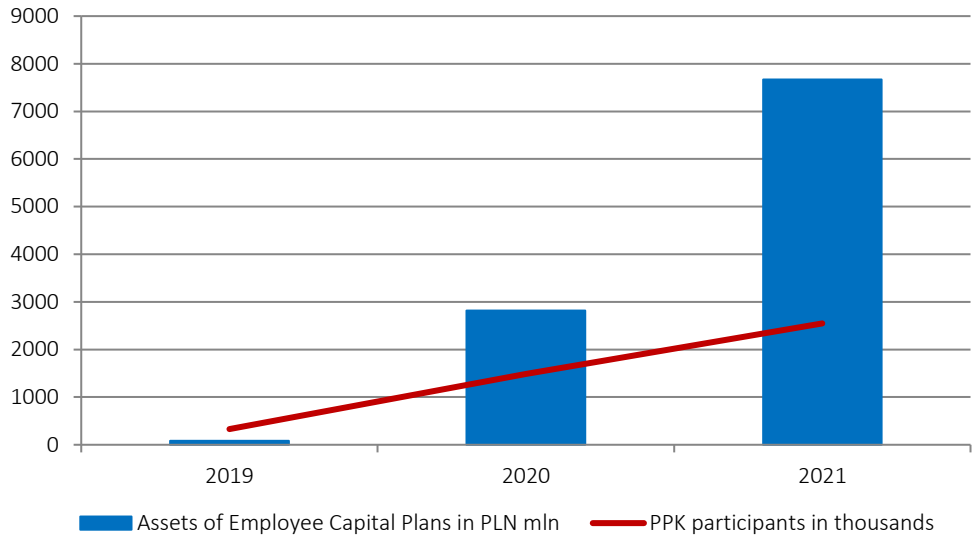
Employee capital plans (*pracownicze plany kapitałowe*, PPK) can be offered by life insurance companies, investment companies (asset management companies, *towarzystwa funduszy inwestycyjnych*, TFIs), general pension societies (*powszechne towarzystwa emerytalne*, PTEs) and Employee Pension Societies (*pracownicze towarzystwa emerytalne*, PrTEs) in a form of target-date funds (TDF, life cycle funds). All employees ages 18-55 are automatically enrolled in a plan but can opt out by signing a declaration.

A plan member should be assigned, and his/her contributions should be allocated to the fund with a date that is the nearest to the date when he/she reaches 60. Every provider has to offer many TDFs with target dates every 5 years. The limits of portfolio structure depend on a target date and are as follows:

- the target date is since setting up till 20 years prior the age of 60: 60-80% shares and 20-40% bonds,
- 10-20 years prior the age of 60: 40-70% shares and 30-60% bonds,
- 5-10 years before 60: 25-50% shares and 50-75% bonds,
- 0-5 years before reaching 60: 10-30% shares, 70-90% bonds,
- since reaching 60: 0-15% shares and 85-100% bonds.

At the end of 2021 there were 19 financial institutions (16 asset management companies, 2 general pension societies and 1 insurance company) offering PPK funds on the market. At the end of 2021 2.55 mln participants gathered PLN 7.67 bln (€1.67 bln) in PPK.

Graph PL2. Assets of Employee Capital Plans and number of PPK participants in 2019-2021



Source: own work based on: UKNF 2021e & 2022a.

Table PL 4. Employee Capital Plans (PPK) in 2021

	Number of participants (thousands)	Market share (as % of participants)	Assets (PLN million)	Market share (as % of assets)
Life insurers	44.2	1.7%	82.8	1.1%
Asset management companies	2144.8	84.2%	6,526.4	85.1%
General Pension Societies	359.0	14.1%	1,056.7	13.8%
Total	2548.0		7665.9	

Source: UKNF 2022b.

Individual Retirement Accounts (IKE)

According to the Polish pensions law (the Individual Pension Accounts Act of 20 April 2004), individual retirement accounts (Indywidualne Konta Emerytalne, IKE) can operate in a form of:

- a unit-linked life insurance contract;
- an investment fund;
- an account in a brokerage house;
- a bank account (savings account); or
- a voluntary pension fund.

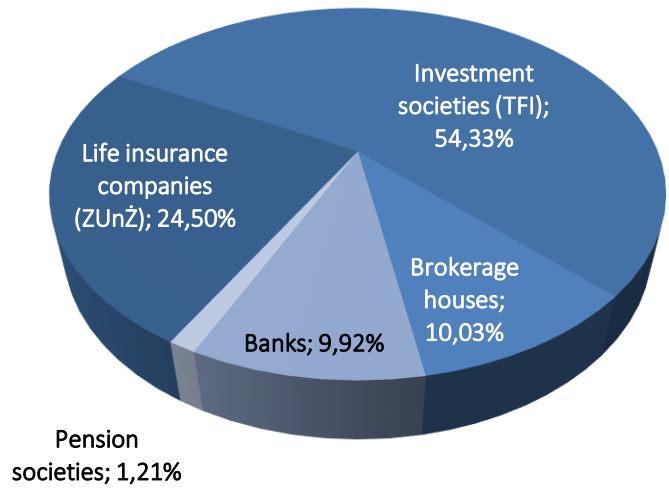
Pension accounts are offered by life insurance companies, investment companies (asset management companies), brokerage houses, banks and pension societies. The most recent pension vehicles are voluntary pension funds that were introduced in 2012 at a time of significant changes in the statutory old-age pension system.

A voluntary pension fund is an entity established with the sole aim of gathering savings of IKE (or IKZE) holders. Pension assets are managed by a pension society (powszechne towarzystwo emerytalne, PTE) that also manages one of the open pension funds (OFE under Pillar II) in Poland. Assets of the funds are separated to guarantee the safety of the system, as well as due to stricter OFEs' investment regulations.

The design of IKE products usually does not vary significantly from the standard offer on financial markets. The difference relates to the tax treatment of capital gains (exclusion from capital gains tax) and contribution limits. Moreover, financial institutions cannot charge any cancellation fee when an individual transfers money or resigns after a year from opening an account.

The most popular IKE products take the form of investment funds and life insurance contracts (unit-linked life insurance). According to official data (UKNF 2022c), these two forms of plans represent 79% of all IKE accounts.

Chart PL2. Structure of IKE market by number of accounts and type of provider as of 31 December 2021



Source: UKNF 2022c.

Table PL 4. Number of Individual Retirement Accounts (IKE) by type of the product (2004-2020)

	Unit-linked life insurance	Investment fund	Account in the brokerage house	Bank account	Voluntary pension fund	Total
2004	110.728	50.899	6.279	7.570		175.476
2005	267.529	103.624	7.492	49.220		427.865
2006	634.577	144.322	8.156	53.208		840.263
2007	671.984	192.206	8.782	42.520		915.492
2008	633.665	173.776	9.985	36.406		853.832
2009	592.973	172.532	11.732	31.982		809.219
2010	579.090	168.664	14.564	30.148		792.466
2011	568.085	200.244	17.025	29.095		814.449
2012	557.595	188.102	20.079	47.037	479	813.292
2013	562.289	182.807	21.712	49.370	1.473	817.651
2014	573.515	174.515	22.884	51.625	1.946	824.485
2015	573.092	201.989	25.220	53.371	2.548	852.220
2016	571.111	236.278	27.615	64.031	3.580	902.615
2017	568.518	275.796	30.418	71.922	4.922	951.576
2018	562.476	316.996	32.584	78.288	5.307	995.651
2019	462.171	355.031	39.030	88.460	6.075	950.767
2020	199.929	393.010	55.821	85.678	7.188	741.626
2021	195.179	432.756	79.906	79.002	9.646	796.489

Source: Own work based on: UKNUiFE 2005; UKNF 2007, 2012b, 2014b, 2016b, 2017b, 2018c, 2019a, 2020b, 2021c & 2022c.

IKE holders do not fully use the contribution limit. The average contribution paid from 2004 to 2021 remains permanently below the statutory limit (3 times the average wage). The total amount of IKE assets amounted to PLN 13.47 bln (€2.93 bln) as of 31 December 2021. There were PLN 16,907 (€ 3,678) gathered on an IKE account on average.

Note: Data on the asset allocation of pension vehicles in Poland is not available at the moment of publication.

Table PL 6. Limits on contributions and average contributions paid into IKE in 2006-2021 (in PLN)		
	Contribution limit	Average contribution paid
2006	3,521	2,199
2007	3,697	1,719
2008	4,055	1,561
2009	9,579	1 85
2010	9,579	1,971
2011	10,077	1,982
2012	10,578	2,584
2013	11,139	3,130
2014	11,238	3,440
2015	11,788	3,511
2016	12,165	3,738
2017	12,789	3,843
2018	13,329	4,179
2019	14,295	4,557
2020	15,681	4,833
2021	15,777	5,203

Source: Own work based on: UKNUiFE 2005; UKNF 2007, 2012b, 2014b, 2016b, 2017b, 2018c, 2019a, 2020b, 2021c & 2022c.

Individual Retirement Savings Accounts (IKZE)

Like individual retirement accounts, the group of IKZE products consists of:

- unit-linked life insurance;
- investment funds;
- bank accounts;
- accounts in brokerage houses; and
- voluntary pension funds.

At the end of 2021 around 463 thousand Poles had individual retirement savings accounts. As shown on chart PL3, the IKZE market is dominated by asset management companies and life insurers that run 45% and 21% of the accounts respectively.

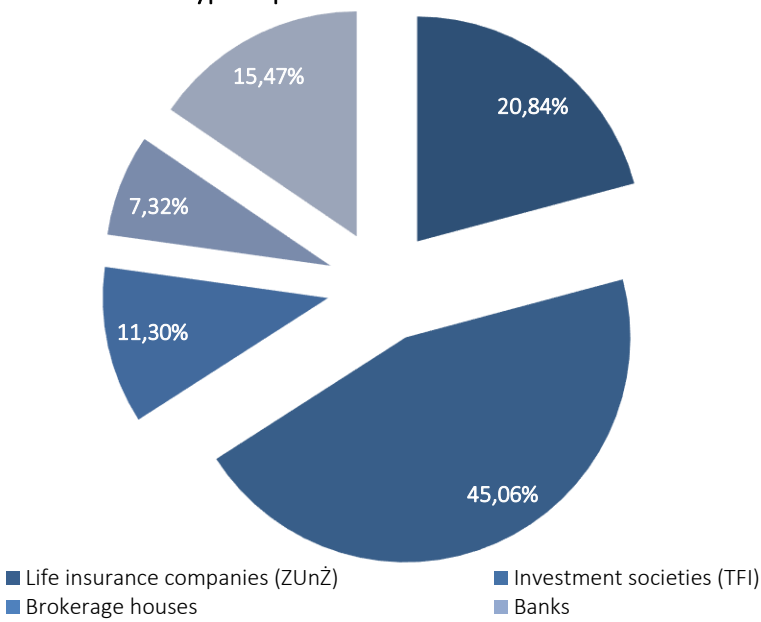
Table PL 7. Number of Individual Retirement Savings Accounts (IKZE) by type of the product (2012-2021)

Type of the product	Unit-linked life insurance	Investment fund	Account in the brokerage house	Bank account	Voluntary pension fund	Total
2012	363,399	5,202	559	19	127,642	496,821
2013	388,699	9,565	1,012	33	97,117	496,426
2014	418,935	17 51	2797	8105	80,795	528,142
2015	442,735	54,471	4,325	13735	82,294	597,259
2016	446,054	87 51	6201	15585	87,762	555,602
2017	448,881	121,269	8,478	18114	94,252	690,994
2018	447,303	150,217	11172	20311	101,386	730,389
2019	376,839	175,029	16,838	24429	61,448	654,583
2020	96,410	191,691	31533	28150	59,773	407,557
2021	96,437	208,493	52,300	33845	71,576	462,651

Source: Own work based on UKNF 2014b, 2015, 2016b, 2017b, 2018c, 2019b, 2020b, 2021d & 2022d.

The savings pot of IKZE is small compared to other elements of the Polish supplementary pension system. At the end of 2021, financial institutions managed funds amounting to PLN 4.98 bln (€ 1.3 bln). It is worth noting that this capital was raised through contributions in just ten years. The rapid growth of IKZE market in terms of coverage and the asset value had been expected in the coming years but the implementation of PPK significantly reduced the interest in individual retirement plans.

Chart PL 3. Structure of IKZE market by number of accounts and type of provider as of 31 December 2021



Source: UKNF 2022d.

Table PL 8. Assets of IKZE (2012-2021, in thousands PLN)						
	Unit-linked life insurance	Investment fund	Account in the brokerage house	Bank account	Voluntary pension fund	Total
2012	36,393	7,973	1,673	40	6,803	**52,882**
2013	75,117	23,371	4,815	98	15,805	**119,206**
2014	167,737	63,559	14,638	11624	37,792	**295,350**
2015	281,946	193,099	30,268	35081	79,198	**619,592**
2016	398,589	407,884	57,045	66600	147,972	**1,078,090**
2017	545,374	719,630	93,780	106702	240,671	**1,706,157**
2018	635,146	1,083,451	119,354	156208	320,798	**2,314,957**
2019	783,627	1,608,717	197,171	224330	469,984	**3,283,829**
2020	956,179	2,257,552	392,266	306986	668,791	**4,581,774**
2021	1,099,976	2,809,972	715,151	383821	967,832	**5,976,752**

Source: Own work based on: UKNF 2022d;

Charges

The type and level of charges deducted from pension savings depend on the vehicle used and the type of programme. Lower fees are charged for collective plans organised by employers (PPE). Significant cost differences exist between various product types. Since no comprehensive data regarding the costs of all supplementary pension plans offered in Poland is collected or officially published, the information provided below reflects the costs of selected (exemplary) pension products and schemes functioning in Poland.

Employee Pension Programmes (PPE)

Data on PPE charges is hardly available. The Financial Supervisory Commission does not provide any official statistics on value or the percentage of deductions on assets of employee pension programmes. Some information can be found in the statutes of PPEs, but they describe rather the types of costs charged than the level of deductions. Employers must cover many administrative costs connected with PPE organisation (disclosure of information, collecting employees' declarations, transfer of contributions, etc.). The savings of participants are usually reduced by a management fee that varied from 0.5% p.a. to 2% p.a. of AuM and depend on the investment profile of funds chosen.

The lowest charges are applied to employee pension funds (Pracownicze Fundusze Emerytalne – PFE), which are set up by employers (in-house management of PPE) and managed by employee pension societies. For this type of pension fund, no up-front fee is deducted and a rather low management fee (0.5% - 1% p.a.) applies to assets gathered.

Since 2019 there is a cap on management fee charged by asset management companies. It could not exceed 3.5% in 2019, 3% in 2020, 2.5% in 2021 and 2% since 2022.

Employee Capital Plans (PPK)

Financial institutions offering PPK can charge management fee (max. 0.5% AuM) and success fee (max. 0.1% AuM and only if return is both positive and above the benchmark). The fee level depends on the risk profile of the fund and amounts from 0.16% to 0.49% with 0.35% being the average for the whole PPK market (Portal PFR 2021).

Table PL 14. Average rates of management fee in PPK in 2020-2021

Target date	2020	2021
2020	0.24%	0.19%
2025	0.28%	0.27%
2030	0.31%	0.31%
2035	0.33%	0.33%
2040	0.34%	0.34%
2045	0.36%	0.35%
2050	0.38%	0.37%
2055	0.39%	0.38%
2060	0.41%	0.40%
2065	0.41%	0.40%
Average for all funds	0.35%	0.35%

Source: PFR Portal 2020 & 2021.

Individual Retirement Accounts (IKE) and Individual Retirement Savings Accounts (IKZE)

The type and level of charges depend on the type of product. There is a management fee for investment funds, voluntary pension funds and unit-linked insurance. In addition, for a unit-linked life insurance, a financial institution can charge an up-front fee, use different "buy and sell" prices for investment units (spread) and deduct other administrative fees from the pension savings accounts, e.g. conversion fees and fees for changes in premium allocation in case changes occur more frequently than stipulated in the terms of the contract. Charges that are not connected with asset management and the administration of savings accounts cannot be deducted from IKZE (i.e., life insurance companies cannot deduct the cost of insurance from the retirement account). The accumulation of pension savings through direct investments (accounts in brokerage houses) is subject to fees which depend on the type of transaction and the level of activity on financial markets (trading fees and charges). Banks do not charge any fees for the IKZEs they offer (apart from a cancellation fee).

All financial institutions offering individual retirement accounts (IKE) can charge a cancellation fee (also called a transfer fee) when a member decides to transfer savings to a programme offered by another financial entity during the first year of the contract. No cancellation fee can be deducted from the account when a saver resigns from the services of a given institution after 12 months and transfers money to another plan provider.

The table below shows the level of fees charged in individual retirement accounts (IKE) and individual retirement savings accounts (IKZE) offered by life insurance companies, investment societies and pension societies.

Table PL 9. Charges in IKE nad IKZE by type of provider

Type of financial institution	Up-front fee	Management fee (% of AuM)	Transfer fee
Life insurance companies	0-8%	0-2.0	10-50% of assets
Asset management companies	0-5.5%	0.8-2.0; success fee 0-30% of the return above the benchmark	0-PLN 500
Pension societies	0-53.4%; quota limit may be applicable	0.6-2.0; success fee 0-20.0 of the return above the benchmark	10-50% of assets; min. PLN 50

Source: own work based on Rutecka-Góra et al. 2020 and taking into account a statutory limit of management fee (max. 2% since 2022).

Taxation

Employee pension programmes (PPE)

Basic contributions financed by employers are subject to personal income tax, which is deducted from the employee's salary. Additional contributions paid by employer from the net salary are treated the same way (contributions paid from after-tax wage). Returns and benefits are not taxed (TEE regime).

Employee Capital Plans (PPK)

In PPK both employee and employer contributions are taxed. A state kick-off payment and regular annual subsidies as well as investment returns and benefits are exempt from taxation. Therefore, it is a TEE regime with a state subsidy.

Individual Retirement Accounts (IKE)

Contribution is taxed as it is paid by a saver from his/her net income. An individual can pay up to three times the average wage annually. There is a tax relief for capital gains. Benefits are not taxable (TEE regime).

Individual Retirement Savings Accounts (IKZE)

Contributions to IKZE are deductible from the income tax base. In 2012 and 2013 there was a cap on contribution amounting to 4% of the person's annual salary in the previous year. Due to the most recent changes in the pension system, the given limit was replaced with a flat-rate limit in 2014. Every individual can pay up to 120% of the average salary into an IKZE account. Since 2021 there is a higher limit of contribution for self-employed that amounts to 180% of

the average salary in the economy. Returns are not subject to taxation, but benefits are taxed with a reduced flat-rate income tax (10%). This part of the supplementary pension system is the only one that follows the EET tax regime.

Pension Returns

Asset allocation

Employee Pension Programmes (PPE)

Polish law does not impose any strict investment limits on voluntary pension savings accounts (IKE, IKZE, most forms of PPE, PPK) except for occupational pension programmes offered in the form of employees' pension fund (types of asset classes are described by law). Every financial institution that offers IKE or IKZE provides information on investment policy in the statute of the fund. Since many existing plans offer PPE participants the possibility to invest in funds from a broad group of investment funds operating in the market (not only the funds dedicated exclusively to pension savings) it's impossible to indicate what the portfolios of most PPEs look like.

The tables below present the investment portfolio of employee pension funds, which are the only types of occupational pension products with official and separate statistics on asset allocation.

Table PL 10. Portfolio of employees' pension funds (PFE) in years 2010-2020 (as % of assets)

	Shares	Gov. bonds	Investment funds units	Bank deposits	Other investments	Assets under management (in PLN mln)
2010	14.19	1.48	24.30	58.78	1.25	**1542.60**
2011	14.90	2.14	33.13	48.90	0.92	**1559.00**
2012	19.49	1.53	37.53	40.91	0.54	**1873.28**
2013	29.86	2.01	49.83	17.91	0.39	**2038.54**
2014	33.00	1.05	61.64	4.30	0.01	**1749.60**
2015	34.09	2.27	63.64	0.00	0.00	**1797.08**
2016	29.62	63.00	0	6.70	0.68	**1766.59**
2017	32.91	64.31	0	1.86	0.92	**1856.91**
2018	30.77	67.22	0	1.62	0	**1740.38**
2019	31.49	58.48	0	1.92	8.11	**1886.42**
2020	16.76	46.61	0	4.45	32.18	**2017.40**

Source: own collaboration based on: Biuletyn Kwartalny. Rynek PFE 4/2019, KNF, Warszawa 2020

PPKs are a target-date funds what means that the general asset allocation (bonds vs shares) depends on the target date of the fund as described in "Pension vehicles" section.

Individual Retirement Accounts (IKE) and Individual Retirement Savings Accounts (IKZE)

There are no available statistics that allow for the identification of the asset allocation within Individual Saving Accounts (IKE) and Individual Retirement Savings Accounts (IKZE) offered as insurance contracts, investment funds and accounts in brokerage houses. It is because an individual can buy units of many investment funds (or financial instruments) that are also offered as non-IKE and non-IKZE products. Since no separate statistics for pension and non-pension assets of a given fund are disclosed, it is impossible to indicate which funds create the portfolios of IKE and IKZE holders nor what the rates of returns obtained by this group of savers are.

The only form of IKE and IKZE that is strictly separated from other funds and is dedicated solely to pension savings is a voluntary pension fund. These vehicles started operating in 2012. The table below shows the DFE's investment portfolios in years 2014-2019.

Table PL11. Portfolio of voluntary pension funds (DFE) offered as Individual Retirement Saving Accounts (IKZE) and Individual Retirement Accounts (IKE) in 2014-2021, as % of DFE assets

Provider	Year	Shares	Gov. Bonds	Non-gov. Bonds	Other	AuM (in PLN mln)	Market share (as % of total DFEs' assets)
Allianz Polska DFE	2014	33.46%	32.43%	21.81%	12.30%	3.72	6.25%
	2015	35.12%	29.39%	28.60%	6.90%	5.6	5.28%
	2016	31.84%	22.54%	37.07%	8.54%	8.3	4.40%
	2017	53.62%	5.86%	34.17%	6.35%	11.9	3.87%
	2018	42.49%	17.33%	34.65%	5.53%	13.7	3.48%
	2019	32.92%	21.52%	38.90%	6.65%	16.9	2.92%
	2020	41.26%	17.49%	34.71%	6.53%	20.2	2.52%
	2021	51.73%	7.75%	34.08%	6.44%	21.6	2.15%
DFE Pekao*	2014	43.83%	40.45%	2.86%	12.86%	13.18	22.16%
	2015	52.90%	30.95%	1.93%	14.21%	28.5	26.89%
	2016	57.41%	32.73%	4.78%	5.08%	52.2	27.65%
	2017	50.99%	43.12%	0.19%	5.70%	82.7	26.87%
DFE Pocztylion Plus	2014	24.62%	67.55%	0.00%	7.83%	0.55	0.92%
	2015	26.26%	67.64%	6.11%	0.00%	0.8	0.75%
	2016	34.83%	59.31%	0.00%	5.86%	1.1	0.58%
	2017	35.25%	55.08%	1.70%	7.97%	1.5	0.49%
	2018	35.38%	54.83%	1.00%	8.79%	2.5	0.64%
	2019	38.48%	53.66%	1.25%	6.61%	4	0.69%
	2020	55.55%	24.49%	14.54%	5.35%	5.9	0.73%
	2021	58.77%	21.33%	16.00%	3.90%	8.5	0.70%
DFE PZU	2014	66.82%	13.94%	2.40%	16.84%	9.08	15.27%
	2015	73.26%	13.58%	1.45%	11.70%	14.8	13.96%
	2016	74.79%	17.64%	0.77%	6.80%	27	14.30%
	2017	72.84%	16.78%	0.42%	9.96%	47.8	15.53%
	2018	69.28%	9.55%	7.01%	14.16%	175.7	44.64%

	2019	60.80%	14.28%	16.31%	8.60%	262.7	45.39%
	2020	63.03%	4.01%	21.75%	11.70%	347.9	43.32%
	2021	59.92%	24.11%	10.03%	5.94%	508.8	41.92%
Nordea DFE(D)	2014	37.44%	35.32%	10.44%	16.81%	1.63	2.74%
Nationale Nederlanden DFE	2014	63.74%	0.00%	12.35%	23.92%	5.92	9.95%
	2015	57.45%	4.49%	10.50%	27.57%	15.2	14.34%
	2016	50.51%	18.75%	6.85%	23.89%	36.7	19.44%
	2017	56.36%	35.58%	0.01%	8.05%	0.3	0.10%
	2018	69.28%	9.55%	7.01%	14.16%	175.7	44.64%
	2019	52.80%	24.09%	14.52%	8.58%	169.2	29.23%
	2020	59.95%	2.84%	29.32%	7.49%	260.3	32.41%
	2021	54.73%	25.84%	10.46%	8.97%	452.7	37.30%
MetLife Amplico DFE	2014	39.46%	40.26%	0.00%	20.27%	19.11	32.13%
	2015	61.24%	32.92%	0.00%	5.84%	24.2	22.83%
	2016	59.60%	32.60%	0.00%	7.80%	28.5	15.10%
	2017	56.99%	22.13%	12.91%	7.97%	73.5	23.88%
	2018	49.69%	43.78%	0.66%	5.87%	30.8	7.83%
	2019	64.96%	29.25%	0.56%	5.23%	36	6.22%
	2020	43.92%	33.77%	0.00%	22.31%	47.3	5.89%
	2021	60.93%	30.71%	1.98%	6.38%	55.6	4.58%
PKO DFE	2014	35.29%	53.04%	0.00%	11.67%	6.29	10.57%
	2015	35.84%	51.51%	0.00%	12.65%	16.8	15.85%
	2016	26.26%	58.34%	0.00%	15.40%	34.8	18.43%
	2017	41.48%	48.64%	0.00%	9.88%	56.3	18.29%
	2018	37.75%	48.14%	1.44%	12.67%	69.8	17.73%
	2019	37.20%	44.07%	6.50%	12.23%	89.3	15.43%
	2020	50.40%	46.46%	0.00%	3.14%	120.1	14.95%
	2021	55.92%	42.64%	0.00%	1.44%	158.7	13.08%
Generali DFE	2015	37.44%	48.61%	0.00%	13.95%	0.1	0.09%
	2016	68.60%	29.87%	0.00%	1.53%	0.2	0.11%
	2017	56.36%	35.58%	0.01%	8.05%	0.3	0.10%
	2018	43.40%	48.54%	0.04%	8.02%	0.5	0.13%
	2019	56.54%	33.98%	0.00%	9.47%	0.7	0.12%
	2020	67.92%	23.70%	0.00%	8.35%	1.4	0.17%
	2021	40.57%	50.18%	0.00%	9.25%	3.2	0.26%

* Liquidated in 2018

Source: own collaboration based on analizy.pl

Pension returns

The investment efficiency of supplementary pension products is almost impossible to assess due to the lack of necessary data published by financial institutions. In Poland there in many retirement plans there is no obligation to disclose rates of return to pension accounts holders. Generally, owners of savings accounts are informed about contributions paid, the value of investment units and the balance of their accounts at the end of the reporting period. But they are not informed neither about their pension accounts real efficiency nor the total cost ratio deducted from their individual retirement accounts. No comprehensive data concerning the investment efficiency of supplementary pension products, especially individual plans, is published in official statistics.

Due to the shortage of detailed statistics the assessment of the efficiency of pension product investments is possible only for the selected vehicles, namely employee pension funds (PFE), capital pension plans (PPK) and voluntary pension funds (DFE).

As the management fee is deducted from fund assets on a regular basis and the value of a fund unit is calculated based on net assets, the nominal rates of return indicated below take into account the levels of management costs. The only fee that must be included when calculating after-charges returns is the upfront-fee deducted from contributions paid into accounts.

During the period of 2002-2021 employee pension funds (PFE) showed rather positive returns up to 17.41% annually. Negative nominal results appeared only in the years 2008, 2011, 2015 and 2018 when equity markets dropped significantly. After-charges real returns observed in 15 of 20 years and the average return in the 20-year period is highly positive as well. These satisfactory results were obtained due to proper portfolio construction, high quality of management and low costs.

Table PL 12. Nominal and real after-charges returns of Employee Pension Funds in 2002-2021 (in %)

Employee pension fund	PFE NESTLÉ POLSKA	PFE SŁONECZNA JESIEŃ	PFE ORANGE POLSKA	PFE UNILEVER POLSKA	PFE "NOWY ŚWIAT"	PFE "DIAMENT"	Weighted nominal return after charges, before inflation	Inflation (HICP)	Weighted real return after charges and inflation
2002			11.35%		9.76%	-21.05%	7.88%	0.81%	**7.02%**
2003			10.28%		10.44%	8.71%	10.14%	1.73%	**8.26%**
2004	11.25%		12.30%	14.24%	13.64%		12.59%	4.32%	**7.93%**
2005	12.53%		14.82%	12.93%	13.81%		14.50%	0.75%	**13.65%**
2006	12.41%	10.60%	15.40%	13.41%	15.25%		14.99%	1.37%	**13.43%**
2007	5.10%	4.52%	6.10%	5.77%	6.23%		5.94%	4.30%	**1.58%**
2008	-10.10%	-11.33%	-13.54%	-6.34%	-13.86%		-13.14%	3.30%	**-15.91%**
2009	13.33%	14.83%	15.78%	12.74%	17.41%		15.85%	3.88%	**11.52%**
2010	9.98%	9.60%	10.33%	9.75%	10.52%		10.22%	2.85%	**7.16%**
2011	-5.05%	-3.10%	-4.75%	-3.59%	-5.20%		-4.51%	4.59%	**-8.70%**
2012	15.82%	13.60%	14.96%	15.01%	14.15%		14.57%	2.14%	**12.17%**
2013	5.19%	5.21%	3.45%	4.56%	5.71%		4.28%	0.60%	**3.66%**
2014	4.42%		3.91%	4.92%	2.56%		3.65%	-0.70%	**4.37%**
2015	-1.24%		-2.74%	-0.97%	-1.35%		-2.31%	-0.40%	**-1.92%**
2016			3.18%	4.88%	3.93%		3.44%	0.90%	**2.51%**
2017			8.24%	6.66%	9.19%		8.47%	1.69%	**6.67%**
2018			-1.12%		-2.69%		-1.47%	0.88%	**-2.33%**
2019			5.58%		1.57%		4.72%	3.01%	**1.66%**
2020			8.36%		1.76%		7.07%	3.39%	**3.56%**
2021			4.40%		3.67%		4.26%	8.01%	**-3.47%**
Annual average 2002-2021	**5.84%**	**5.15%**	**6.04%**	**6.51%**	**5.54%**	**-7.36%**	**5.80%**	**2.35%**	**3.37%**

Source: own work based on Eurostat (HICP) and UKNF.

Voluntary pensions funds (DFE) have obtained extraordinary investment results from their start in 2012. The first years of their operation coincided with the time of the Polish financial market recovery and allowed the funds to maximise rates of return from the equity portfolios. The best DFEs reported more than 50% nominal return in 2013. But such returns were impossible to achieve in next years. In 2014, some of DFE even experienced slightly negative returns that were covered by returns in the following years. The worst investment returns were achieved in 2018 when all DFE made losses. The average real rate of return after charges in years 2013-2021 amounted to 3.72%.

Table PL 12. Nominal and real returns of voluntary pension funds (DFE) in 2013-2020 (in %)										
	2013	2014	2015	2016	2017	2018	2019	2020	2021	Annual average 2013-2021
Allianz Polska DFE	7.80%	2.03%	-0.33%	5.81%	9.33%	-8.32%	3.44%	91.00%	13.79%	**3.65%**
DFE Pekao*	16.30%	1.27%	3.26%	4.85%	6.78%					**6.37%**
DFE Pocztylion Plus	6.90%	-2.22%	2.56%	3.60%	-0.98%	-4.77%	1.04%	8.04%	19.65%	**3.54%**
DFE PZU	32.80%	3.64%	9.07%	16.19%	14.67%	-9.90%	3.39%	1.62%	12.41%	**8.75%**
NN DFE	59.10%	-0.73%	16.21%	13.26%	9.01%	-8.61%	8.91%	15.29%	10.81%	**12.48%**
MetLife DFE	56.70%	6.09%	-1.89%	3.76%	6.65%	-16.61%	9.65%	33.28%	11.53%	**10.48%**
PKO DFE	16.90%	2.54%	-0.88%	5.74%	8.63%	-8.51%	0.14%	10.97%	14.82%	**5.31%**
Weighted nominal return before charges and inflation	40.57%	3.15%	3.90%	8.14%	8.92%	-9.75%	4.87%	9.34%	12.14%	**8.36%**
Weighted nominal return after charges**, before inflation	36.94%	0.64%	1.36%	5.49%	6.18%	-12.28%	1.77%	6.09%	8.69%	**5.48%**
Inflation (HICP)	0.60%	-0.70%	-0.40%	-0.90%	1.69%	0.88%	3.01%	3.40%	8.01%	**1.70%**
Weighted real return after charges and inflation	36.12%	1.34%	1.77%	6.45%	4.42%	-13.04%	-1.21%	2.60%	0.63%	**3.72%**

Source: own elaboration based on analizy.pl, Eurostat data

Positive rates of return were also reported by employee capital plans (PPK) that stared to operate in the second half of 2019. Their investment efficiency in 2020 and 2021 is presented in the table below.

Table PL 14. Nominal and real average returns of employee capital plans (PPK) in 2020-2021 (in %)								
	Target date of the funds							
	2025	2030	2035	2040	2045	2050	2055	2060
2020	7.66%	9.30%	10.75%	10.95%	12.42%	12.19%	11.90%	13.43%
2021	-0.70%	4.80%	9.68%	10.95%	14.25%	14.60%	14.43%	14.17%
Annual nominal average return 2020-2021	**3.40%**	**7.03%**	**10.21%**	**10.95%**	**13.33%**	**13.39%**	**13.16%**	**13.80%**
Annual real average return after charges and inflation 2020-2021	**-2.16%**	**1.27%**	**4.29%**	**4.99%**	**7.24%**	**7.29%**	**7.08%**	**7.68%**

Source: own work based on analizy.pl

Holding Period	Employee pension funds			Voluntary pension funds		
	Gross returns	Net Nominal Returns	Real Net Returns	Gross returns	Net Nominal Returns	Real Net Returns
1-year	-	4.26%	3.55%	12.14%	8.69%	0.63%
3-years	-	5.34%	0.93%	8.74%	5.48%	0.66%
5-years	-	4.55%	2.37%	4.80%	1.87%	-1.45%
7-year	-	3.39%	2.03%	5.14%	2.31%	0.10%
10-years	-	4.57%	2.02%	-	-	-
Since inception	-	5.80%	3.37%	8.36%	5.48%	3.72%

Conclusions

Starting in 1999, with individual supplementary elements introduced in 2004, 2012 and 2019, the Polish supplementary pension market is still in its early stage of operation. The coverage ratios (3.82%, 4.75%, 2.76% and 15.18% respectively), show that only a tiny part of Poles decided to secure their future in old age by joining the occupational pension plan or purchasing individual pension products. This could be due to low financial awareness, insufficient level of wealth or just the lack of information and low transparency of pension products.

The official information concerning supplementary pension products in Poland is limited. In the majority of pension plans financial institutions do not have any obligation to disclose rates of return, either nominal or real, nor after-charges. Published data includes the total number of programmes or accounts by types of financial institution and total assets invested in pension products. The Financial Supervisory Commission (KNF) collects additional detailed data about the market (the number of accounts and pension assets managed by every financial institution) but does not disclose the data even for research purposes.

Moreover, no comparable tables on charges, investment portfolios and rates of return are prepared or made accessible to the public on a regular basis. Certain product details must be put in the fund statutes or in the terms of a contract, but they are hardly comparable between providers. The Polish supplementary pension market is highly opaque, especially in terms of costs and returns.

Among a wide variety of pension vehicles, there are only a few products with sufficient official statistics to assess their investment efficiency: employee pension funds (PFE) managed by employees' pension societies, voluntary pension funds (DFE) managed by general pension societies (PTE) and employee capital plans (PPK). Other products are more complex due to the fact that supplementary pension savings are reported together with non-pension pots. That makes it impossible to analyse the portfolio allocations and rates of return for individual pension products separately.

After-charges returns in the "youngest" pension products offered as a form of voluntary pension fund (DFE) were extremely high in 2013, both in nominal and real terms, and offered relatively high average real rate of return amounting to 3.72% in the period 2013-2021. The second type of products analysed, namely employee pensions funds (PFE), delivered significant profits as well, with the annual average real return of 3.37%. But other pension vehicles may turn out not to be so beneficial, especially when a wide variety of fees and charges are deducted from contributions which are paid to the accounts.

To sum up, the disclosure policy in supplementary pension products in Poland is not saver oriented. Individuals are entrusting their money to the institutions, but they are not getting clear information on charges and investment returns. Keeping in mind the pure DC character of pension vehicles and the lack of any guarantees, this is a huge risk for savers. All this may lead to significant failures on the pension market in its very early stages of development. In the future, some changes in the law should be introduced, such as **imposing an obligation** on financial institutions **to disclose rates of return** to pension accounts holders. Moreover, there is **an urgent need for a full list or even ranking of supplementary pension products**, both occupational and individual ones, published by independent body. This would help individuals make well-informed decisions and avoid buying inappropriate retirement products.

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Pension Savings: The Real Return

2022 Edition

Country Case: Romania

Rezumat

Ţinând cont de proporţiile reduse de acoperire a forţei de muncă în sistemele de pensii private din Europa, România se distinge prin obligativitatea aderării la fondurile de pensii administrate privat. Această prevedere constituie, în principiu, un avantaj atât pentru individ, cât şi pentru sistemul public de pensii, reducând presiunea pe cel din urmă si crescând şansele de a genera un nivel adecvat al venitului după pensionare.

Concluziile Înaltului Forum privind Uniunea Pieţelor de Capital (High-Level Forum on the Capital Markets Union, 2020) subliniază necesitatea armonizării, la nivelul Uniunii Europene, a prevederilor privind aderarea automată, cu posibilitatea de retragere, a întregii forţe de muncă ocupate. În acest sens, Romania se află pe traiectoria potrivită pentru consolidarea unui sistem de pensii durabil. Mai mult, fondurile de pensii din pilonul II cad sub incidenţa unei obligaţii de a obţine un randament minim. Din nefericire, acest randament minim este calculat în termeni nominali, nu reali, ceea ce în perioade cu rate foarte înalte ale inflației, cum este și cea din prezent, pot afecta foarte serios participanții în sistemele de pensii administrate privat.

Fondurile de pensii din România au înregistrat randamente nominale nete pozitive in ultimii 15 ani: media anuala pentru pilonul II a fost de 5.38% (calculat in €, cumulat 208%) iar pentru pilonul III 2.63% (calculat in €, cumulat 147%). Însă, după ajustarea la nivelul inflaţiei, fondurile pensii administrate privat au obţinut, în medie, 2.04% (calculat în €, cumulat 132%) iar fondurile facultative -1% (calculat în €, cumulat -14%). Trebuie totuși menționat că aceste rezultate nete pozitive au fost influențate favorabil de faptul că, în momentul crizei financiare din 2008, fondurile de pensii din România erau la început, astfel încât corecțiile majore ale piețelor le-au afectat într-o foarte mică măsură.

Compunerea portofoliilor ambelor tipuri de scheme administrate privat rămâne foarte similară şi, prin urmare, generează randamente brute similare. Cu toate acestea, randamentul net al Pilonului III este influenţat în mod semnificativ de structura costurilor substanţial mai mari (aproape de 4 ori mai mari) şi, astfel, pe termen lung, va genera randamente mai mici decât cele aferente Pilonului II.

Asociaţia Utilizatorilor Români de Servicii Financiare (AURSF), membră BETTER FINANCE, a atras în permanenţă atenţia asupra costurilor mari de administrare și, în special asupra comisionării ex-ante a contribuțiilor virate în conturile participanților. În plus, AURSF a criticat vehement și a contestat, inclusiv în Parlament, decizia autorităţilor de a reduce contribuţiile

virate în contul participanţilor de la 5,1% la 3,75%, care a reprezentat o deturnare inabil mascată a 0,5% din venitul brut al acestora dinspre contul personal de la pilonul II către pilonul I. De asemenea, AURSF a inițiat schimbarea legislativă prin care s-a încurajat opţiunea asumată a participanţilor pentru unul dintre fondurile administrate privat, urmând să monitorizeze dacă obligativitatea de informare impusa angajatorilor începând cu data de 19 iulie 2021 va produce efectele scontate, în sensul diminuării numărului de participanți distribuiți aleatoriu. De asemenea, AURSF a pus în discuție în cadrul Grupului de Dialog Permanent pentru Protecția Consumatorilor organizat la nivelul Autorității de Supraveghere Financiară (ASF) problema afectării grave a randamentelor obținute de fondurile de pensii administrate privat, în contextul creșterii ratei inflației și a ratelor de dobânzi, care au afectat negativ randamentele titlurilor de stat, principalul activ deținut de fondurile de pensii administrate privat. În plus, AURSF a solicitat explicații și în legatură cu achiziționarea de către fondurile de pensii administrate privat a unor obligațiuni ale unei bănci cu capital rusesc.

Eforturile Autorităţii de Supraveghere Financiară (ASF) privind transparenţa vehiculelor de pensii private aflate sub jurisdicţia sa merită o menţiune specială. Coordonatorii acestui raport subliniază că, în general, obţinerea datelor statistice necesare analizelor noastre devine din ce în ce mai grea: randamentele (dacă) sunt publicate cu multă întârziere şi după deducerea costurilor (ceea ce face dificilă raportarea randamentelor brute), iar alte cifre cheie (număr de participanţi, alocarea capitalului, valoarea activelor sub gestiune) sunt fie indisponibile, fie extrase din surse variate.

În schimb, exact cum recomandăm şi altor autorităţi competente, pagina de internet “Date statistice fonduri de pensii” întreţinută de A.S.F. România actualizează, lunar, 89 de tabele privind fondurile de pensii din pilonul II şi pilonul III.

Felicităm A.S.F. România pentru acest demers şi recomandăm ferm completarea tabelelor 5.1 si 4.1 cu randamentele nete ajustate cu indicele inflaţiei (indicele lunar armonizat al preţurilor de consum, publicat de Eurostat).

Summary

Considering the reduced coverage ratios of the occupied labour force in European private pension schemes, Romania stands out for its mandatory enrolment to privately managed pension funds (Pillar II, occupational). This provision gives an advantage both for the individual and for the public pension system as it reduces pressure on the latter and elevates the chances to achieve pension adequacy.

The High-Level Forum on the Capital Markets Union (2020) concluded the need to harmonise, at EU level, regulations on auto-enrolment, with the choice of withdrawal, of the entire occupied labour force. In this regard, Romania is on the right path to consolidate a sustainable pension system. Moreover, occupational pension funds are required to deliver a minimum return. Unfortunately, this return is calculated in nominal, not real terms, which can

significantly affect privately managed pension fund participants in times of spiralling inflation, as is currently the case.

Romanian pension funds reported positive nominal returns over the past 15 years: the annual average for Pillar II was 5.38% (computed in €, compounded 208%) and for Pillar III 2.63% (computed in €, compounded 147%). However, after adjusting for inflation, privately managed funds returned, on average, 2.04% (computed in €, compounded 132%) and voluntary funds -1% (computed in €, compounded -14%). It is worth mentioning that these performances were positively influence by the fact that, during the 2008 global crisis, the funds were at its inception, thus the impact of market corrections was minimal.

The portfolios of both schemes are very similar and, thus, generate similar gross returns. However, Pillar III returns are heavily influenced by the significantly higher costs (almost four times higher) and, as such, on the long-term it will generate lower returns than Pillar II funds.

The Romanian Financial Services Users' Association (AURSF), member of BETTER FINANCE, has constantly drawn attention to the high administrative costs and, in particular, to applying ex-ante commissions on pension fund participants' contributions to their individual accounts. Moreover, AURSF has firmly criticized, including before the Romanian Parliament, public authorities' decision to reduce the contribution rate from 5.1% to 3.75%, which represented an unsuccessfully masked misappropriation of their gross income from the personal account to Pillar I. In addition, AURSF initiated the legislative reform incentivizing the active choice of participants for one of the privately managed pension funds, which will be subject to monitoring if employers' duty to inform as of 19 July 2021 will reach the aim of reducing the number of default assigned participants. AURSF also tabled the issue of pension funds' performances in times of rising inflation and interest rates, which affected the yield of sovereign instruments, the main asset in pension funds' portfolios. Last, AURSF demanded justifications as to the acquisition of bonds issued by a Russian-capital bank.

The Romanian Financial Supervisory Authority's efforts towards the transparency of private pension vehicles under its jurisdiction deserve a special mention. This report's coordinators highlight that, in general, it's becoming more and more difficult to obtain the necessary statistical data for our analyses: (where applicable) returns are published late and after deducting costs and charges (making it difficult to compute gross returns), and other key figures (number of participants, asset allocation, assets under management) are either unavailable, or aggregated from other various sources.

In contrast, as we have been recommending to other competent authorities as well, the webpage "Date statistice fonduri de pensii" (available only in Romanian) updates, on a monthly basis, 89 tables on Pillar II and Pillar III pension funds.

We congratulate the Romanian FSA for this endeavour and firmly recommend adding to tables 5.1 and 4.1 inflation-adjusted net returns (using the monthly harmonised index of consumer prices, published by Eurostat).

Introduction

The Romanian old-age pension system is based on the World Bank's multi-pillar model, which consists of three main pillars:

- Pillar I – State pension organized as a mandatory Pay-As-You-Go (PAYG) scheme;
- Pillar II – Organised as a mandatory, funded and defined contribution pension scheme,
- Pillar III – A supplementary pension scheme, based on the principle of voluntary participation with the defined-contribution characteristic.

Romania's multi-pillar pension reform began in 2007, when Pillar III was added into the pension system (collecting the first contributions) and became voluntary for all persons earning any type of income. Pillar II was put into place in 2008 (collecting the first contributions) and became mandatory for all employees aged under 35.

Table RO1. Pensions system in Romania

National Public Pensions Office	Private Pension System Supervisory Commission	
PILLAR I	**PILLAR II**	**PILLAR III**
State Pension	**Funded pension**	**Voluntary pension**
Law no. 263/2010 on the unitary public pension system	Law no. 411/2004 on the privately managed pension funds, republished, including subsequent amendments and additions	Law no.204/2006 on the voluntary pensions, including subsequent amendments and additions
Mandatory	Mandatory	Voluntary
Publicly managed	Privately managed pension funds	
PAYG	Funded	
DB (Defined Benefit scheme)	DC (Defined Contribution scheme)	
	Individual personal pension accounts	
The possibility of early and partially early retirement, contingent upon the fulfilment of the age conditions and the contribution stage provided by the law and the accumulated points.	Withdrawal from the system is only allowed through retirement.	The participant can, at any time, suspend or stop the contribution payment (they remain members in the system until retirement).
Quick facts		
Number of old-age pensioners: 5.08 mil. Number of insured: 6.23 mil.	Administrators: 7 Funds: 7	Administrators: 8 Funds: 10

Average old-age pension: €336.6	Custodians: 3	Custodians: 3
Average salary (gross): €1278.4	Brokers: 14	Brokers: 21
Net replacement ratio (state pension): 26.3%	AuM: €18 bln. (89.1 bln. RON)	AuM: €0.69 bln. (3.41 bln RON)
	Participants: 7.79 mil.	Participants: 0.56 mil.
Average aggregate pension replacement ratio: 38% (2021 – Eurostat)		

Source: Own elaboration based on CNPP, ASF and INSSE data, 2022; Notes: Exchange rate RON/EUR = 4.949; data on average old-age pension and gross salary and data on the number of old-age pensioner are calculated as an average for the year 2021; data on number of participants and assets under management as of December 2021

The overall coverage of Pillar II, measured as a ratio between the number of participants and the economically active population, was almost entire working population in 2019, while Pillar III covered only 6% of the economically active population. Thus, we can expect than future pension income stream will be influenced mostly by Pillar II pensions, while Pillar III will generate an insignificant part of individuals income during retirement.

Summary Return Table				
	Pillar II		Pillar III	
Holding Period	Nominal	Real	Nominal	Real
1 year	4.12%	-2.58%	3.63%	-3.07%
3 years	5.84%	1.64%	4.80%	0.6%
7 years	3.73%	1.23%	2.71%	0.22%
10 years	5.28%	2.83%	4.35%	1.90%
Since inception	5.38%	1.91%	2.63%	-1.00%

Source: BETTER FINANCE own composition, 2022

Pillar I – State Pensions

The first pillar of the Romanian pension system is organized on the Pay-as-You-Go (PAYG) principle of redistribution, being funded on an ongoing basis and functioning on the defined-benefit rule.

The state (through the National House of Public Pensions, a public institution constituted for this purpose in particular[217]) collects the social pension contribution from the contributors[218] and immediately pays the pensions to the current retirees.[219] State pension in Romania is also based on the principle of solidarity between generations and gives the right to pension entitlement upon retirement age, following a minimum contribution period (15 years), as provided by law.

This compulsory system is closely connected to the economic activity and income of citizens. It is 88%[220] financed from social security contributions made by both employers and by employees, while generally consuming the biggest part (or entirety) of the social security budget.

Social security contributions are paid to the State's social security budget at a rate of 20.8% of payroll for employers and 10.5% of income (gross earnings) for employees. It should be noted that since 1 October 2014, the employer's contribution ratio has been reduced to 15.8%. This pillar is financed by contributions of economically active individuals. These contributions are directed to the CNPP, which distributes the benefit to current pensioners (system beneficiaries).

The pensions are calculated using a formula to an algorithm based on the mean salary score (which is calculated by comparing an individual's own salary to the average monthly salary), the correction coefficient, the full vesting period (35 years), and on pension points, which are expressed as a nominal value.

Therefore, the pension entitlement is calculated when the employee claims it and uses the values determined for that date (once), using the following formula:

Pension allowance =

Mean Salary Score x Correction Coefficient x Value of the Pension Point.

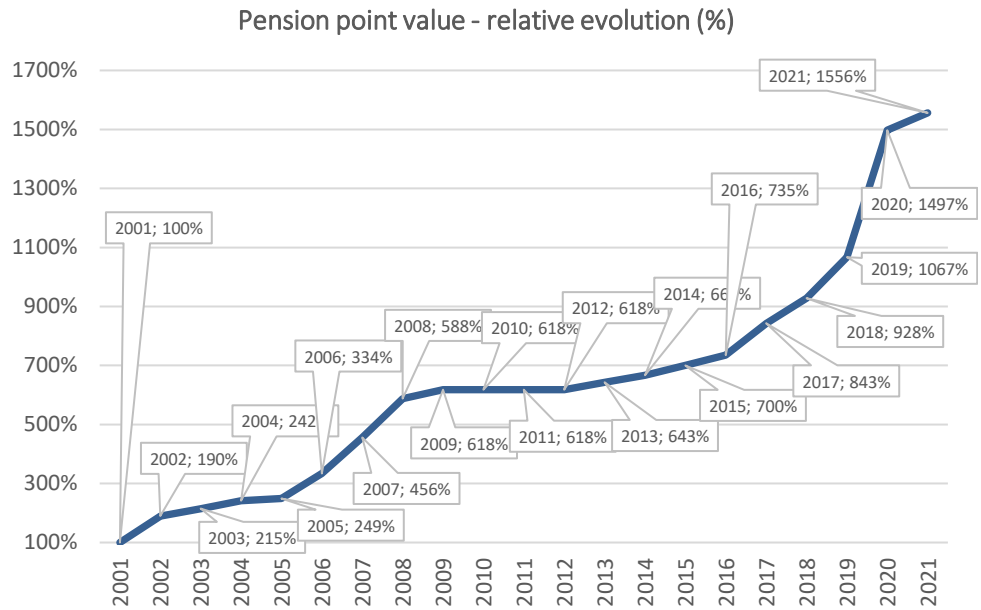
The most important variable is given by the value of the pension point, which have been increasing for 20 years in a row.

[217] In Romanian, „Casa Naţională de Pensii Publice", hereinafter CNPP, as per Article 4.2 read in conjunction with Article 52 (Chapter IV, Section I) of Law no. 263/2010: http://legislatie.just.ro/Public/DetaliiDocument/124530.

[218] According to the principle of contributivity, as per Article 2.c) of Law no. 263/2010.

[219] According to the principle of redistribution provided in Article 2.e) of Law no. 263/2010.

[220] In 2017, 75% of the budget was constituted from social security contributions and 25% from the consolidated state budget – see Annex no. 1/03 to Law no.7/2017 concerning the social security budget for 2017; in 2018, 88% of the budget was financed from contributions and 12% from the consolidated state budget – see Annex no. 1/03 of Law no. 3/2018 concerning the social security budget for 2018.



Source: BETTER FINANCE own composition based on CNPP data, 2022

However, in 2019, the legislation on calculating Pillar I old-age pensions came into force. Since September 2021, all old-age pensions will be recalculated. The new law increased the pension point value from 1,100 RON (230 Eur) to 1,265 RON (264 Eur). The pension point value will continue to increase to 1,775 lei (371 Eur) on September 1, 2020, and to 1,875 lei (386 Eur) on September 1, 2021. Starting in 2022, the pension point value will be automatically adjusted based on 100 percent of the annual inflation rate and 50 percent of the real increase in average gross wages.

The main retirement income stream is generated by Pillar I and, on average, representing 28% of the mean annual salary during the economically active period of the retiree in 2020, while the net replacement rate generated by Pillar I was 51%.[221] However, gross replacement ration continues to decline.

According to Romania's legislation, starting on 1 January 2011, the standard retirement age is 63 years for women and 65 years for men. These levels will be gradually reached as follow:

- between January 2011 and January 2015, the standard age for the pensioning of women will grow from 59 years to 60 years and for men from 62 years to 65 years;
- at the end of 2015 period retirement age will gradually increase only for women from 60 years to 63 years until 2030.

[221] See OECD, 'Pensions at a Glance 2017: OECD and G20 Indicators' (OECD Library, 2017), page 106, https://www.oecd-ilibrary.org/docserver/pension_glance-2017-en.pdf?expires=1533208010&id=id&accname=guest&checksum=D723E9620BBEC45B10FD956DCF9A420A, data accessible here https://data.oecd.org/pension/net-pension-replacement-rates.htm.

Early retirement - According to Law no. 263/2010 regarding the public pension schemes (in force since 1 January 2011) claiming early pension is possible as of a maximum 5 years before the standard retirement age, provided the worker has at least eight or more contribution years. The deduction made on early pension payment is fixed at 0.75% for each month (9% per year), which might bring a maximum deduction of 45% from the standard pension. The deduction is applied until the standard age limit is reached.

Pillar II – Funded pensions

Romania's mandatory private pensions system (Pillar II) is based on the World Bank's multi-pillar model. It is a fully funded scheme, with mandatory participation and distinct and private management of funds based on personal accounts and on the defined contribution (DC) philosophy with minimum return guarantees. The minimum return guarantee means that participants will receive at least the sum of contributions, net of fees, at retirement. Each fund has to comply, during the accumulation phase, with a minimum return mechanism that is set quarterly by national regulation and based on average market performance of all funds. Pillar II represents the privately managed mandatory pensions funds or schemes.

The beginning of Pillar II in Romania is connected with three important dates:

- January – July 2007 (Authorizing the administrators),
- 17 September 2007 – 17 January 2008 (Choosing pension fund by participants),
- 20 May 2008 (Collecting the first contributions to Pillar II).

Pillar II has been mandatory since its inception for all employees paying social security contributions under the age of 35 and voluntary (optional) for employees aged 35 to 45.[222]

Contribution collection is centralized by CNPP (The National Public Pensions Office), which collects and directs the contributions towards the mandatory pension funds.

A participant contributes during his active life and will get a pension when reaching the retirement age of 65 for men and 63 for women. The starting level of contribution was at 2% of the participant's total gross salary and it should go up by 0.5 percentage points a year, to reach 6% of total gross revenues in 2017. However, these values were never reached and the value for 2021 is still 3.7% and is expected to grow to 4.75% by 2024. The contribution level is fixed, with no possibility to contribute less or more based on individual preferences.

The contributions to a pension fund are recorded in individual personal pension account. The savings are invested by the pension fund administrator, according to the rules and quantitative limits generally set by the law regulating Pillar II vehicles.[223] Participants can choose only one pension fund.[224]

[222] Article 30 of Law no. 411/2004 regarding the privately managed pension funds.
[223] Article 23 defines the guiding principles and rules of conduct the fund administrator must follow, Article 25 defines the quantitative limits on asset allocations and Article 28(1) lists the ineligible investments (Law no. 411/2004).
[224] Article 31 of Law no. 411/2004.

Mandatory pension funds are managed by their administrators - Pension Management Companies (PMCs). Each PMC can manage only one mandatory pension fund. Mandatory pension funds operations are similar to the investment funds. PMC must obtain several licenses from Romania's pension market regulatory and supervisory body, which is the Financial Supervisory Authority (in Romanian, *Autoritatea de Supraveghere Financiară*, 'ASF').

The ASF is in charge of control, regulation, supervision and information about private pensions as an independent administrative authority and legal entity under the control of the Romanian Parliament.

Withdrawal from the system is only allowed at the standard retirement age of participants in the private pension system.

Pillar III – Voluntary private pension

Romania's voluntary private pensions system Pillar III is also based on the World Bank's multi-pillar model. It is also a fully funded system, based on personal accounts and on the defined contribution (DC) philosophy. Pillar III represents privately managed supplementary, voluntary pensions.

The beginning of Pillar III in Romania is connected with two important dates:

- October 2006 – May 2007 (Authorizing the administrators),
- May 2007 (Collecting the first contributions to third Pillar).

Participation is open to everybody earning an income, either employees or the self-employed. Contributions are generally made through the employers in case of employees. In case of self-employed, the contributions are sent directly on the accounts managed by pension management companies. The contributions are made by the employee, with the possibility for employers to contribute a share.

Voluntary pension funds as a special purpose vehicle are managed by their administrators - Pension Management Companies (PMCs), Life Insurance Companies (LICs) or Asset Management Companies (AMCs). Each administrator is obliged to establish and operate at least one voluntary pension fund. However, in contrast to Pillar II, administrators can manage as many funds as they wish. A voluntary pension fund operates on a similar basis as investment fund. Pension fund administrators must get several licenses from Romania's Financial Supervisory Authority.

Participants to such a fund contribute during their active life and will get a pension at the age of 60 (both woman and men) if he had accumulated at least 90 contributions. The contribution is limited up to 15% of the participant's total gross income. The contribution level is flexible - it can be decided upon, changed, and even interrupted and resumed.

Pension Vehicles

Pillar II – Funded pensions

As indicated above, each PMC specifically authorized to provide Pillar II savings products in Romania is allowed to manage only one mandatory pension fund. At the introduction of the Pillar II, the total number of authorized administrators (funds) was 18. Consolidation started as early as 2009 and 2010. Currently (end of 2021), there are 7 administrators offering 7 pension funds. The two biggest mandatory pension funds (AZT and NN) serve almost 48% (according to number of participants) or 57% (according to AuM) of the market.

Each PMC is authorized and supervised by ASF. One of the most important conditions imposed on PMC is to attract at least 50,000 participants. ASF withdraws the fund's authorization if the number of participants drops below 50,000 for a quarter.

The structure of savers, assets under management and market share of respective mandatory pension fund (PMC) is presented in a table below.

Table RO2. Pension Management Companies market share in Romania (Pillar II)

Mandatory Pension Fund (PMC)	Assets under management *(in €)*	Market share based on AuM	Number of participants	Market share based on participants
ARIPI	1,614,063,367	8.97%	813,011	10.43%
METROPOLITAN LIFE*	2,487,284,736	13.82%	1,088,825	13.97%
AZT VIITORUL TAU	3,853,165,380	21.41%	1,633,410	20.96%
BCR	1,228,667,838	6.83%	716,339	9.19%
BRD	713,839,486	3.97%	502,251	6.44%
NN	6,295,813,792	34.98%	2,060,322	26.44%
VITAL	1,804,616,909	10.03%	978,929	12.56%
TOTAL	**17,997,451,508**	**100,00%**	**7,793,087**	**100.00%**

Source: Own calculation (https://www.asfromania.ro/), 2022

Mandatory pension funds' investment strategy is very strictly regulated. The law imposes percentage limits for different asset classes.

Mandatory pension funds can invest:

- up to 20% in money market instruments;
- up to 70% in State bonds of Romania, the EU or EEA;
- up to 30% in bonds and other transferable securities issued by the local public administrations in Romania, the EU or EEA, traded on a regulated market in RO, EU or EEA;
- up to 50% in securities traded on a regulated market in Romania. the EU or EEA;
- up to 15% in bonds issued by third-party states, traded on a regulated market in Romania, the EU or EEA;

- up to 10% in bonds and other transferable securities issued by the local public administration in third-party states, traded on a regulated market in Romania. the EU or EEA;
- up to 15% in bonds issued by the World Bank. the European Bank for Reconstruction and Development and the European Investment Bank, traded on a regulated market in Romania, the EU or EEA;
- up to 5% in bonds issued by Non-governmental Foreign Bodies, traded on a regulated market in Romania, the EU or EEA;
- up to 5% in units issued by Undertakings for Collective Investment in Transferable Securities – UCITS, including ETF in Romania, the EU or EEA;
- up to 3% in ETC`s and equity securities issued by non UCITS set up as closed investment funds, traded on a regulated market in Romania, the EU or EEA;
- up to 10% in private equity - only for voluntary pension funds.

There is no explicitly defined general quantitative limit on equity investments.

Aside from the quantitative restrictions by asset class, fund managers have quantitative limits by type of issuer:

- 10% of the total number of shares issued by one issuer;
- 10% of the preferential shares issued by one issuer;
- 25% of the equity securities issued by an UCITS, ETF, non UCITS closed investment fund or ETC;
- 10% of an issuer's bonds, with the exception of the state bonds.

Mandatory pension funds can invest all their assets abroad. There are no explicit restrictions regarding investments made abroad.

Pension funds can have one of three possible risk profiles, which are calculated on a daily basis according to a formula established by ASF regulations:

- low risk (risk level up to and including 10%),
- medium risk (risk level between 10%, exclusively, and 25%, inclusively),
- high risk (risk level between 25%, exclusively, and 50%, inclusively).

Pillar III – Voluntary private pensions

The Romanian Pillar III allows each administrator (PMC, LIC or AMC) to manage as many voluntary pension funds as they prefer. At its inception, there were only four providers and six voluntary pension funds. Currently (at the end of 2021), there was 8 providers offering 10 voluntary pension funds. Only two administrators (NN and AZT) are currently offering more than one voluntary pension fund.

Each administrator in Pillar III (PMC, LIC or AMC) is authorized by ASF and must get several licenses from ASF. ASF withdraws the fund's authorization if the number of participants drops below 100 for a quarter.

Voluntary pension funds are also constituted by civil contract and authorized by ASF. Accounting of the voluntary pension fund is separated from the administrator.

Investment rules in the voluntary private pension pillar are the same as in the mandatory pillar (see quantitative and restriction limits for different asset classes in the text above), with less strict limits on private equity (5%) and commodities (5%).

The structure of savers, assets under management and market share of respective voluntary pension fund is presented in a table below.

Table RO3. Pension Management Companies market share in Romania (Pillar III)

Risk profile	Mandatory Pension Fund (PMC)	Assets under management *(in €)*	Market share based on AuM	Number of participants	Market share based on participants
High	AZT VIVACE	26,665,481	3.81%	20,863	3.69%
	NN ACTIV	83,655,737	11.95%	59,895	10.61%
Medium	AZT MODERATO	72,324,669	10.33%	45,796	8.11%
	BCR PLUS	119,540,487	17.08%	141,349	25.36%
	BRD MEDIO	36,733,143	5.425	36,327	6.44%
	NN OPTIM	300,362,583	42.91%	212,324	37.61%
	PENSIA MEA	25,643,256	3.66%	22,322	3.95%
	RAIFFEISEN ACUMULARE	25,943,152	3.71%	16,151	2.86%
	STABIL	6,862,195	0.98%	5,524	0.98%
	AEGON ESENTIAL	2,269,459	0.32%	3,948	0.70%
	TOTAL	**700,000,127**	**100.00%**	**564,472**	**100.00%**

Source: Own calculation (https://www.asfromania.ro/), 2022

Charges

Pillar II – Funded pensions

According to the Mandatory Pensions Law, the fund manager's income resulted from the administration of privately administrated pension funds are composed of:

- management fees and commissions;
- transfer penalties (covered from personal assets, in case of moving to another fund/PFC earlier than in 2 years – between 3.5% and 5%);
- tariffs for additional information services, in particular:
    - Depositary commission (depository fee);
    - Transaction costs (trading fees);
    - Bank commissions (banking fees);
    - Fund auditing taxes (pension fund auditing fees).

Since 2019, the administration fee is established by:

a) deducting an amount from the contributions paid, but not higher than 1.0%, before the conversion of contributions into fund units (Management commission), of which 0.5% is transferred to the National House of Public Pensions (Casa Nationala de Pensii Publice; the organization that administers the social insurance program);

b) Management fee - 0.02% to 0.07% of net assets under management, depending on the fund's rate of return relative to the inflation rate. Before 2019, the maximum monthly management fee was 0.05 percent.

The transfer penalty represents the amount paid by the participant in the event of a transfer to another administrator, occurring within two years of the subscription date to the private pension fund, with the maximum ceiling of this penalty being established by ASF and set at maximum 5% of assets (Norm CSSPP 12/2009 for Pillar II and Norm 14/2006 for Pillar III).

The fund also pays for the annual auditing fee (Fund auditing taxes) and the rest of the fund's expenses (custody, depositary, transaction/trading expenses) must be supported by the pension company (the administrator). The next table compares effective charges of mandatory pension funds in Pillar II over time (calculated via total and net NAV).

Table RO4. Effective annual charges in mandatory pension funds (Pillar II) in %														
Mandatory pension fund	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
ARIPI	1.23	0.86	0.75	0.68	0.63	0.62	0.62	0.63	0.61	0.58	0.63	0.49	0.49	0.60
METROPOLITAN LIFE	0.54	0.70	0.65	0.61	0.62	0.60	0.59	0.60	0.58	0.56	0.61	0.59	0.59	0.47
AZT VIITORUL TAU	0.56	0.69	0.66	0.60	0.61	0.61	0.60	0.60	0.58	0.56	0.61	0.48	0.47	0.47
BCR	1.69	0.93	0.75	0.64	0.63	0.62	0.63	0.61	0.58	0.56	0.62	0.48	0.60	0.47
BRD	2.4	1.11	0.87	0.75	0.70	0.62	0.62	0.64	0.60	0.56	0.61	0.47	0.48	0.37
NN	0.55	0.62	0.61	0.58	0.62	0.60	0.60	0.60	0.58	0.56	0.61	0.48	0.48	0.47
VITAL	0.00	0.58	0.79	0.70	0.65	0.64	0.61	0.61	0.58	0.56	0.61	0.60	0.60	0.47
EUREKO	*0.36*	*0.12*	*0.84*	*0.60*	*0.60*	*0.60*						*0.00*	*0.00*	*0.00*
PENSIA VIVA	*0.12*	*0.60*	*0.60*	*0.60*	*0.60*							*0.00*	*0.00*	*0.00*
BANCPOST	*8.4*											*0.00*	*0.00*	*0.00*
KD	*5.88*	*0.60*										*0.00*	*0.00*	*0.00*
OMNIFORTE	*2.4*											*0.00*	*0.00*	*0.00*
OTP	*14.6*	*6.00*										*0.00*	*0.00*	*0.00*
PRIMA PENSIE	*8.88*	*6.72*										*0.00*	*0.00*	*0.00*
TOTAL	**0.77**	**0.70**	**0.66**	**0.61**	**0.62**	**0.61**	**0.60**	**0.60**	**0.58**	**0.56**	**0.61**	**0.51**	**0.51**	**0.48**

Source: Own calculations based on ASF Romania data, 2022 (data as of December 2021)

Pillar III – Voluntary private pensions

According to the Voluntary Pensions Law,[225] the administrator shall charge a fee from participants and beneficiaries for the management of a pension fund.

- The levels of fees shall be established in the pension scheme prospectus and shall be the same for all participants and beneficiaries;
- Participants shall be notified of any change to the fees at least 6 months before it is applied.

The administrator's revenue will come from:

- management commission (up to 5% from the contributions) and management fee (up to 0.2% monthly from total gross assets in pension fund);
- transfer penalties (covered from personal assets, in case of moving to another fund/PFC earlier than in 2 years – 5%);
- fees for services requested by participants:
  - Depositary commission (depository fee);
  - Transaction costs (trading fees);
  - Bank commissions (banking fees);
  - Fund auditing taxes (pension fund auditing fees).

Management fees are made up of:

[225] Law number 204/2006 concerning voluntary pensions

a) deduction of a percentage from contributions paid by participants; this percentage cannot be higher than 5% and must be made before contributions are converted into fund units (Management commission);
b) deduction of a negotiated percentage from the net assets of the voluntary pension fund; this percentage cannot be higher than 0.2% per month and shall be mentioned in the pension scheme prospectus (Management fee).

A transfer penalty is applicable (paid by the participant) in the event of a transfer to another fund within two years of having joined the previous fund; its upper limit is established by Commission norms. The next table compares effective charges of voluntary pension funds in pillar III over time (calculated via total and net NAV).

Table RO5. Effective annual charges of voluntary pension funds (Pillar III)

Voluntary pension fund	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
AZT VIVACE	1.05%	1.47%	2.83%	2.83%	2.52%	2.06%	2,00%	1.91%	1.84%	1.74%	1.67%	1.79%	2.14%	2.04%	2.00%
NN ACTIV	0.04%	1.64%	1.85%	2.38%	2.19%	2.34%	2.14%	2.09%	2.17%	2.1%	1.95%	2.11%	2.04%	2.02%	2.01%
AZT MODERATO	0.99%	1.83%	2.16%	1.86%	1.66%	1.41%	1.33%	1.28%	1.24%	1.18%	1.13%	1.21%	1.56%	1.51%	1.49%
BCR PLUS	5.61%	2.38%	2.28%	2.77%	2.44%	2.4%	2.23%	2.27%	2.16%	2.03%	1.97%	2.16%	2.11%	2.07%	2.06%
BRD MEDIO	0,00%	0,00%	0.85%	1.9%	1.56%	2.86%	2.18%	2.14%	2.2%	2.11%	1.91%	2.18%	2.05%	2.15%	2.13%
*CONCORDIA MODERAT**	0,00%	*0,00%*	*1.47%*	*1.47%*	*1.43%*	*1.46%*	0,00%	0,00%	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0.00%*	*0.00%*
*EUREKO CONFORT**	0,00%	0,00%	*0.05%*	*0,00%*	*0.18%*	*0.06%*	*0.14%*	*0.07%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0.00%*	*0.00%*
NN OPTIM	0.09%	1.58%	1.68%	2.09%	1.97%	2.05%	1.99%	1.97%	2,00%	1.94%	1.85%	2,00%	1.96%	1.95%	1.94%
PENSIA MEA	3.22%	3.17%	2.85%	2.66%	2.66%	2.7%	2.66%	2.66%	2.64%	2.43%	2.37%	2.56%	2.51%	2.50%	2.46%
RAIFFEISEN ACUMULARE	0,00%	0.15%	2.93%	2.4%	2.23%	2.15%	2.43%	2.26%	2.47%	2.16%	2.06%	2.19%	2.02%	1.99%	1.99%
STABIL	0,00%	0,00%	2.26%	1.61%	1.5%	1.65%	1.63%	3.16%	3.71%	3.37%	2.8%	2.99%	2.81%	2.74%	2.69%
AEGON ESENTIAL	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	1.87%	3.15%	2.99%	3.12%	2.86%	2.73%	2.60%
*BRD PRIMO**	0,00%	0,00%	*0.83%*	*1.57%*	0,00%	0,00%	0,00%	0,00%	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0.00%*	*0.00%*
*OTP STRATEG**	*708.75%*	*19.1%*	*3.8%*	*2.91%*	0,00%	0,00%	0,00%	0,00%	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0,00%*	*0.00%*	*0.00%*
TOTAL	**4.72%**	**1.91%**	**2.12%**	**2.3%**	**2.09%**	**2.1%**	**1.99%**	**1.99%**	**2.01%**	**1.92%**	**1.83%**	**1.99%**	**1.99%**	**1.98%**	**1.96%**

Source: Own calculations based on ASF Romania data, 2022 (data as of December 2021)

* Closed

The year 2021 brought no significant change in effective annual charges, and the Pillar III confirmed that the Pillar III pension funds remain expensive pension vehicles for effective pension wealth building process.

Taxation

Pillar II – Funded pensions

Romania applies an EET system for the taxation of future mandatory accounts. Employee contributions are tax-deductible and investment income on the level of the pension fund is tax-exempt. Pension benefits paid out during retirement will be subject to a personal income tax (10% tax rate) above a certain level.

Pillar III – Voluntary private pensions

The amount of contributions to voluntary pension funds is fiscally deductible from each subscriber's gross monthly wage or any other assimilated revenue if the total amount is not greater than the equivalent in RON of €400 in a fiscal year. The same rule applies to the employer, meaning that the employer can deduct the amount paid to the employee's voluntary pension account up to €400 annually.

The investment returns achieved by the third pillar fund are tax exempt until the moment of payments toward subscribers' start. The pension benefits paid from Pillar III are subject to personal income tax, thus representing an 'EET' regime.

Pension Returns

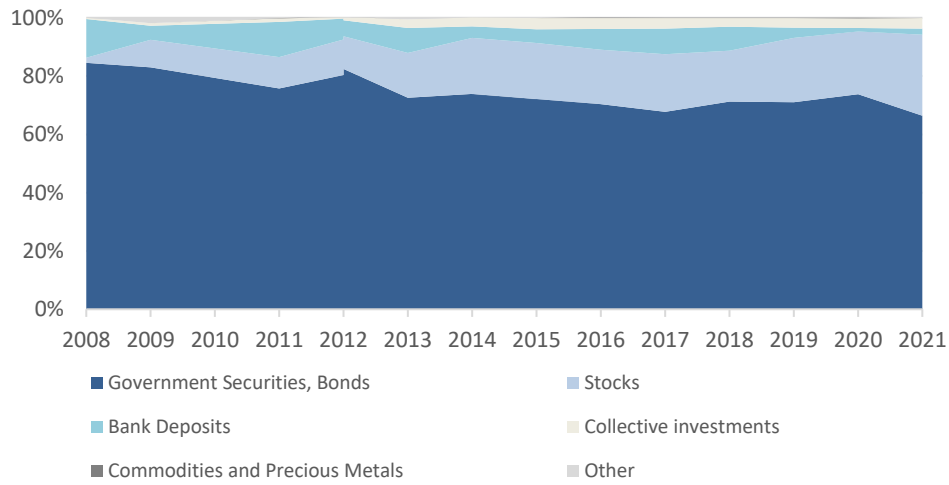
Pillar II – Funded pensions

Seven asset managers offer seven mandatory pension funds in Romania. Performance analysis reveals similarities in their investment strategy, implying similarity in the pension funds' portfolio structure.

Romanian mandatory pension funds invest mostly in government securities and bonds asset classes. The second most important asset class (from the portfolio structure point of view) are equities and the third most important are bank deposits. Three other classes have minimal impact on pension fund's performance. The portfolio structure of the Romanian Pillar II is presented below. According to the data available, currently almost 74% of all investments in Pillar II pension funds are bond investments and less than 22% is invested in equities despite relatively young age structure of savers. More detailed data on Pillar II portfolio structure is presented below.

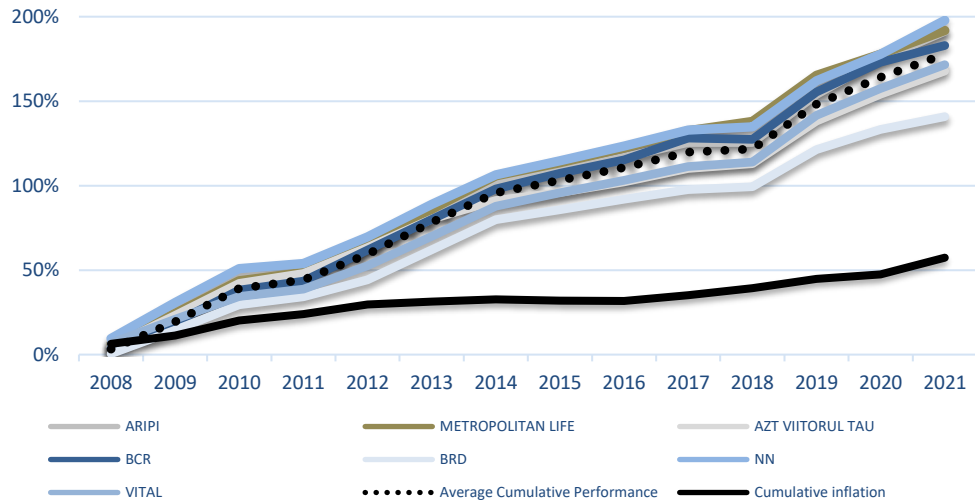
For the purpose of this study, we simplified the portfolio structure to only six main asset classes.

Graph RO1. Portfolio structure of Pillar II mandatory pension funds



Mandatory Pension Funds' performance compared to the inflation index is presented below.

Graph RO2. Pillar II Mandatory Pension Funds – Cumulative Nominal Performance



Source Own elaboration based on ASF Romania data, 2022

Nominal as well as real returns of Pillar II pension funds in Romania, weighted by AuM, are presented in a table below.

Table RO6. Nominal and Real Returns of II. Pillar in Romania					
2008	Nominal return after charges, before inflation and taxes	-4.10%	5.38%	Real return after charges and inflation and before taxes	-10.47%	2.04%
2009		11.64%			6.94%	
2010		14.34%			6.39%	
2011		1.76%			-1.42%	
2012		7.53%			2.97%	
2013		10.82%			9.50%	
2014		8.63%			7.59%	
2015		2.75%			3.43%	
2016		3.42%			3.51%	
2017		1.58%			-1.00%	
2018		0.95%			-2.07%	
2019		9.10%			5.05%	
2020		4.39%			2.59%	
2021		4.12%			-2.58%	

Source: Own calculation (https://www.asfromania.ro/), 2022

To indicate the evolution of annualized performance (nominal as well as real) of Pillar II pension funds in Romania based on different holding periods, see the summary table below.

Table RO7. Nominal and Real Returns of II. Pillar in Romania		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	4.12%	-2.58%
3-years	5.84%	1.64%
5-years	3.99%	0.35%
7-year	3.73%	1.23%
10-years	5.28%	2.83%
Since inception	5.38%	1.91%

Source: Own calculation (https://www.asfromania.ro/), 2022

In general, we can confirm very similar performance of all provided pension funds, which lead us to a question of real competition and adjustment of the portfolio structure towards the length of the saving (holding) horizon.

Pillar III – Voluntary private pensions

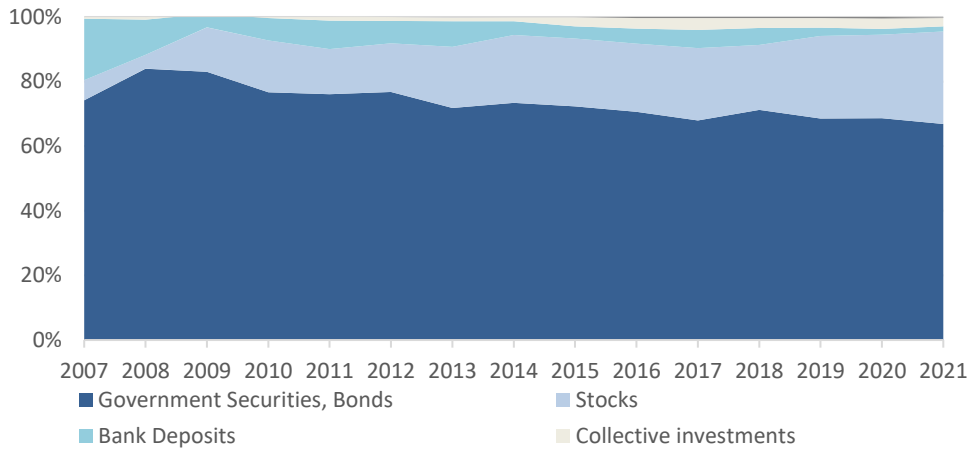
The eight asset managers offer 10 voluntary pension funds in Romania. AZT and NN are the only providers which offer two voluntary pension funds. The performance of all pension funds shows the same finding as with Pillar II mandatory pension funds - there is similarity in voluntary pension funds' investment strategy. Performance results also imply a similarity in pension funds' portfolio structure.

Analysing the portfolio structure of voluntary pension funds based on CSSPP data, we can conclude that most of the performance is tied to the Government Securities and Bonds asset classes. The second most important asset class (from the portfolio structure point of view) is

equities and the third most important is bank deposits. The three other classes have minimal impact on pension fund's performance results.

Portfolio structure of Romanian Pillar III voluntary pension funds is presented below. According to the data for 2021, around 68% of all investments in Pillar III pension funds are bond investments and about 30% is invested in stocks and collective investment vehicles (UCITS funds). Overall, Pillar III portfolio structure is very similar to that of Pillar II over the whole analysed period. The difference in the performance could therefore be devoted to the negative impact of fees, which are significantly higher in Pillar III.

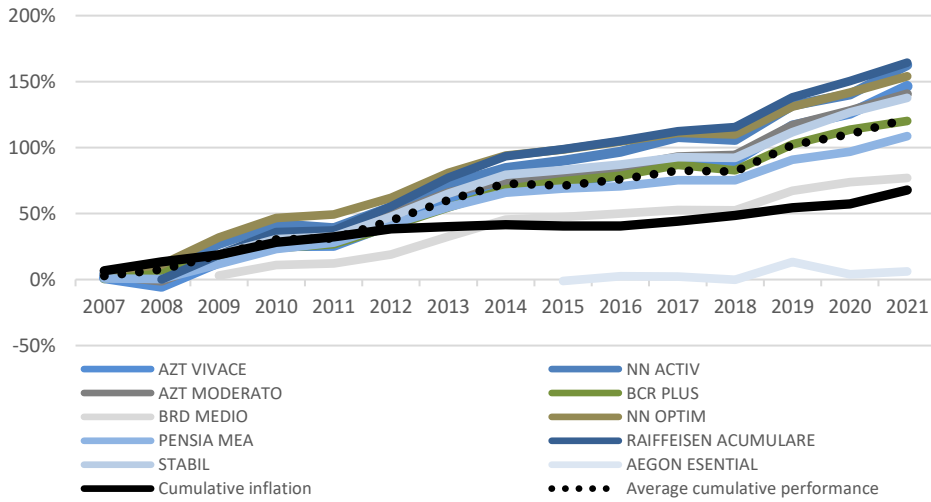
Graph RO3. Portfolio structure of Pillar III voluntary pension funds



Source: Own calculation (https://www.asfromania.ro/), 2022

All voluntary pension funds' performance on a cumulative basis compared to the inflation index is presented in the graph below.

Graph RO4. Voluntary Pension Funds – Cumulative Nominal Performance



Source: Own calculation (https://www.asfromania.ro/), 2022

Nominal as well as real returns of voluntary pension funds in Romania, weighted by AuM, are presented in a summary table below.

Table RO8. Nominal and Real Returns of III. Pillar in Romania					
2007		-12.09%		-18.75%	
2008		-9.26%		-15.64%	
2009		9.31%		4.61%	
2010		10.47%		2.52%	
2011		0.14%		-3.03%	
2012	Nominal return after charges, before inflation and taxes	6.96%	Real return after charges and inflation and before taxes	2.40%	-1.00%
2013		10.70%		9.39%	
2014		7.20%		6.16%	
2015		1.61%		2.29%	
2016		2.57%		2.66%	
2017		1.30%		-1.29%	
2018		-0.76%		-3.78%	
2019		8.04%		3.99%	
2020		2.79%		0.99%	
2021		3.63%		-3.07%	

Source: Own calculation (https://www.asfromania.ro/), 2022

To indicate the evolution of annualized performance (nominal as well as real) of Pillar III voluntary pension funds in Romania based on different holding periods, see the summary table below.

Table RO9. Nominal and Real Returns of Pillar III (Voluntary Pension Funds) in Romania		
Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	3.63%	-3.07%
3-years	4.80%	0.6%
5-years	2.96%	-0.67%
7-year	2.71%	0.22%
10-years	4.35%	1.90%
Since inception	2.63%	-1.00%

Source: Own calculation (https://www.asfromania.ro/), 2022

Conclusions

Romania's population is rapidly decreasing and aging, which – unless they adopt the necessary reforms - will lead to the explosion of the demographic bomb in a few decades. That is why Romania introduced the private pensions system in 2007, which is based on the model tested and recommended by the World Bank. The multi-pillar private pensions system includes Pillar II (mandatory schemes) and Pillar III (voluntary schemes).

In the public PAYG pensions system, the state collects contributions from employees and redistributes the money among existing pensioners. Demographics show that this redistribution logic is no longer viable, as contributors' numbers will fall, and the number of pensioners is already going up. The departure from this dilemma takes the form of the private pensions system, allowing each active person to save for their own future retirement.

Romanian pillar II is a fully funded system based on personal accounts and on the defined contribution (DC) philosophy. Pillar II is mandatory for all employees aged under 35 years and voluntary (optional) for employees aged 35 to 45. The starting level of contribution was set at 2% of the participant's total gross income and increases by 0.5 percentage points annually until it reaches 6 of total gross income in 2017. However, this level has not been reached, and the contribution system has inversed.

Mandatory pension funds are managed by their administrators - Pension Management Companies (PMCs). Each PMC is obliged by respective law to administrate and manage just one mandatory pension fund. Currently, there are seven PMCs managing seven mandatory funds on the Romanian Pillar II market. The market is dominated by two PMCs (AZT and NN).

Romanian pillar III is also a fully funded system based on personal accounts and on the defined contribution (DC) philosophy. Pillar III represents privately managed supplementary pensions. This system is opened to all income cohorts. The tax advantage contribution is limited to 15 of participant's total gross income.

Voluntary pension funds in Pillar III are managed by their administrators - Pension Management Companies (PMCs), Life Insurance Companies (LICs) or Asset Management Companies (AMCs). Each administrator is obliged to establish and operate at least one

voluntary pension fund. Currently, there are eight providers offering 10 voluntary pension funds. Pillar III market is fairly concentrated, where three dominant players cover almost 90 of the market.

Mandatory as well as voluntary pension funds' investment strategy is strictly regulated. The law imposes percentage limits and restrictions for different asset classes. It must be noted that investment rules in mandatory and voluntary system are very similar. This fact logically causes implications on portfolio structure, thus also on performance of mandatory and voluntary pension funds in Romania. Currently about 70% of all investments in Pillar II as well as Pillar III pension funds are bond investments (Romanian Government Money market instruments and Bonds) and only about 22 is invested in equities, which could raise a question about suitability of portfolio structure with regard to the age structure of savers.

Overall, the real return of pension funds in Pillar II as well as Pillar III are positive and well above the inflation. However, considering the fee structure, Pillar II savers are better positioned as the charges are almost 5-times lower than the fees applied in Pillar III.

Policy considerations

Romania's pension system is among the few to require mandatory enrolment in occupational pension funds, determining a large coverage of the active population. Further measures to stimulate the labour force between 35 and 45 years old would be beneficial, as well as an increased contribution rate to Pillar II funds. In addition, fiscal stimulus and financial education for voluntary pensions would be welcomed to incentivise households to save additionally in Pillar III products.

In addition, bearing in mind the general and constant research results on the correlation between cost and performance in investment funds, one consideration would be to further cap the total costs for privately managed occupational pension funds (Pillar II).

Last, considering the detrimental effects inflation have on nominal net returns, the minimum return rate for occupational pension funds should factor in inflation and require, for instance, a certain positive **real net** return.

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Pension Savings: The Real Return

2022 Edition

Country Case: Slovakia

Zhrnutie

Slovenský dôchodkový systém je typickým modelom Svetovej banky založenom na viac-pilierovom (troj-pilierovom) systéme s individuálnymi (osobnými) účtami sporiteľov. V roku 2019 došlo výrazným zmenám v I. pilieri, ktoré boli motivované politickým populizmom pred voľbami. Do dôchodkového systému bol ústavným zákonom zapracovaný dvojpilierový systém a zároveň strop dôchodkového veku. V roku 2021 boli očakávané výrazné reformné zmeny v I. pilieri, ktoré by mali zvýšiť finančnú stabilitu I. piliera a vyriešiť problémy v nastavení súkromných dôchodkových schém. V roku 2021 tak boli v kontexte reformných snáh ohlásené zmeny v II. pilieri cielené za zavedenie predvolenej investičnej stratégie a reformné snahy o zvýšenie konkurencie v schémach dobrovoľného doplnkového dôchodkového sporenia, ktoré však zastali a zaviedol sa výlučne zákon o celoeurópskom osobnom dôchodkovom produkte.

Summary

The Slovak pension system is a typical World Bank model based on a multi-pillar (three-pillar) system with individual (personal) accounts of savers. In 2019, there were significant changes in Pillar I, which were motivated by political populism before the elections. The two-pillar system was incorporated into the pension system by a constitutional law, as well as a ceiling on the retirement age. Significant reform changes to Pillar I were expected in 2021, which should increase the financial stability of Pillar I and resolve problems in the set-up of private pension schemes. Thus, in 2021, in the context of reform efforts, changes in Pillar II were announced targeting the introduction of a default investment strategy and reform efforts to increase competition in voluntary supplementary pension saving schemes, but these stalled and only a law on a pan-European personal pension product was introduced.

Introduction

The Slovak old-age pension system is based on the multi-pillar approach, which consists of three main pillars:

- Pillar I – State pension organized as a mandatory Pay-As-You-Go (PAYG) scheme;
- Pillar II – Funded pension organized as voluntary funded DC based scheme; and

- Pillar III – Supplementary pension organized as a voluntary individual pension DC based scheme.

The Slovakian pension reform started in 1996 with the introduction of Pillar III, which at that time (and until 2009) was organized as voluntary pension pillar offering life insurance contracts and as an occupational pillar as well. Since July 2009, the system was changed to funded saving schemes and voluntary Pillar III pension funds are offered to the savers (members). The organization of Pillar III started to become more personal with the financial support of employers.

The World Bank's approach has been fully implemented by introducing Pillar II at the beginning of 2005, and, from a terminological point of view, it should be called the "1bis pillar", as individual retirement accounts are funded via partial redirection of social security contributions on individual pension savings accounts.

For a person who works a full career (42 years) and retires in 2021, the main income stream derives from the PAYG (Pillar I) pension scheme. On average, the individual replacement ratio of such a person could reach 50% of his gross salary. If the person would have participated since 1996 in Pillar III and contributed on average 3% of his salary into a Pillar III pension scheme, having also entered Pillar II (1bis pillar) in 2005, his income stream during retirement would have been slightly different and his replacement ratio would have been a little higher than 50%. However, still more than 90% of the retirement income stream is provided via the PAYG scheme (Pillar I), around 5% from Pillar II (1bis pillar) and 5% from Pillar III.

Introductory Table - SK Pension System Overview		
Pillar I	**Pillar II**	**Pillar III**
State pension (almost 100% coverage) - Mandatory (PAYG)	Occupational pensions - Mandatory DC (funded schemes) - coverage 68%	Individual pensions - Voluntary fully funded DC - coverage 28%
Managed by the Social Insurance Company	Managed by Pension Asset Management Companies	
Contribution rate: 14.00% (employer) and 4% (employee); Gross replacement rate: 41.8%; Average pension: € 506	Contribution rate: 4.25%; 17 pension funds offered	19 funds offered
Quick facts		
Retirement age – 62 years and 10 months		
A relatively high old-age dependency ratio of 24.95% in 2021		
Aggregate replacement ratio for pensions (excl. social benefits) in 2021 of 49.3%		

Sources: Social Insurance Company, 2022 (https://www.socpoist.sk/646/1614s); Eurostat, 2022 (online data code: tespn070)

Pillar I – State Pensions

Pillar I is a state organized Pay-As-You-Go (PAYG) pension scheme, managed by the State Social Insurance Company. Pensions are funded on an ongoing basis and benefits are calculated based on the number of insured years and paid contributions. The PAYG principle of financing is supplemented by the redistribution principle, where the lowest income groups receive higher replacement ratios and higher income groups (due to the solidarity mechanisms) receive lower replacement ratios.

Pillar I is closely connected to the economic activity and income of the citizens. This pillar is financed by contributions of economically active individuals, amounting to 12.25% (18% if the saver is not participating in Pillar II) of their base income (gross salary). These contributions are directed to the Social Insurance Company, which distributes the allowance to the beneficiaries (current pensioners).

Although Pillar I is a typical PAYG scheme, it has many NDC (notional defined contribution) scheme features with a certain income solidarity element. The old-age pension of the insured person depends on three parameters:

1. The insurance period (number of insured years with active contribution);
2. The average personal wage point (a ratio representing the contribution base of an individual is compared to the average salary in Slovakia); and
3. The value of the pension unit (this value is annually defined by the Slovak Government to mimic the increase in the average salary in Slovakia).

However, an individual is entitled to an old-age pension only after the statutory retirement age is reached. The pension insurance is comprised of two independent, separately funded sub-schemes managed by the Social Insurance Agency:

- the old-age pension insurance: insurance to secure income in retirement and in the event of death; and
- the disability insurance: insurance in the event of a reduced ability to work due to long-term illness of the insured and in the case of death.

Pension insurance is mandatory; statutory insurance and participation in this scheme is a legal obligation for all eligible persons. However, the Act on Social Insurance also enables voluntary pension insurance participation.

The basic pension insurance parameters that make up the content of the benefit scheme and affect the entitlement to individual pension benefits are: the insurance period, the average personal wage point, the value of pension unit and the retirement age, defined as follows:

- **Number of insured years (insurance period):** given by the number of working years of an individual during which social insurance contributions were paid;

- **Average personal wage point (APWP):** determined as the ratio of the sum of personal wage points calculated for each calendar year of the reference period and the period of pension insurance in the relevant period. The average personal wage point shall be rounded up to four decimal points;
- **Value of pension unit:** the monetary value of one personal wage point. The pension value is adjusted on 1 of January each year through indexation, which is determined as the ratio of the average wage calculated in the third quarter of the previous calendar year and the average wage calculated in the third quarter of the calendar year two years preceding the calendar year on which the pension value is calculated. This way the determined pension value is always valid from 1 January to 31 December of the calendar year. The current pension value, which is used to calculate pension benefits, is the pension value valid at the time of a claim for payment of the pension benefits;
- **Retirement age** – 62 years and 10 months in 2021, valid for both men and women. However, the automatic mechanism of retirement age adjustment has been abandoned in 2019 and replaced with the constitutional ceiling of retirement age at 64 years for men. For women, the retirement age is lower and depends on the number of raised children. For each raised child the retirement age is lowered by 6 months up to 3 children. The new constitutional ruling that passed the Parliament in 2020 removes the ceiling on retirement age.

To illustrate the calculation of an old-age pension, let us assume that an individual has the following individual parameters and reached the statutory retirement age of 62 years and 10 months in 2021:

1. Number of insured years (N) = 42 (full working career);
2. Average personal wage point (APWP) = 1 (for the entire working career, an individual has been earning on average 100% of average salary in Slovakia)
3. Value of pension unit (VPU) = € 14.2107 (for persons retiring in the year 2021).

The old-age pension is then calculated using the following formula: N x APWP x VPU.

Therefore, considering the abovementioned individual parameters of a person claiming old-age pension, he/she will be entitled to a monthly pension equal to 42 x 1 x €14.2107 = €597.

If an individual has earned on average 100% of an average salary during his entire working career and the average salary in 2021 was €1,211, then the gross individual replacement ratio of such an individual would be: €597 / €1,211 = 49.30%.

Pillar II – Funded pensions

The Slovak Pillar II was established as a defined contribution (DC) pension saving scheme in 2005. Since September 2012, the enrolment is fully voluntary (until September 2012 it was a

mandatory one) and eligible for persons up to 35 years of age. The principle of funded pension is based on the accumulation of savings during employment and investing savings in financial markets via special purpose vehicles - pension funds, which are managed and administrated by Pension Fund Management Companies (PFMCs), licensed by National Bank of Slovakia.

The role of old-age pension saving, along with old-age social insurance (Pillar I), is to ensure retirement income for savers and their survivors in the case of his/her death.

The Pillar II market is fairly concentrated. Each saver can choose one out of six currently existing providers (PFMCs) on the Slovak market. The PFMCs are private joint-stock companies with a minimum capital requirement of €10 million and established in the territory of the Slovak Republic. Their exclusive business is the creation and administration of pension funds. As a further condition, they must attain at least 50,000 members within a period of 18 months from the establishment of the pension fund.

According to the applicable law (the Act on Old-Age Saving), each PFMC is obligated to operate at least two pension funds. We can divide these pension funds into two main groups:

1. Bond guaranteed pension fund (guaranteed scheme);
2. Equity non-guaranteed pension fund (non-guaranteed scheme).

Each PFMC is free to choose (mostly based on their business model) whether it operates additional pension funds, which are optional. These legislative changes entered into force on 30 April 2013. Before this date, each PFMC had to operate three (respectively four) obligatory pension funds:

1. Bond (Conservative) pension fund (since March 2005);
2. Mixed (Balanced) pension fund (since March 2005);
3. Equity (Growth) pension fund (since March 2005);
4. Index pension fund (since April 2012).

After the legislative changes became effective in May 2013, mixed and index pension funds became optional, and some of PFMCs merged these pension funds with obligatory Equity non-guaranteed pension funds. It is important to say that the first three categories of pension funds are (from an asset management point of view) actively managed pension funds, and Index pension funds are the only funds managed entirely passively. However, changes in the fee policy (strictly regulated) forced providers to change the investment strategy of pension funds towards being passively managed using mostly ETFs as main financial instruments.

PFMCs are subject to a variety of regulations. The Old-age Pension Savings Act defines the range of allowed investment instruments and sets maximum limits for portfolio allocations (quantitative limits). Investment procedures and valuation of investments (daily at market prices) are also regulated. Thus, each category of pension funds has their own investment

strategy, as well as general or special quantitative limits and operating conditions. PFMCs and managed pension funds are supervised by the National Bank of Slovakia.

Pillar II as a voluntary DC scheme allows savers to enter the system whenever they wish before the age of 35. In general, pension fund members (Pillar II savers) are free to choose one or two of the aforementioned pension funds provided by the same PFMC.

Each saver has an individual retirement account (IRA). His contributions (savings) are redirected from the Social Insurance Company to the chosen PFMC on his IRA at a rate of 5% of gross salary. However, since 2017, the contributions have started to increase by 0.25% annually until they reach the final level of 6% in 2024.

With the possibility to save in one or two pension funds at the same time, it is completely up to a saver how much of his own savings would be invested in one pension fund or another. He can invest, for example, 70% in a Bond guaranteed pension fund and another part (30%) in an Index non-guaranteed pension fund. There is no fee or charge to change this allocation ratio or switch pension funds managed by the same PFMC - even on a daily basis. Switching providers (PFMCs) for free is possible for savers if the change is made after one year, otherwise a fee of €16 is applied.

The reform of the pay-out phase, introduced in 2015, stipulates the following types of pension products that are allowed for the pay-out phase:

1. single annuity (for most cases) with guaranteed payment period for 84 months;
2. single indexed annuity;
3. single annuity with survivorship benefits (for up to 2 years);
4. programmed withdrawal (phased withdrawal);
5. perpetuity (withdrawal of only annual gains).

Products 1, 2 and 3 are provided by insurance companies, products 4 and 5 by PFMCs.

The year 2019 brought an introduction of Pension Benefit Statement with pension benefits projections also into the II. pillar. The providers are obliged to send the pension benefit statements to all savers since January 2021.

Pillar III – Supplementary pensions

The Supplementary pension is a voluntary funded DC-based pension saving scheme in which the funds of the participants are administered by Supplementary Pension Fund Management Companies (SPFMCs). The SPFMCs are private joint stock companies established under the Slovak law and able to only provide services tied to the management of supplementary pension funds. SPFMCs and their supplementary pension funds are supervised and regulated by the National Bank of Slovakia.

The purpose of supplementary pension saving is to allow participants to obtain supplementary pension income in old-age and the whole Pillar is mostly oriented towards employers and their employees. However, the coverage ratio is rather low (28% in 2021).

Currently there are four providers (SPFMCs) operating on the market, which could be considered concentrated. Each SPFMC is obliged by law to operate at least one contributory and one "pay-out" supplementary pension fund. The legislation does not determine specific types of contributory pension funds; however, we can divide all existing contributory pension funds according to the portfolio structure into 3 main groups:

- Conservative supplementary pension funds (no equity investments);
- Balanced supplementary pension funds (small portions of equity investments);
- Growth supplementary pension funds (highest portions of equity investments).

Company "NN" and later on "Axa (UNIQA since January 2021)" have launched the first passively managed equity fund within the Pillar III. There are no specific investment restrictions regarding asset classes in supplementary pension funds, but there are some general quantitative limits to restrict the concentration risk of the fund.

The following benefits are paid from the supplementary pension saving upon the completion of the saving period:

- supplementary old-age pension in the form of lifelong or temporary supplementary annuity;
- supplementary pension in the form of programmed withdrawal;
- lump-sum settlement;
- redundancy pay.

Pension Vehicles

Pillar II – Funded pensions

There are five providers - Pension Asset Management Companies (PFMCs) - operating on the market. In 2019, the NN bought the Aegon. According to the Assets under Management (AuM) measure, the two biggest, Allianz and UNIQA (AXA before 15.1.2021), represent nearly 56% of the market. More details on the market share of particular providers are presented in the table below.

Table SK1. Pension Asset Management Companies market share (Pillar II)		
Pension Fund Management Company	Assets under management *(in millions €)*	Market share based on AuM
Allianz	3,528.73	29.50%
UNIQA (AXA before 2021)	3,119.79	26.06%
DSS Postovej banky	588.65	4.92%
NN (ING before 2015)	2,481.17	20.74%
VUB - Generali	2,243.49	18.76%
TOTAL	**11,961.83**	**100.00%**

Source: Own calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

The table below (Table SK2) presents the market share of Pillar II pension funds according to their dominant investment strategy and asset allocation. The dominant part of savings is allocated into bond pension funds that invest conservatively and mainly in short-term bonds.

Table SK2. Pillar II Market share by group of pension funds			
Scheme	Type of voluntary pension fund	Assets under management (in millions €)	Market share based on AuM
Guaranteed PFs	Bond guaranteed pension funds (5) - *obligatory*	7,309.67	61.11%
Nonguaranteed PFs	Mixed nonguaranteed pension funds (2) - *optional*	147.92	1.24%
	Equity nonguaranteed pension funds (5) - *obligatory*	1,808.32	15.12%
	Index nonguaranteed pension funds (5) - *optional*	2,695.92	22.54%
TOTAL	**17 Pension funds**	**11,961.83**	**100.00%**

Source: Own calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

The increase in assets under management was caused mainly by the stabilization of the market and higher returns of Index pension funds. We see increased number of savers, who mix two funds on their individual retirement savings accounts.

However, the structure of investments does not match the age profile of Slovak savers and thus increases the risk of lower replacement ratio for most of the savers in the future. After the Governmental intervention in 2013, the number of savers in equity pension funds has dropped significantly. Currently, still 70% of all savings in Pillar II are allocated into the Bond guaranteed pension funds and it does not correspond to the age profile of savers. This fact might cause more problems and increase the political risk in the future, as many savers still believe that they save in equity pension funds.

Asset allocation of Pillar II pension funds is regulated by law (Act on Old-Age Saving), laying down the general quantitative investment limits on all pension funds – for example:

- max. 3% of AuM into one financial instrument (does not apply on bond investments or in case of passively managed pension funds);
- max. 10% of AuM into one UCITS fund;
- max. 15% of the whole pension fund portfolio into one issuer (does not apply on bond investments or in case of passive managed pension funds);
- bond investments must have investment grade rating (does not apply in case of passively managed pension funds).

Pillar II savers can choose from two main types of obligatory and two types of optional voluntary pension funds.

Obligatory - Bond guaranteed pension funds are actively managed pension funds and are obliged to invest 100% of the assets into bonds, money market instruments, deposits, investment funds in which assets must be invested in the above securities and deposits and other similar assets. Bond guaranteed pension funds are not allowed to invest in equities and real estate, nor respective investment funds. This conservative strategy focuses on bonds, and its objective is the preservation of capital and moderate growth primarily on shorter horizons. Bond guaranteed pension funds are obliged to hedge at least 95% of the whole portfolio against currency exposure. That means that if the pension fund allocates the assets into the financial instruments that are denominated in a currency other than Euro, fund managers must open the position (usually swaps or other hedging instrument) that fixes the value of such investment in Euro.

Obligatory - Equity non-guaranteed pension funds are actively managed pension funds and proceed in investing in different types of assets from the objective under quantitative limits:

- up to 80% of the assets of the funds can be invested in equities, equity funds and other instruments similar to equity;
- at least 20% of the whole portfolio has to be hedged against currency risks;
- max. 20% of the whole portfolio can be invested in precious metals.

Optional - Mixed non-guaranteed pension funds are actively managed pension funds, and they invest in different types of assets, according to their objective and under general quantitative limits. There are no specific limitations applicable.

Optional - Index non-guaranteed pension funds, introduced in April 2012, are the only passively managed pension funds in Slovak pillar II. There are no general nor specific quantitative limits, because of the nature of investing. Slovak Index non-guaranteed pension funds track respective stock market benchmarks (such as MSCI World, Eurostoxx 50, MSCI ACWI, MSCI Euro).

Pillar III – Supplementary pensions

There are four providers – Supplementary Pension Fund Management Companies (SPFMCs) - operating on the market. According to Assets under management, the two biggest, NN and DDS Tatra banky, represent nearly 71% of the whole market.

DDS Tatra banky has introduced TDFs (target date funds) in 2015, with the aim to provide age specific investment strategy for its members saving for retirement in Pillar III pension vehicles.

Table SK3. Pillar III Supplementary Pension Companies market share

Supplementary Pension Company	Assets under management (in millions €)	Market share based on AuM
DDS Tatra banky	968.75	31.63%
UNIQA (AXA before 2021)	462.41	15.10%
NN	1,200.53	39.20%
STABILITA	430.64	14.06%
TOTAL	**3,062.33**	**100.00%**

Source: Own calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

Under the law, each SPFMC must operate at least two types of pension vehicles for supplementary pension (Pillar III):

1. contributory pension fund; and
2. "pay-out" pension fund.

Although the law does not determine specific types of contributory pension funds, we can divide all existing contributory pension funds according to the portfolio structure into three main groups:

- Conservative supplementary pension funds (no equity investments);
- Balanced supplementary pension funds (small portions of equity investments);
- Growth supplementary pension funds (higher portions of equity investments).

For supplementary pension funds, there are no special investment restrictions regarding asset classes, but there are some general quantitative limits, i.e., no more than:

- max. 5% of AuM in one financial instrument;
- max. 30% of AuM in securities and money market financial instruments from one issuer (does not apply to instruments issued by the EU Member States);
- max. 35% of AuM in securities and money market financial instruments issued by the EU Member State, the EU, ECB, MMF or World bank;
- max. 20% of AuM in one standard mutual fund (UCITS compliant);
- max. 10% of AuM in one alternative investment fund (AIF);
- max. 40% of AuM in mutual funds.

Table SK4. Supplementary Pension vehicles market share by group of funds			
Type	**Supplementary pension vehicles**	**Assets under management** (*in millions €*)	**Market share based on AuM**
Contributory	Conservative supplementary pension funds (4)	862.77	28.17%
	Balanced supplementary pension funds (2)	1,153.40	37.66%
	Growth supplementary pension funds (9)	932.54	30.45%
PAY-OUT	Pay-out supplementary pension funds (4)	113.63	3.71%
TOTAL	**19 Pension funds**	**3,062.33**	**100.00%**

Source: Own calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

In general, the Pillar III scheme covers less than 27% of economically active population, while only 70% of them actively contribute to the scheme. At the same, most of the retirement savings are directed into balanced supplementary pension funds, which apply rather conservative investment strategy with limited long-term investments.

Charges

Pillar II – Funded pension

Charges are highly regulated and capped in the Pillar II scheme by the Old-Age Pension Saving Act.

PFMCs can apply the following types of charges at the expense of the pension funds:

- Management fee (as percentage of NAV in respective pension fund);
- Performance fee (as percentage of new highs reached in performance of respective pension fund –High Water Mark[226] 'HWM' principle);
- Administration fee - Administration of Personal pension account (as percentage of new contributions);
- Depository fee (as percentage of NAV in the respective pension fund); and
- Other charges (mostly trading charges).

It must be mentioned that on top of these charges, each saver in Slovak Pillar II also has to pay an Administration fee to the Social Insurance Company that administers the central collection system, central information, and offering system for annuities. The Social Insurance Company collects the social security contributions and transfers part of savers´ contributions to his personal pension account managed by the Pension Asset Management Company.

[226] Slovak legislation defines the HWM method for calculating the success fee as a comparison of new highs of respective pension fund to its historical performance achieved 3 years ago. If today´s closing price is higher than historical highs achieved 3 years ago, the provider has the right to charge 10% success fee from the difference between today's pension unit price and highest historical price. If the difference is negative no success fee can be charged.

The following table compares applied charges in Pillar II.

Table SK5. Pillar II Pension Funds´ Fees		
Fee type	**Since 2005**	**as of 31 December 2020**
Management fee (for PFMC)	max 0.8% p.a., NAV	max 0.3% p.a., NAV *(since 1 April 2012)*
Success Fee (for PFMC)	max 5.6%, HWM	max 10%, HWM (*since 1 July 2013)*
Administration of Personal pension account (for PFMC)	1% of new contribution	1% of new contribution
Administration fee (for Social Insurance Agency)	0.50% of new contribution	0.25% of new contribution *(since 1 January 2013)*

Source: Own research, data as of 31 December 2021

Pillar III – Supplementary pensions

Charges in Pillar III are capped by law. Supplementary Pension Fund Management Companies are (since 1 January 2014) allowed to apply the following types of charges:

- Management fee (as percentage of AuM in a respective supplementary pension fund),
- Performance fee (as percentage of new highs reached in performance of a respective supplementary pension fund – High Water Mark principle),
- Depository fee (as percentage of AuM in a respective pension fund),
- Other charges (Switching fee).

The Following table compares charges applied in the Pillar III.

Table SK6. Supplementary Pension Funds´ Fees		
	Since 2009	Since 1 January 2014
Management Fee *1. contributory SPF*	max **2,5%** NAV (2010) => max **1,98%** (2019+)	max **1,2%** NAV
2. pay-out SPF	max **0,996%** NAV	max **0,6%** NAV
Success Fee *1. contributory SPF*	max **10%** (2010) => max **20%** (2020+); HWM principle	max **10%**; HWM principle
2. pay-out SPF		**0%**
Switching Fee	**0%** more than 3 years	**0%** more than 1 year / max **5%** less than 1 year
Early Exit Fee	**20%** (5% SPC + 15% SPF)	**0%**

Source: Own research based on Supplementary pension saving Act, data as of 31 December 2021

Taxation

The Act on Income Tax recognizes two different of income tax rates in Slovakia that apply to pension saving schemes.

Personal income tax rate has been set at 19% since 2005. Since 2013, there is higher tax rate of 25% for higher earners, whose monthly income in 2021 was higher than €3,165 (around 7% of working population in 2021).

Corporate income tax rate for 2021 was 21%.

Pillar II – Funded pensions

Pillar II should be viewed as a 1bis pension pillar that is basically a derivate of the basic old-age security scheme, as a part (5.25% in 2021) of the overall (18%) old-age social insurance contributions are diverted from a PAYG pillar into funded DC scheme. Understanding this principle, Pillar II taxation is similar to the PAYG pillar, meaning that an "EEE" taxation regime is applied.

Taxation of contributions

Contributions paid to Pillar II are tax deductible. However, a saver can add voluntary contributions on top of the 5.25% contributions redirected from PAYG pillar. Since 2017, voluntary contributions on top of redirected social insurance contributions are subject to the personal income tax (19%) as well as social and health insurance. Thus, the "T" regime applies for voluntary contributions.

Taxation of the Fund

Fund returns are not subject to Slovak income taxes at the fund level.

Taxation of pay-out phase income

Income generated via purchased pillar II pay-out phase products (annuity, perpetuity, programmed withdrawal) are not subject to personal income tax. In case of heritage, the amount the successor receives as inherited (accumulated) savings is not subject to personal income tax.

Thus, we can say that for Pillar II the "EEE" taxation regime applies in general. However, for voluntary contributions, the "TEE" regime applies.

Pillar III – Supplementary pensions

Taxation of Pillar III differs from the Pillar II taxation approach significantly. There are different taxation treatments of contributions as well as different treatments of the pay-out phase. It is rather difficult to generalize the regime. However, the "EET" regime can be used with several exceptions and specifications.

Taxation of contributions

When considering the taxation treatment of contributions, a slightly different regime is used for savers´ (employees´) contributions and a different regime for employer´s contributions.

Generally, both contributions are income-tax deductible; however, for employees (savers) there is a ceiling of €180 per year. This means that the monthly contributions to the Pillar III supplementary pension fund up to €15 are income tax base deductible. Above this amount, the contributions made to the individual saving account are subject to personal income tax. Considering that the average salary (€1,211 in 2021), employee contributions up to 1.24% of the gross average salary can be deducted from the personal income tax base.

Employer contributions are treated in a slightly different way. Contributions are tied to the monthly salary of employees. Employer´s contributions up to 6% of monthly salary are treated as tax expenses. Therefore, employers are motivated to contribute on behalf of employees up to this tax favourable ceiling. Taking into account the average salary in Slovakia, contributions up to €72.66 per employee per month are considered as tax expenses for contributing employers in 2021. Taking into account the poor supplementary pension funds´ performance and the relatively high level of charges, favourable tax treatment of employer´s contributions are the key drivers for the participants. At the same time, this favourable treatment of employer´s contributions paid on behalf of its employees exclusively in the Pillar III scheme creates an administrative monopoly in form of preferred supplementary retirement product in Slovakia.

Taxation of the Fund returns

Fund returns are exempt from income taxes at the fund level.

Taxation of pay-out phase

There are three different types of products used for the Pillar III pay-out phase (according to the Act on Supplementary Pension Saving):

1) Lump-sum – paid out through SPFMC at maximum of 50% of accumulated savings;
2) Annuities – paid out through insurance company in form of a single annuity;
3) Phased (Programmed) withdrawal – paid out through SPFMC for at least 5 years.

There are 3 general conditions, where at least one should be met when entering the pay-out phase in order to achieve more favourable tax treatment of income stream from Pillar III savings. They concern the member´s age, the entitlement for state retirement pension benefits or the entitlement for early state retirement pension benefits.

When considering the tax treatment of the pay-out phase income stream from the saver's point of view, there is a possible way to adjust the personal income tax base. The Act on Income Tax stipulates that the deduction from income tax base will be applied to the income stream from Pillar III benefits and life insurance contracts. Personal income tax base shall be lowered by the paid contributions (Pillar III) or paid premiums (life insurance contract). The Act on Income Tax also defines the income tax base adjustments in case of paid monthly benefits according to the following formulas:

- In the case of temporary annuity, the income tax base is calculated as positive balance between sum of already received benefits and sum of paid contributions;
- In the case of single annuity, the income tax base is calculated as paid monthly benefits and total paid contributions (or premium) divided by the number of remaining years calculated as life expectancy and the age of the taxpayer (beneficiary) at the moment of the first paid benefit.

Therefore, we can conclude that the income tax treatment of pay-out phase is, in fact, a deferred taxation of investment returns applied not to the supplementary pension fund, but directly to the saver during the pay-out phase. In general, we can say, that the tax regime for Pillar III is "EET".

Pension Returns

Pillar II – Funded pensions

The five asset managers offer 17 pension funds in Slovakia (see table below). Pension funds are divided into 2 main groups:

1. obligatory pension funds
   a) bond guaranteed pension funds (5 offered)
   b) equity nonguaranteed pension funds (5 offered)
2. optional pension funds
   c) mixed nonguaranteed pension funds (2 offered)
   d) index nonguaranteed pension funds (5 offered)

Groups a), b) and c) were launched onto the market by the beginning of Pillar II. Index nonguaranteed pension funds (only passively managed pension funds) were launched in 2012.

Table SK7 Pension vehicles in Pillar II

Pension vehicle	Fund Name	Fund Inception Day
Bond guaranteed pension funds	Allianz - Slovenska d.s.s. – BGPF (Garant)	*22 March 2005*
	UNIQA d.s.s. – BGPF (Dlhopisovy)	*22 March 2005*
	365.life d.s.s. – BGPF (Dlhopisovy)	*22 March 2005*
	NN d.s.s. – BGPF (Solid)	*22 March 2005*
	VUB Generali d.s.s. – BGPF (Klasik)	*22 March 2005*
Mixed nonguaranteed pension funds (optional)	NN d.s.s. – MNGPF (Harmónia)	*22 March 2005*
	VUB Generali d.s.s. – MNGPF (Mix)	*22 March 2005*
Equity nonguaranteed pension funds (obligatory)	Allianz - Slovenska d.s.s. – ENGPF (Progres)	*22 March 2005*
	UNIQA d.s.s. – ENGPF (Akciovy)	*22 March 2005*
	365.life d.s.s. – ENGPF (Akciovy)	*22 March 2005*
	NN d.s.s. – ENGPF (Dynamika)	*22 March 2005*
	VUB Generali d.s.s. – ENGPF (Profit)	*22 March 2005*
Index nonguaranteed pension funds (optional)	NN d.s.s. – INGPF (Index Global)	*2 April 2012*
	UNIQA d.s.s. – INGPF (Indexovy)	*2 April 2012*
	365.life d.s.s. – INGPF (Indexovy)	*2 April 2012*
	NN d.s.s. – INGPF (Respekt)*	*13 April 2012*
	VUB Generali d.s.s. – INGPF (Index)	*2 April 2012*

Source: Own elaboration based on oranzovaobalka.sk data, 2022
*Remark: ESG factor has been introduced as of 22.11.2021

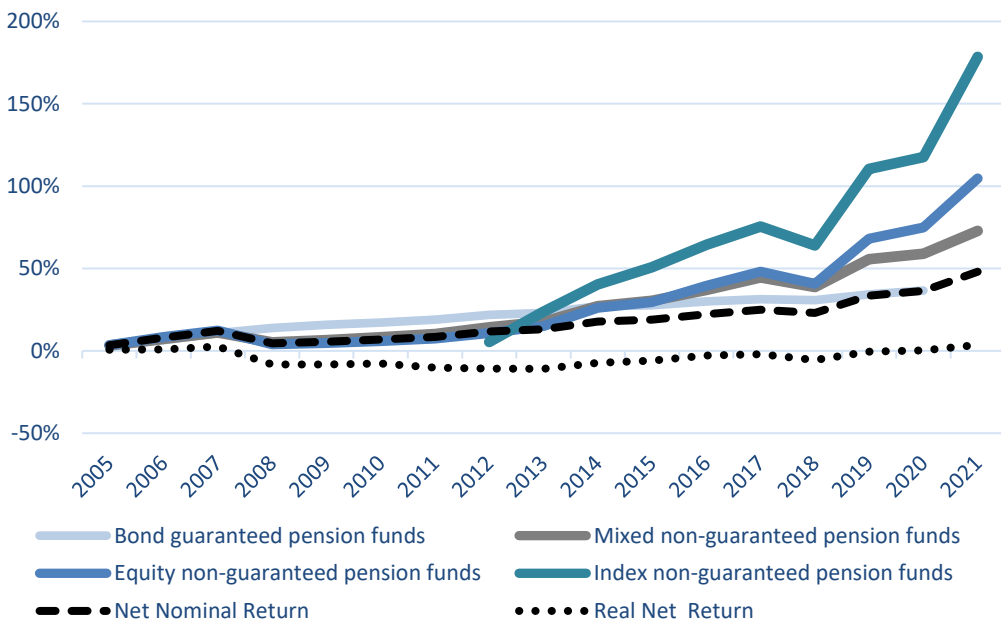
The performance (returns and respective volatility) differs in all four types of pension funds. This is caused by the portfolio structure and different investment strategies.

Bond guaranteed pension funds do not invest in equity investments. Mixed non-guaranteed pension funds invest a small portion in equity investments (currently less than 40% of AuM on average) and equity non-guaranteed pension funds invest higher portion in equity investments (currently more than 50% of AuM on average). Optional Index non-guaranteed

pension funds possess the highest level of equity investments (nearly 100% of AuM), because their fully passive investment strategy focusing on the replication of benchmark (various equity market index) performance.

The following graph presents the cumulative performance of Pillar II Pension Funds. At the same time, we present the nominal as well as real cumulative performance, where the returns are weighted by funds´ AuM.

Graph SK8. Cumulative Performance of Pillar II pension funds



Source: Own elaboration based on oranzovaobalka.sk data, 2022 (as of 31 December 2021)

From the view of a saver, one could present the performance using various holding periods. The table below presents the AuM weighted performance of Pillar II pension funds net of fees in nominal as well as real terms.

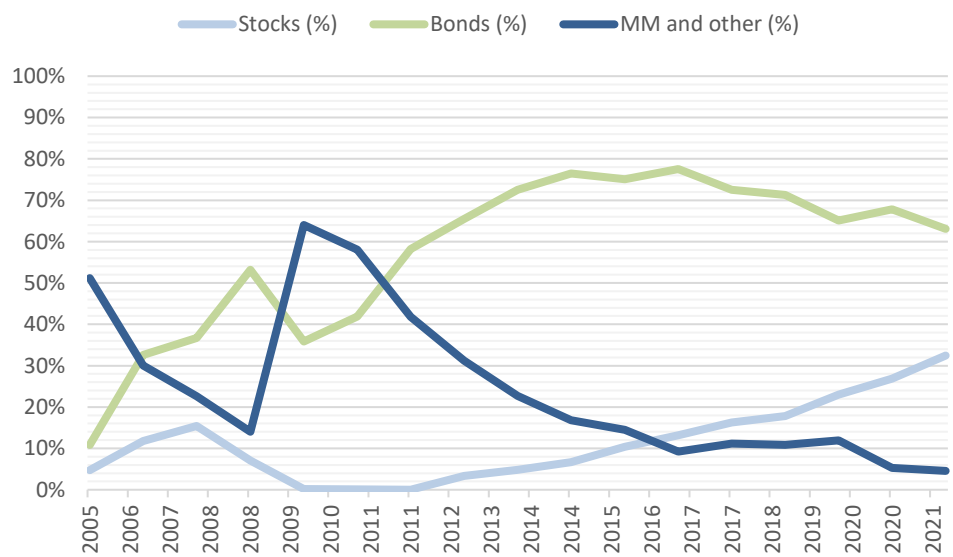
Table SK9. Pillar II Pension funds Nominal and Real Performance according to the holding period

Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1 year	8.48%	3.38%
3 years	6.39%	3.13%
5 years	3.89%	1.29%
7 years	3.32%	1.59%
10 years	3.16%	1.43%
Since inception	2.33%	0.21%

Source: BETTER FINANCE calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

The portfolio structure of Pillar II pension funds according to the classes (bonds, equities, money market instruments) is presented in the graph below. According to our analysis, currently about 63% of all investments in Pillar II pension funds are bond investments. On the other hand, only 32% of all investments are equity investments. The portfolio structure does not correspond to the age profile of Pillar II savers, which causes overall low returns of Pillar II savings.

Graph SK10 Pillar II Pension funds´ Portfolio Structure



Source: Own elaboration based on oranzovaobalka.sk data, 2022

The portion of equities in Pillar II Pension funds´ portfolios is rising constantly, however the overall portfolio structure does not correspond the age profile of existing savers. On the other

hand, younger savers who joined the Pillar II voluntarily after 2012 invest more aggressively in line with conventional knowledge.

Nominal as well as real returns of Pillar II pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table SK11 Nominal and Real Returns of Pillar II Pension Funds in Slovakia					
2005	Nominal return after charges, before inflation and taxes	3.42%	2.33%	0.62%	0.21%
2006		4.54%		0.24%	
2007		3.67%		1.77%	
2008		-6.65%		-10.55%	
2009		0.84%		-0.06%	
2010		1.26%		0.56%	
2011		1.48%		-2.62%	
2012		3.03%		-0.67%	
2013		1.34%		-0.16%	
2014		4.03%		4.13%	
2015		1.04%		1.34%	
2016		2.82%		3.32%	
2017		2.17%		0.77%	
2018		-1.65%		-3.52%	
2019		8.53%		5.36%	
2020		2.29%		0.69%	
2021		8.48%		3.38%	

Source: Own elaboration based on oranzovaobalka.sk data, 2022

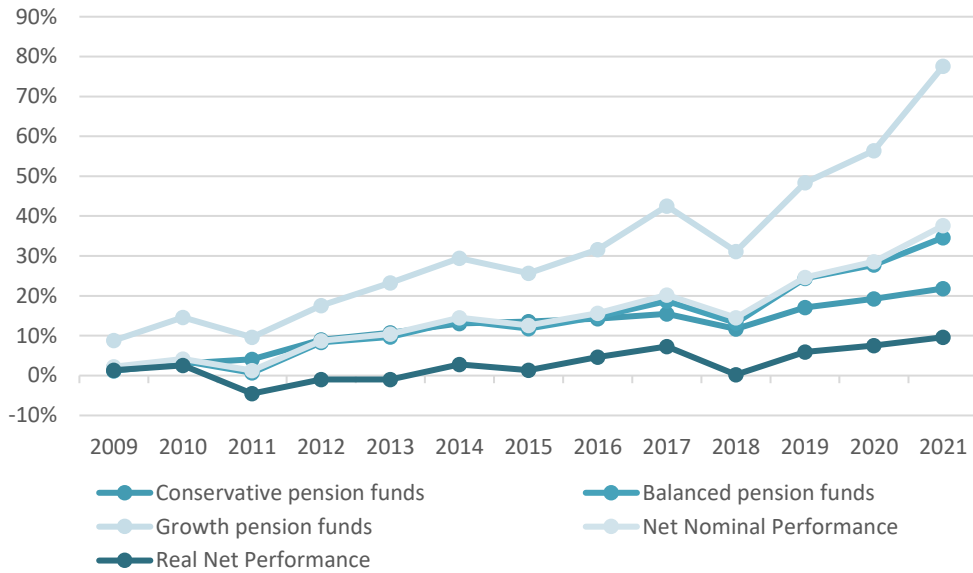
Negative real returns between years 2008 and 2013 were caused by inappropriate legislative changes that came into effect in July 2009 after stock market turmoil. These changes forced portfolio managers to sell off all equities and hold cash in portfolios. Year 2021 brought exceptional returns on equity markets, which has positively influenced the performance of mixed, equity and index pension funds. However, as most of the savers are allocated into the bond funds, the pension savings of most savers did not experience these gains.

Pillar III – Supplementary pensions

Supplementary pension funds differ in strategy and portfolio structure. Conservative pension funds do not invest in equity investments. Balanced pension funds invest a small portion in equity investments (currently less than 20% of AuM in average) and growth pension funds invest a higher portion in equity investments (currently more than 40% of AuM in average).

Supplementary pension funds' performance on a cumulative basis accompanied by the calculated net nominal as well as real cumulative performance is presented in the graphs below.

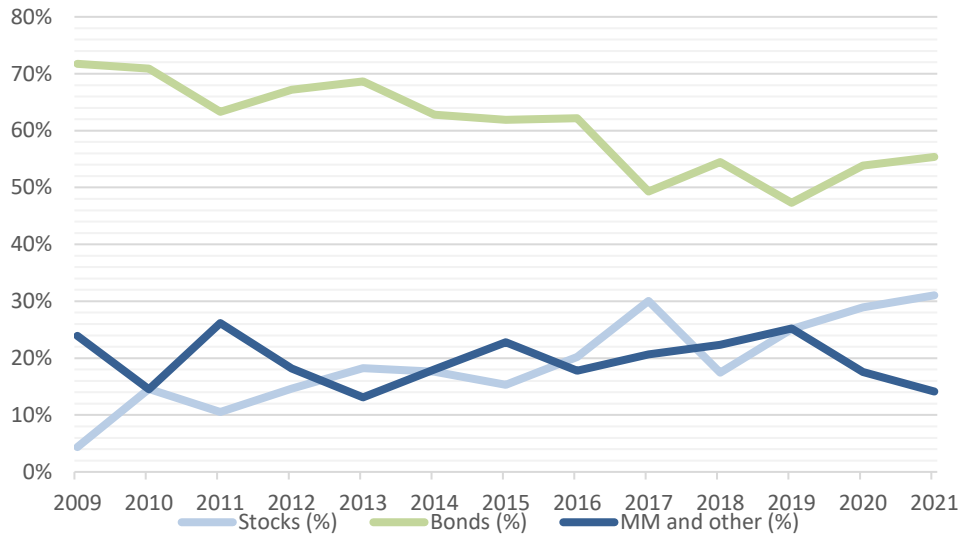
Graph SK12. Supplementary Pension Funds Cumulative Performance



Source: Own elaboration based on oranzovaobalka.sk data, 2022

Balanced and Conservative supplementary pension funds have achieved very similar returns over the analysed period. This could be explained by similar portfolio structure. The portfolio structure of Pillar III is presented in the graph below.

Graph SK13. Supplementary Pension Funds´ Portfolio Structure



Source: Own elaboration, 2022

Currently, more than 55% of all investments in Pillar III pension funds are bond investments. In 2020 we could have seen portfolio changes in favour of equities and rather sharp decrease of money markets instruments.

Looking at the performance from a saver´s point of view, where various holding periods are considered, we present the net of fees nominal as well as real returns.

Table SK14. Supplementary Pension funds Nominal and Real Performance according to the holding period

Holding Period	Net Nominal Annualized Performance	Real Net Annualized Performance
1 year	7.02%	1.92%
3 years	6.31%	3.03%
5 years	3.54%	0.93%
7 years	2.66%	0.92%
10 years	3.11%	1.39%
Since inception	2.49%	0.71%

Source: BETTER FINANCE calculations based on oranzovaobalka.sk data, 2021 (data as of 31 December 2020)

Nominal as well as real returns of supplementary pension funds in Slovakia weighted by AuM are presented in a summary table below.

Table SK15. Nominal and Real Returns of Supplementary Pension Funds in Slovakia						
2009	Nominal return after charges, before inflation and taxes	2.25%	2.49%	Real return after charges and inflation and before taxes	1.35%	0.71%
2010		1.88%			1.18%	
2011		-2.78%			-6.88%	
2012		7.37%			3.67%	
2013		1.56%			0.06%	
2014		3.69%			3.79%	
2015		-1.68%			-1.38%	
2016		2.72%			3.22%	
2017		3.95%			2.55%	
2018		-4.73%			-6.60%	
2019		8.84%			5.67%	
2020		3.14%			1.54%	
2021		7.02%			1.92%	

Source: BETTER FINANCE calculations based on oranzovaobalka.sk data, 2022 (data as of 31 December 2021)

Supplementary pension funds have achieved positive returns in 2020 mainly due to the increased portion of equities in their portfolios. However, relatively high fees played their role and contributed negatively to the overall low performance.

Conclusions

The Slovak multi-pillar pension system is not quite favourable for savers. Pillar II suffers from constant changes and significant political risk therefore not only arises from diverging political opinions on the pension system. The new phenomena in Slovak pension system is the pension populism, where political parties reverted stabilization features and decreased the financial stability and trustworthiness of the PAYG scheme. The year 2020 could therefore be viewed as a year of expected major changes in Pillar I.

Even though there have been negative interventions in Pillar II from 2008 to 2012 (significant investment restrictions, a decrease in contributions from 9% to 4%), several positive features have been introduced in Pillar II. However, unprofessional move of transferring savers´ assets from equity-based pension funds into bond ones have had detrimental effect on savings, which could lead to low pension pots and further political pressures on decreasing importance of private pension savings in Slovakia.

Pillar III pension vehicles are generally poorly performing, costly and without significant tax benefits for employees´ contributions; Pillar III would never survive competition from Pillar II pension funds and typical investment funds. The debate on finding an appropriate regime for

the Pillar III scheme is still ongoing, while there are several different views on how to make Pillar III more favourable for savers. Major governmental spending review in this area is expected to provide a clearer way forward.

Policy Recommendations

Slovak Pillar II suffers from the misalignment between the remaining saving horizon of savers (age profile) and applied investment strategy or allocation of savings. Most of the savers allocate their savings into the bond funds even if their remaining saving horizon is far longer than 15 years. Pension asset managers and regulators should therefore acknowledge inertia of savers and imply default investment strategy that would at least recognize the remaining saving horizon of savers and thus allocate the savings accordingly.

Pillar III faces two main limitations that are in fact deeply interconnected. The first problem is the small coverage of economically active population, which disqualifies the pillar from being recognized as universal pension pillar. This problem is however connected to the high fees that effectively refrain larger participation of employers and employees in this pillar. Regulators should scrutinize the possibilities to lower the management fees with rising assets under management, which would show the clear and transparent road map towards the development of supplementary pension schemes in Slovakia.

However, the key issue of the pension system in Slovakia is the I. pillar managed by state-owned Social Insurance Company. Pension populism has financially destabilized the I. pillar and decreased the trustworthiness of the I. pillar, while the private forms of pension savings have increased on importance. The government should immediately start taking actions to increase the financial stability of the I. pillar and remove the populist features introduced in 2019 with continuation in 2020 as soon as possible. Reform attempts announced in 2020 started to emerge in 2021 and become part of the Recovery and Resilience Plan, however they have not become reality as of now.

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- Supplementary pension saving Act No. 650/2004 (http://www.zakonypreludi.sk/zz/2004-650)

Pension Savings: The Real Return

2022 Edition

Country Case: Spain

Resumen

Los trabajadores españoles no ahorran para su pensión. Más del 70% de sus activos totales son "ladrillos y cemento", que de ninguna manera puede considerarse un "activo previsional". Cuando las pensiones de Seguridad Social sustituyen más del 80% del salario previo a la jubilación, ¿por qué los trabajadores deberían ahorrar para ello? Como resultado de estos y otros factores, la "industria de las pensiones" (Pilares II y III) en España es pequeña y menos eficiente que si fuese tan grande como las de Holanda, Dinamarca o el Reino Unido. Los activos previsionales de los Planes de Pensiones a 31 de diciembre de 2021 llegaban al 10,55% del PIB de ese año, y las reservas técnicas de una amplia gama de productos asegurados para la jubilación (o similares) alcanzaban otro 15,82% del PIB, en total un 26,37% del PIB. Por estas razones, la gestión de estos activos no es barata, aunque puede llegar a serlo, y mucho, en los esquemas del Pilar II. La Fiscalidad de los activos y rentas de ambos pilares en España responde al régimen EET, común en la mayor parte de los países de la OCDE, si bien en los últimos dos años se ha deteriorado considerablemente para los vehículos del Pilar III. El rendimiento acumulativo medio general de los esquemas del sistema de Planes de Pensiones, una vez descontada la inflación, y antes de impuestos (marginal del IRPF, en este caso) ha sido del 0,58% por año en el periodo 2000-2021. Todos los datos utilizados en este capítulo provienen de fuentes oficiales fácilmente accesibles en internet (INVERCO, DGSFP, INE y Banco de España).

Summary

Spanish workers don't save for their retirement. "Bricks & Mortar" make more than 70% of a typical Spanish household's portfolio. And there is no way to think of this asset as retirement savings. As Social Security old-age benefits replace more than 80% of lost labour income at retirement, why Spanish employees should save with this purpose? As a result, Spanish Pensions Industry (Pillars II and III) is small and less efficient as that of Denmark, Netherlands or the UK. Pension Funds' assets at end 2021 reached 10.55 percentage points of GDP that year, and if insured retirement or retirement-like vehicles' mathematical reserves were added to this, an extra 15.82 percentage points could be found, adding to a grand total of 26.37% of GDP. These and other reasons imply that asset management in this low-scale industry cannot be cheap. To be sure, Pillar II assets are as cheap to manage as in advanced countries or more, but this is not the case with Pillar III assets. Taxation of retirement assets and income in Spain

responds to the EET regime, as in most OECD countries, although the last two years have witnessed a deterioration of fiscal terms grants to Pillar III schemes. Average cumulative net real return since 2000 through 2021, in the standard Pension Plans system, once inflation adjusted, and before taxes (the marginal Personal Income Tax in this case), has been just 0.58% annually. All data used in this chapter can be found on readily available official sources' web sites (INVERCO, DGSFP, INE and Bank of Spain).

Introduction

The Spanish pension system is composed of three pillars:

- Pillar I – Public, with a pay-as-you-go major branch of compulsory, earnings related pensions (old-age, invalidity and survivors' benefits) and a minor, means-tested assistance branch for over 65 years old individuals (old-age and invalidity).
- Pillar II – Voluntary, defined benefit and defined contribution occupational, employer-sponsored pension plans (restricted de facto to large companies) and other qualified pension vehicles (insured and non-insured).
- Pillar III – Voluntary, individual defined contribution pension plans and a variety of other qualified retirement savings vehicles (insured and non-insured).

A more detailed structure of these three pillars is presented in the following table.

Introductory Table Multi-pillar pension system in Spain (2020/2021)			
	Pillar I **National Social Security**	**Pillar II** **Employer-sponsored Pension Plans**	**Pillar III** **Individual Pension Plans**
Participation	Mandatory	Voluntary	Voluntary
Type of funding	Financed by social contributions (employees 4.7%, employers 23.6% of gross pay)	Financed normally by employers' contributions (no standard rate)	Financed by insured persons
Type of benefit entitlement	Final Wage formula (variable % of a 25 years average of actualized pensionable wages)	Both DB and DC benefits are used	DC benefits
Management	Publicly managed benefits paid by the National Social Security Agency (INSS)	Managed by independent agencies under companies' Social Partners supervision	Managed by Plans' Promoters (Financial institutions, Insurers or Associations)
Products	Contributory state pension, Non-contributory state pension and Minimum Basic Income (means tested, as from July 2020)	Pension Plans (standard vehicle), Simplified Pension Plans (new as from 2022), Insured Pension Plans (PPA), Life Insurance & Group Insurance, Individual Saving Plan (PIAS) and Long-term Individual Saving Insurance (SIALP).	
Average benefit	Average contributory pension (14 payments per year): €1,503 per month (old-age, newly retired employees)	Employer-sponsored standard Pension Plans (14 payments per year): € 819,74 per month (all contingencies, income only benefits, 2020) (a)	Individual standard Pension Plans (14 payments per year): €163 per month (all contingencies, income only Plans, 2020) (b)
	Average non-contributory pension (14 payments per year): €421.4 per month (old-age and invalidity)	Only 45,30% of total beneficiaries opt for income only benefits and amounts payed were 54,12% of total benefits paid	66.8% of total beneficiaries opt for income only benefits and these amount to 29.75% of total benefits paid
Coverage	Social Insurance is compulsory for all workers. There are 6.2 million old-age pensioners. All persons 65 and over are eligible for Social Assistance.	Barely 11.24% of employees were covered by Employer-sponsored standard Pension Plans in 2021. Only 67.1 thousand beneficiaries received income only benefits in 2020.	Below 25% of population aged 16 to 64 was covered by Individual Plans in 2020. 332 thousand beneficiaries received income only benefits in that year
Net replacement ratio (c)	74,3% (as for 2021)	43.1% (as for 2020)	8,1%

(a) Employer-sponsored Pension Plans are the standard employee pension vehicle. Besides these, Group Insurance has a far larger popularity, although average capital is one fifth that of the Pension Plans'.

(b) Individual Pension Plans are the dominant personal retirement behicle for idependent workers and employees.

(c) This ratio is a gross, efective, average "benefit ratio" rather than a standard OECD type replacement ratio.

Source: Own estimation based on data from Social Security, INE, INVERCO and DGSFP

It is well known that Social Security contributions, even if they are immediately spent on current benefits and not accumulated as savings by workers, may return relevant yields when retirement benefits are finally received. This happens everywhere, al so in Spain. Estimations of the implicit rate of return for Spain are around 6% real per year. This means that Social

Security, as a matter of fact, has returned every euro paid in contributions around 12 years after retirement when the average retiree has yet another 10 years of remaining life.

This implicit return is difficult to beat by marketed retirement products, even if these are by default sustainable when they are of the DC variety.

This said, the summary table below tells a story that bears a sharp contrast with the above description of Social Security internal rate of return. Long term (since 2000) net (of fees), real (after inflation) and before taxes, returns of the standard retirement plans (Pillars II and III) in Spain has been 0.68% in annual cumulative terms (0.50% for Pillar III schemes and 0.96% for Pillar II schemes) and this thanks to the good performance of stock markets in 2019 and 2021 (overall 8.8% in 2019 and 8.5% in 2021).

Aggregate summary return table										
	1 year		3 years		7 years		10 years		Since 2000	
	2021	2020	2019-2021	2018-2020	2015-2021	2014-2020	2012-2021	2011-2020	2000-2021	2000-2020
PILLAR II										
Nominal return	8.09%	1.53%	4.93%	3.32%	4.38%	4.33%	4.62%	4.02%	3.18%	2.94%
Real return	1.52%	2.10%	2.25%	2.40%	3.02%	3.86%	2.56%	2.86%	0.89%	0.86%
PILLAR III										
Nominal return	8.67%	0.29%	4.24%	2.25%	3.55%	3.55%	3.78%	2.77%	2.71%	2.42%
Real return	2.10%	0.86%	1.58%	1.33%	2.20%	3.08%	2.26%	1.60%	0.43%	0.35%
Both Pillars										
Nominal return	8.50%	0.67%	1.80%	0.79%	3.83%	3.81%	4.07%	3.22%	2.89%	2.62%
Real return	1.93%	1.24%	1.80%	-0.5%	2.48%	3.34%	2.56%	2.05%	0.61%	0.54%

Source: own composition based on INVERCO data

Pillar I

The National Institute for Social Security (INSS, Spanish acronym) is the national agency for pensions run by the central government. The Spanish Social Security covers all workers against old-age, invalidity, and survivorship (widowhood and orphanhood). It has two separate branches: an insurance, contributory and earnings-related branch and a non-contributory, assistance, flat means-tested benefits branch, sharply differentiated not only by law but also by its size, nature, and functions.

The insurance branch of Social Security is, by far, the dominant scheme in the Spanish pension's arena (all public and private vehicles considered). It is contributory, compulsive for all workers, either employees or self-employed workers, and firms and is financed through social contributions that, within each current year, are used to pay for current pensions. The financial method of the system is thus of the Pay-As-You-Go variety. The pension formula is of

the "defined benefit" type where only contribution (pensionable) wages, age at retirement and registered contribution years are considered (besides penalties/bonuses for early/delayed retirement).

As of 31st December 2021, The INSS was paying 9.92 million pensions (to about 8.9 million pensioneers) at a rate of € 1,039 each per month (14 payments in a year, all pension categories, all pensioners). Within these figures, slightly more than 6.2 million pensions went to the old age category at an average rate of € 1,196 per beneficiary and month (14 payments in a year). Direct total expenditure in earnings-related Social Security benefits in 2020 amounted thus to around € 144 billion, that is 11,97% of that year's GDP.[227]

As for workers' coverage, as of 31st December 2021, 19.4 million workers were affiliated to the national Social Security scheme. Out of these, 14.9 million (76.8%) were wage earning workers covered by the Social Security General Regime and 3.3 million (17.0%) independent workers covered by the Self-employed Workers Regime. The remaining few, a mere 7.8% of workers, belonged to different sub-regimes within Social Security.

There were also 3.1 million registered unemployed workers, 58,8% were covered by Social Security through social contributions paid on their behalf by the Spanish Employment Agency (SEPE, Spanish acronym) for as long as they received unemployment benefits.

Besides social insurance pensions, the Spanish Social Security, through its assistance branch, as of 31st December 2021, paid 446.1 thousand pensions of which 263 thousand were old-age and the rest were invalidity pensions. The average pension under this scheme was € 5,639.20 a year (2021 average), a total amount of almost € 2.5 billion, or 1,74% of that year's GDP. Non-contributory (assistance) pensions are subject to means (income and assets) tests and are clearly a minor scheme since autonomous regions in Spain offer a wide range of basic benefits to those individuals and households in need.[228] These benefits are paid by Social Security thought fully financed out of general taxation. These benefits can be complemented by other personal characteristics (housing, dependent spouse and other health or disability conditions).

Within the contributory pensions class, social contributions received by the Social Security administration, that amounted to € 125.14 billion, provided, as of 2021, for 86,9% of total cost of direct Social Security contributory benefits. The total contribution rate is 28.3% of gross contribution wage. This rate splits in 23.6 pp paid by employers and 4.7 pp paid by workers. The self-employed must pay the whole 28.3% rate on their pensionable earnings. Contribution wages track effective wages closely through a scale with a minimum (as of 2021) of € 1,125.90 and a maximum of € 4,070.10 per month. Employees cannot choose their contribution wage but self-employed can do it and most of them do choose the minimum contributory earnings

[227] In 2021, Spanish GDP recovered partially from a strong decrease of 10.8% in 2020 with respect to 2019 because of Covid-19 administrative restrictions to economic activity. Direct earnings-related benefits in 2019 amounted to 10.9% of that year's DP. SS expenditure over GDP in 2020 was 12.5%.
[228] Since June 2020, Social Security is offering a new individual Minimum Basic Income.

base. This results in their ex-post retirement benefits being too small. Many of these benefits will have to be latter complemented with an assistance top to reach the statutory minimum retirement pension benefit. This resulting, paradoxically, in a larger internal rate of return for minimum earnings-related old age pensions recipients, over their past contributions, compared to retirees receiving higher or maximum earnings-related pensions payable by Social Security.

Pillar II

As shown in the Introductory Table above, Social Security old-age benefits in Spain replace pre-retirement wages with one of the highest rates in the world and against a rather high pay-roll tax mostly paid by employers[229]. So, there is little margin left for occupational and personal retirement accounts to step substantially into the retirement arena[230]. And, indeed, what we observe in Spain is a very limited landscape for marketed retirement solutions even though the modern regulation for these products was enacted around 1987 last century.

The General Government Budget Law 11/2020, enacted on 30th December 2020, established new limits for tax deductibility of contributions paid by participants in occupational vehicles amounting to € 10,000 including employer's and employees' contributions.

Pillar II in Spain embraces employer-sponsored retirement accounts for wage earners[231]. These products are financed through contributions mostly paid by employers, with employees rarely participating on a matching basis.

There is a variety of retirement vehicles that employers may offer to their employees, or available for self-employed workers as well. Amongst them, tax-qualified Pension Plans are the standard and most prevalent vehicle. These Pension Plans are capitalisation retirement accounts of either Defined Benefit or Defined Contribution type to which employers contribute with a percentage of wage. Workers can also contribute. Contribution rates to occupational Plans may vary considerably, but their average rate can be estimated at around a modest 2.6% of average gross wage[232], or around € 619,71 per covered employee and year (2020). Normally, only above average wage earners are offered with these deferred wage benefits.

Employers are not obliged by law to offer this coverage to their workers, although some may be obliged by Collective Bargaining agreements in an industry or sector, which is rare. And indeed, very few companies, but the large ones, offer them to their workers as barely 2 million

[229] This said, however, pay-roll taxes to Social Security or other welfare programs are deferred wages and, were they to be entirely supported by employees, gross wages should be accordingly updated to accommodate this wedge.
[230] See Introductory Table above.
[231] "Associated pension plans", a very minor category used by cooperatives' members are classified as "other personal pensions" together with individual pensions within Pillar III vehicles by the regulator.
[232] Estimation based on data from INVERCO and INE.

accounts of this type where registered through 2021, to a total active population of 23.2 million that same year, a mere 8.4%. In 2020, only 95 thousand retired employees received old-age benefits from standard pension plans, in form of income, a lump-sum or other kind. Average annual equivalent benefit was € 11,628.65 (before taxes) and the equivalent benefit rate (against average annual gross pay) was 43.6%[233]. As of 31st December 2021, total assets under management (AuM, in what follows) to these accounts totalled € 37.8 billion (€ 2.1 billion above AuM one year earlier), that is, a tiny 3.14% of Spanish GDP in that year.

Pillar II retirement accounts are fiscally qualified by the government. Contributions by employers or employees are tax deductible up to an absolute limit of € 10,000 per person per year[234]. Benefits, no matter whether retrieved in form of monthly income, as a lump-sum or otherwise, are taxed under the current personal income taxation rules[235]. When benefits are retrieved in form of an income stream, beneficiaries are obliged to buy an annuity (life or term) or a drawdown. Nearly half of beneficiaries opt for a lump-sum given the tiny pension pots they manage to accumulate during their working lifetimes.

Often, in Spain and in many other countries, and this is a crucial issue of understanding for our industry, layman savers and even experts refer to the fiscal treatment explained before as "incentives" or even "a fiscal gift". The truth is that having contributions tax exempted and taxing benefits (tax deferral) is the world EET standard (Exempt contributions, Exempt returns on those and Tax benefits), rather than the opposite or, even worst, double taxation of pensions if both contributions and benefits were to be taxed. Tax deferral, as opposed to an "incentive", is not a gift from government or from the rest of society, is a just treatment for income won after decades of work efforts and thrift.

Pillar III

Pillar III embraces personal, or individual Pension Plans, the latter being again the dominant type within a large variety of types (see the Introductory Table above). These plans are personal, voluntary and "complementary" to both Pillar I and Pillar II arrangements. These accounts were equally treated, as Pillar II accounts, from the tax point of view up to 2020. But, as already mentioned, Law 11/2020 radically changed this status quo by reducing tax deductibility of contributions to € 2,000. In 2021 a new change in the 2022 Budget Law

[233] Detailed data on benefits is only available up to 2020.
[234] Up from € 8,000 as for December 2020. This absolute limit breaks down to € 1,500 as the general limit for Pillars II and III schemes and an additional limit of € 8,500 from employers plus employees' social contributions to Pillar II schemes. The Spanish Government has enacted in mid-2022 new legislation that regulates new Pillar II schemes called Simplified Pension Plans to which both employees and the self-employed can contribute. The above fiscal limits also apply to these schemes for employees, but now self-employed workers have an additional (to the general) limit of € 4.250 tax deductible.
[235] Spain has a Dual Personal Income Tax that differentiates income from investments from labour income. Pension benefits (both principal and interest), however, are fully taxed as labour income.

established that € 1,500 can be tax-free as the new extant general limit. One of the lowest thresholds in the OECD.

This double shock to Pillar III retirement savings will have devastating effects soon barely compensated by the "Simplified Pension Plans" newly introduced aiming at self-employed workers. As a result of these fiscal changes to Pillar III schemes, contributions to individual Pension Plans in the first six months of 2022 had fallen by 16,7% over contributions made in the same period in 2021 which had already fallen by 21.7% over contributions made in the same period in 2020. An accumulated fall of 34.8%. Analysts are expecting a continued fall in contributions to III Pillar schemes in the second semester of 2022. One salient feature within this category is that contributions by account holders are made at the end of the year using balances left to profit from tax deductibility.

In what concerns other features, however, Pillar III Personal Pension Plans are virtually the same product as employer-sponsored Pension Plans, albeit quite more expensive to manage. In 2021, only 500 thousand persons received benefits either as income, a lump-sum or both. Average annual benefit was € 5,423 (gross). As of 31st December 2021, Pillar III included 7.5 million retirement accounts that belonged to around 6.5 million individuals (or 21% of Spanish population 16-64 years old). These numbers did not change as from 2019. AuM for these plans totalled € 89.3 bn (€ 7.3 bn up from one year earlier), that is, a mere 7.41% of Spanish GDP.

Household Savings

Personal (financial) saving in Spain is not a salient feature of its economy's financial side. Financial saving is so low because Spaniards love to save "*autrement*". That is, in "bricks & mortar". This said, households are still able to spare some money by the end of the year and have so far managed to accumulate a financial buffer. Only a small part of these assets, however, are dedicated to a retirement objective. One of the reasons for this lies in the fact that Social Security forces Spanish workers to "save" through pay-roll taxes paid in large part by their employers on their behalf. This reduces both disposable income and the share of it that households could save. Besides, in exchange for heavy pay-roll taxation (28.3% of gross contribution wages only for retirement and associated contingencies), public pensions replace wages after retirement at around a 75% average, effective benefit rate.

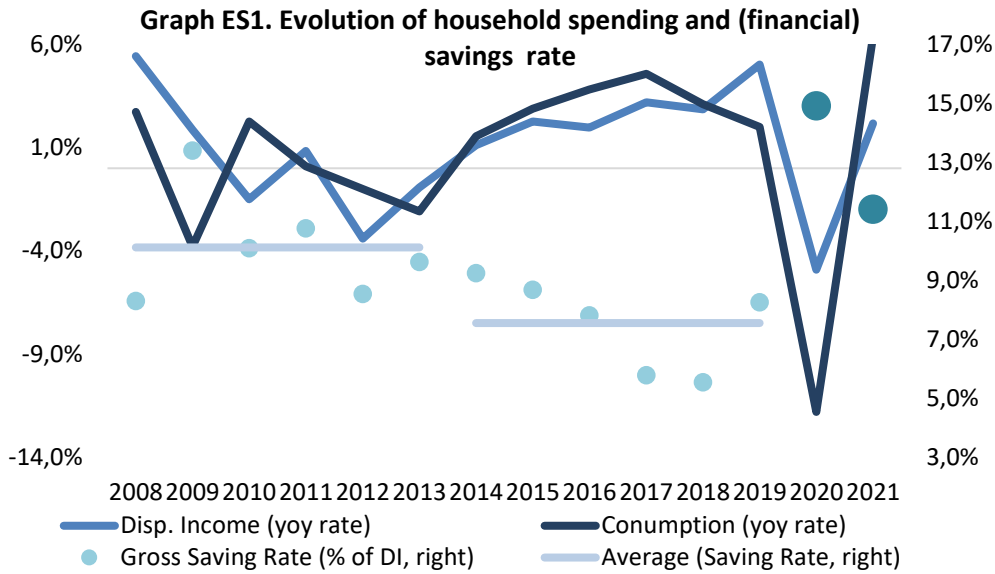
These factors reduce the desire and/or capacity to save for retirement of Spanish workers. Social contributions paid by employers (23.6 percentage points of the total rate) are commonly considered to be "deferred wage" showing up in a correspondingly lower gross pay received effectively by workers as compared to the gross pay, they would receive had them to pay the full contribution rate.

As for real estate, it is well known that it is hardly a retirement asset at all. Yet many homeowners, that in Spain tend to own more than one house or apartment, think that they

could use their houses as a source of retirement income. However realistic this may be, the fact is that an astonishing three fourths of Spanish households' total wealth is made of "bricks & mortar", its value representing near four times the value of Spanish GDP. Housing, in a way, is "the" retirement asset in Spain and retirement solutions providers would better think on how to develop sound retirement income products based on housing assets rather than hope for households to start accumulating proper retirement assets, at least for a generation and provided that radical changes help a development of large retirement solutions markets in Spain.

The above, basically the same text we wrote last year, tended to be the picture before Covid-19. And so continued to be in 2021, but for few important differences. First comes the fact that households, who were given by the government the possibility to withdraw part of their retirement savings to cope with financial hardship at home and/or at their businesses, did not actually use this window. Total AuM at Pension Funds (both Pillar II and III) have increased by € 11.6 billion, or a 9.9%, in 2021 over 2019. This increase was due mostly to interest payments (+ € 10.7 billion) than to net contributions (+ € 0.93 billion).

The overall picture on households' Gross Disposable Income (year-on-year change), Consumption (year on year change) and Gross Savings (rate over Disposable Income) is shown in Graph ES1 below. During the crisis (2009-2013), the savings rate oscillated amply around an average of about 10% of Gross Disposable Income. 2009 and 2013 were precisely the most recessive years of the period. Pre-crisis years (since mid-90s in the last century) savings rate was low, reflecting the strong dynamics of private consumption, fuelled by cheap loans and intense employment creation, coupled with wage increases. After 2008, the deep recession of 2009 and a second (and large) recession in 2011-2013, led Spanish households to increase their savings ratio above 13% in 2009, and keep it around 10% in the recessive years. Meanwhile, wages stagnated, and employment continued to fall bringing the unemployment rate above 25% in the through of the second recession, at mid-2013.



Source: Own elaboration based on Banco de España data

Expansive years (2015-2018), when consumption was growing vigorously the savings rate dipped to a bottom 5% of disposable income in 2018. In 2019, consumption (and the economy) decelerated, and savings bounced to above 8%. As for 2020, we have seen an almost doubling of the savings rate observed in 2019, to a high of 14.9%. Covid-19 effectively restrained consumption in 2020 to a 2015 standard (a yoy 11.8% fall) while disposable income suffered far less (a yoy 4.9% fall). Finally, in 2021, we have observed positive rates of change for these three indicators, notably a far larger increase in consumption than in disposable income and a fall in the savings rate to a, notwithstanding, healthy 11.4% level not seen before de large rate observed in 2020.

By the end of 2021, (gross) financial assets owned by Spanish households (and non-profit institutions serving households - NPISH) amounted to € 2.7 trillion, according to the Bank of Spain financial balance sheets statistics. That amount represented slightly more than 3.6 times households' Gross Disposable income and above 2.2 times Spanish GDP. They also increased their holdings of financial assets by € 169 billion, a healthy increase of 6.7% compared to 2020.

If we take a closer look at the distribution of (gross) financial assets owned by Spanish households in 2020-2021, as shown in Table ES1 below, one can immediately observe that the "cash and bank deposits" class of assets, with more than one trillion euros at end 2021, takes up to an impressive 38.6% of all financial assets held by Spanish households, slightly below the share observed one year earlier. "Equity" being the second most important financial asset in households' portfolios at € 755.7 billion and 28.2% of total financial assets, or barely one percentage point up from a year earlier. Clearly, the Covid-19 recession had an impact in both preference for liquidity and precautionary savings, but this impact will be smoothly reversed.

In fact, very little of the large extra savings realized in 2020 and 2021 went to accumulation of pension rights, that barely increased in these two years.

Table ES1. Financial assets held by Spanish households 2020-2021

	2020			2021			Change (%)
	€ bn	%	% of GDI	€ bn	%	% of GDI	
Cash and bank deposits	990.8	39.4%	133.4%	1,034.4	38.6%	136.3%	4.4%
Investment Funds	350.8	14.0%	47.2%	408.7	15.2%	53.9%	16.5%
Shares	689.9	27.4%	92.9%	755.7	28.2%	99.6%	9.5%
Pension rights	176.3	7.0%	23.7%	188.4	7.0%	24.8%	6.8%
Insurance	210.4	8.4%	28.3%	199.4	7.4%	26.3%	-5.2%
Other	95.6	3.8%	12.9%	96.6	3.6%	12.7%	1.1%
Total	**2,513.8**	**100%**	**338.5%**	**2,683.2**	**100%**	**353.6%**	**6.7%**
Pro memoria: GDI (a)	742.5			758.7			2.2%

(a) GDI: Gross Disposable Income
Source: own elaboration based on Banco de España

Spanish households did not increase much, or even decreased, their investment funds and insurance holdings in 2019. Equity holdings suffered a large fall as reflected in the table above. Pension entitlements, however, managed to keep their share at 7% of total financial assets. A very modest claim indeed.

With respect to households' Gross Disposable Income, it increased a contained 2.2% in a still complicated economic and financial year, but total financial assets jumped by 6.7%, reaching a relative nominal size of 3.5 times households' GDI an above two times Spanish GDP in 2021.

Pension Vehicles

Even if, due to the overwhelming presence of Social Security, the room for Pillars II and III is not a very large one in Spain, there is a large variety of marketed retirement products. The most standard retirement vehicles are Pension Plans (occupational and personal) and Insured Pension Plans. Most retirement vehicles in Pillar III are provided by financial institutions and insurers that also act as managers and depositaries of Pillar II occupational pension plans. The latter are basically provided by employers. Also, several professional associations have since long created *Mutualidades* (Mutual Funds) that offer complementary (Pillar II) coverage to *mutualistas* (members), with some of those also operating as regulated alternative schemes to Social Security's self-employed schemes (Pillar I) for these occupational groups.

Current laws regulating modern Pillars II and III were enacted around 1987-1988. Occupational pensions, that were directly provided by employers to their employees before then, were gradually taken out of P&L accounts and entrusted to newly created entities that have their

own legal personality (*Planes de Pensiones*) and their assets integrated into standard vehicles also created by those laws (*Fondos de Pensiones*). As recently as June 2022, however, the Spanish Parliament passed Law 12/2022 by which Public Occupational Pension Funds were created and brand new private Simplified Occupational Pension Plans were regulated allowing self-employed workers to join occupational schemes for the first time in Spain.

Notwithstanding the fact that Spanish households preferred to hold their financial assets in form of Bank Deposits & Cash, Equity kept their place in 2021 at a 28.2% share of total financial assets, well above Investment Funds (Tables ES1 and ES2). In 2021, total investment in this class of assets increased by 9.5%. Investment Funds enjoyed a healthy 16.5% increase. Pension funds improved considerably the performance observed in 2020 and had a nominal 6.8% increase repeating the pattern of 2019.

In 2021, both savers through Investment Funds and Pension Funds obtained excellent net yields amid clear domestic and international economic and financial recovery conditions after Covid-19 impact in 2020.

Investment Funds also received significant net investments of a level not seen since 2017 and were able to increase the value of AuM significantly, as shown in Table ES3. Pension Funds, however, entirely relied on net yields to see the volume of AuM increased as Net Investments were negative. For the first time in record, moreover, occupational, associated, and individual Pension Funds showed negative net investments.

Table ES2. Total assets managed by Group Investment Institutions 2010-2021 (€Mn)							
	Group Investment Funds					Pension Funds	Total
	Investment Funds		Investment Trusts		Foreign IF		
	Financial	Real Estate	Financial	Real Estate			
2010	138024	6123	26155	322	48000	84750	303374
2011	127731	4495	24145	316	45000	83148	284835
2012	122322	4201	23836	284	53000	86528	290171
2013	153834	3713	27331	868	65000	92770	343516
2014	194818	1961	32358	826	90000	100457	420420
2015	219965	421	34082	721	118000	104518	477707
2016	235437	377	32794	707	125000	106845	501160
2017	263123	360	32058	620	168000	110963	575124
2018	257514	309	28382	734	168000	106886	561825
2019	276557	309	29446	725	195000	116419	618456
2020	276497	311	27599	886	220000	118523	643816
2021	317858	311	29247	913	272000	127998	748327
YoY 20-21	14.96%	0.00%	5.97%	3.05%	23.64%	7.99%	16.23%

Source: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021

Table ES3. Flows of funds for Investment Funds & Pension Funds 2012 – 2021 (€ Mn)								
	Investments Funds (national, financial)				Pension Funds			
	BoY Assets	Net Investment	Net Yields	EoY Assets	BoY Assets	Net Investment	Net Yields	EoY Assets
2012	127731	-10263	4854	122322	83148	70	3310	86528
2013	122322	23048	8463	153833	86528	239	6003	92770
2014	153833	35573	5412	194818	92770	898	6789	100457
2015	194818	24733	413	219964	100457	526	3535	104518
2016	219964	13820	1652	235436	104518	264	2063	106845
2017	235436	21410	6277	263123	106845	451	3667	110963
2018	263123	8410	-14019	257514	110963	-170	-3907	106886
2019	257514	1693	17350	276557	106886	799	8734	116419
2020	276557	1161	-1221	276497	116419	1176	928	118523
2021	276808 (a)	25723	15327	317858	118523	-270	9745	127998

(a) This year Real Estate Investment Funds are also included

Legend. BoY: Beginning of Year; EoY: End of Year

Source: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021

Pension Plans

Pension Plans (*Planes de Pensiones*) are the standard retirement saving vehicle in Spain, albeit only one of many different retirement vehicles that are currently being marketed in the country. They can be promoted by employers on behalf of their employees, by professional associations on behalf of their members or by financial institutions for the general public (workers included). Insurance companies also promote Insured Retirement Plans (*Planes de Previsión Asegurados*, PPA) for the general public and Insured Employer Retirement Plans (*Planes de Previsión Social Empresarial*, PPSE). These insured vehicles are basically equivalent to their non-insured counterparts and share with them the same regulatory standards.

Pension Plans are voluntary and complementary to Social Security pensions. They are not integrated in whatsoever way with Social Security benefits. Plans created after 1987 legislation are DC plans but many of previously existing occupational plans, that had to be latter segregated from their parent companies, continue to be DB plans, accounting for roughly half the assets managed into the occupational sub-class.

Pension Plans integrate for the sake of management and by law into Pension Funds (Fondos de Pensiones) to reach scale and financial synergy. This is the case of small Pillar II, occupational plans and of virtually all Pillar III, or individual retirement plans and associated plans. Pension Funds are legal entities, linked or not to financial institutions, obliged by law to contract out their managing and depositary functions with specialized, authorised agents.

Pension Plans in Spain, like in most countries, are tax qualified (EET) retirement vehicles. All payments by participants (or in their behalf) are tax-exempt up to a limit, so that compounded interest may play its full magic over larger savings during many years. Benefits are taxed (*vid infra*). In exchange for this tax treatment, funds cannot be cashed before retirement, unless some major contingencies happen (redundancy, sickness, or long-term unemployment), albeit some extra flexibility has been added recently (*vid infra*). Accrued rights, however, can be switched to different plan promoters at no cost within the individual accounts scheme.

Table ES4 below presents the number of participants (accounts rather, see note at the bottom of the table) to Pension Funds as of 31st December 2010 and 2021. The past decade has witnessed a worrying trend in the number of accounts/participants and things are not likely to improve unless strong action is taken.

As of December 2021, slightly less than 9.5 million accounts were integrated in the whole scheme. The individual accounts sub scheme totalled barely 7.5 million accounts, 79.1% of total number of accounts.

Table ES4. Number of participants to Pension Plans 2010-2021					
	Dec. 2010		Dec. 2021		
	Accounts	% of total	Accounts	% of total	Change 10-21
Associate schemes	78072	0.7%	51281	0.5%	-34.3%
Employer-sponsored schemes	2149334	19.8%	1929079	20.4%	-10.2%
Individual schemes	8601775	79.4%	7474863	79.1%	-13.1%
Total	**10829181**	100%	**9455223**	100%	**-12.7%**

Source: own elaboration based on INVERCO data

The most salient feature displayed in the above table is the drop in the number of accounts since 2010, a 12.7% rather uniformly distributed on time, shared by all sub schemes but especially relevant (in absolute terms) in the individual accounts sub scheme, that lost more than 1 million accounts in the period.

Correspondingly, as Table ES5 shows, the number of pension plans displays an almost regular decrease all through the present decade. Number of plans totalled 2,964 in 2010 and 2,325 at the end of 2021, a 21.6% drop, a fairly regular though time decrease averaging over sub schemes, but most relevant again (in absolute terms) for the individual accounts sub scheme. Associated schemes (inside Pillar III, according to the regulator classification) are minoritarian.

These data hide the fact that the average size of Pension Plans increased in the period from 3.2 thousand accounts per plan to nearly 4 thousand accounts per plan, likely making the system more efficient. Even if one cannot get rid of the feeling that the whole scheme reached a ceiling time ago and is now well set for a continuous and regular decline unless a "big bang" happens in this industry.

Table ES5. Number of Pension Plans by type of scheme 2010 - 2021				
As of December 31st	Individual schemes	Employer-sponsored schemes	Associated schemes	Total
2010	1271	1484	209	2964
2011	1342	1442	198	2982
2012	1385	1398	191	2974
2013	1384	1350	187	2921
2014	1320	1330	178	2828
2015	1257	1312	172	2741
2016	1189	1305	164	2658
2017	1107	1291	156	2554
2018	1079	1293	151	2523
2019	1027	1284	146	2457
2020	976	1282	141	2399
2021	903	1286	136	2325
Change 2010-2021	-29.0%	-13.3%	-34.9%	-21.6%

Source: own elaboration based on INVERCO data

Pillar II schemes (employer-sponsored) represented, as of December 2021, 20.4% of total accounts and 55.3% of total plans (accounts per plan). AuM within Pillar II plans represented 29.5% of system's AuM (Table ES6 below), a gradually diminishing share. This, in turn, implies that average retirement assets per account are also larger within the Pillar II schemes than within Pillar III. Actually, € 11.950 per account in the latter versus € 19,591 per account in the former.[236]

Coming to total AuM for the whole Pension Plans and Funds industry, as of December 2021, this indicator showed a strong increase of 8%, due to assets' yields in the year as net investment was negative for the first time ever (see Table ES3). Note, however, that total AuM for Pension Plans today barely reach 11% of GDP.

Table ES6. Evolution of Pension Plans' AuM by scheme 2010-2021

As of December 31st	Individual		Employer sponsored		Associate		Total
	AuM (Mn)	%	AuM (Mn)	%	AuM (Mn)	%	AuM (Mn)
2009	53,228	62.6%	30,784	36.2%	992	1.2%	85,004
2010	52,552	62.0%	31,272	36.9%	926	1.1%	84,750
2011	51,142	61.5%	31,170	37.5%	835	1.0%	83,148
2012	53,160	61.4%	32,572	37.6%	795	0.9%	86,528
2013	57,954	62.5%	33,815	36.5%	1,001	1.1%	92,770
2014	64,254	64.0%	35,262	35.1%	940	0.9%	100,457
2015	68,012	65.1%	35,548	34.0%	958	0.9%	104,518
2016	70,487	66.0%	35,437	33.2%	921	0.9%	106,845
2017	74,378	66.9%	35,843	32.3%	903	0.8%	111,123
2018	72,247	67.5%	33,957	31.7%	829	0.8%	107,033
2019	79,850	68.6%	35,710	30.7%	859	0.7%	116,419
2020	82,014	69.2%	35,681	30.1%	827	0.7%	118,523
2021	89,323	69.8%	37,792	29.5%	883	0.7%	127,998

Source: own elaboration based on INVERCO data

It can also be seen that around 69.8% of total AuM in these retirement vehicles belong to the Individual accounts sub scheme, representing a mere 7.4% of GDP. This category of assets has

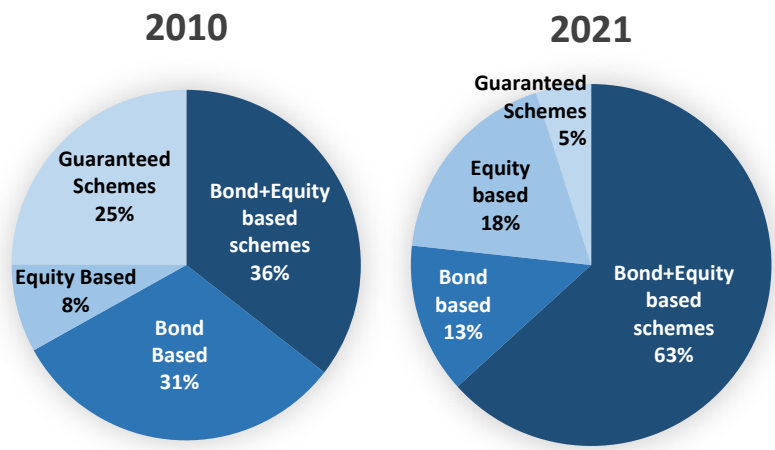
[236] Using standard mortality tables for Spain and assumptions about returns, these reduced amounts would yield very low instant lifetime annuities. The annuity a typical individual account could buy retiring at 65 amounts to less than € 60 per month (twelve payments) and increases up to less than € 100 per month in the case of the typical occupational account. This said, retirement savings under these two varieties tend to be sensibly larger at retirement age but won't even double the figures mentioned in the main text. Also, within the occupational variety, around half a million accounts belong to civil servants and most of these accounts have assets below one thousand euros per participant. That's why benefits at retirement are normally cashed in as a lump-sum. On the other hand, some employer-sponsored plans, covering dozens of thousands of employees in manufacturing and financial and advanced services (notably in the Basque Country, manufacturing), hold rather large average retirement accounts.

increased its nominal value an 8.9% over the previous year, compared to an increase of 5.7% for occupational pension plans' assets.

Typically, Pension Funds offer a variety of risk profiles that participants generally adhere to for some time until they decide to switch. This is generally the case of individual schemes, where participants can switch regularly between schemes albeit these schemes remain relatively specialized as for their risk profile as participants come and go. The above implies that all standard asset classes must be present in overall portfolios at minimum and maximum thresholds, ranging from mostly bond-based schemes to mostly equity-based schemes. Occupational schemes, however, are set with the risk profile established (if at all) by their sponsors and fund managers (or control boards, where employers and workers representatives sit) will have certain freedom to change the risk profile of the fund according to market conditions. Over a large period of time then, both participants, with their regular scheme choices, and managers and social partners may induce relevant changes in the asset allocation of pension funds.

Graph ES2 below shows that Spanish Pension Funds are less and less conservative and allocate slightly more than ¾ of their assets to a combination of mixed (bond + equity-based) and mostly bond-based schemes. Mostly-equity-based schemes have a reduced, but increased, stance (18% of Pillar III assets) but, indeed, in 2021 funds have switched towards riskier investments than in 2020 (see Table ES7).

Graph ES2. Investments by asset class (Pillar III schemes) 2010 - 2021



Source: own elaboration based on INVERCO Report on Investment Funds and Pension Funds 2021

On a short-term perspective (Table ES7), asset allocation structure of Pension Funds (all schemes) is obviously more stable even if there has been a sharp contrast with respect to 2020 concerning assets' returns. At the end of 2020, despite the terrible economic conditions, allocative decisions did not change

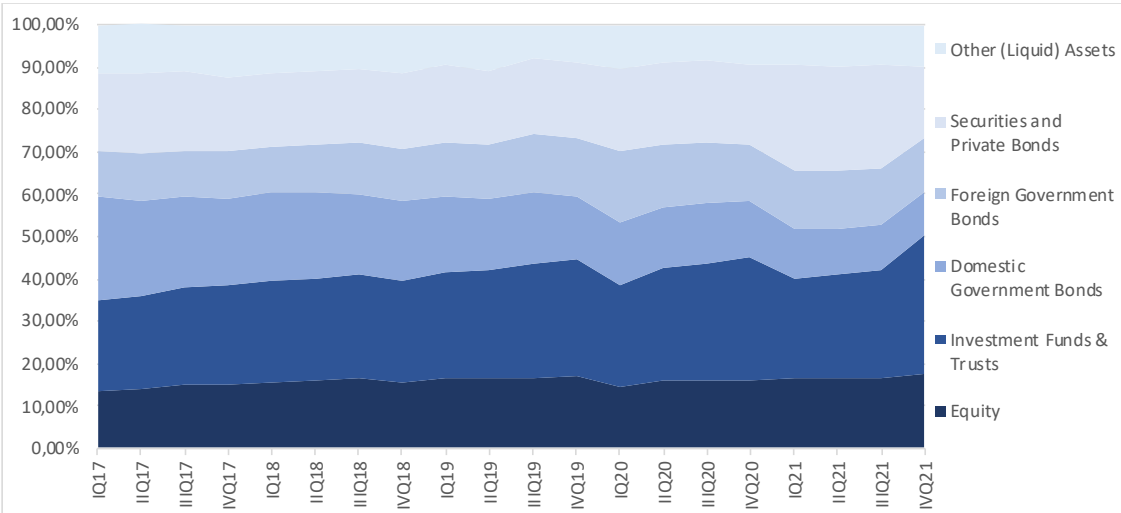
dramatically the picture seen by end 2019. But at the end of 2021 significant changes towards Investments Funds & Trusts and out of domestic and private bonds could be observed.

Table ES7. Pension Funds' Asset Allocation 2018-2021				
	IVQ18	IVQ19	IVQ20	IVQ21
Equity	15.33%	17.03%	16.29%	17.50%
Investment Funds & Trusts	24.16%	27.43%	28.84%	32.61%
Domestic Government Bonds	18.67%	14.93%	13.33%	10.13%
Foreign Government Bonds	12.67%	14.01%	13.18%	13.14%
Securities and Private Bonds	17.74%	17.90%	18.71%	16.88%
Other (Liquid Assets)	11.43%	8.68%	9.64%	9.74%
Total	100%	100%	100%	100%

Source: own elaboration based on DGSFP data

As shown in Graph ES4 below, when a mid-term perspective is adopted, the increasing role of riskier assets in Pension Funds' allocation strategy is the result of a gradual switch from bonds in the last few years after sovereign debt became less and less attractive in an ultra-low interest rate scenario. A bet that, that in 2019, rewarded those who undertook it. 2020, as said, for all its complexity in economic terms, has really been a continuation of the basic allocation structure of the previous year with 2021 showing a continuation of the trend towards Investment Funds and Trusts.

Graph ES4. Pension Funds' Asset Allocation 2017-2021



Source: own elaboration based on DGSFP data

Life Insurance

Measured by own AuM, the Insurance Industry is a major retirement income products provider in Spain, both for Pillar II and, specially, Pillar III. Also, a substantial part of standard Pension Funds' assets is managed by insurers. A salient feature of this trade is the large variety of retirement and quasi-retirement vehicles that are marketed by the industry, in Spain and everywhere.

Some of these vehicles are indistinguishable from genuine retirement or pension plans (if we forget about the insurance part of any retirement solution) and quite a few are genuine life insurance solutions marketed since very old times by the industry and turned into retirement vehicles through a progressive assimilation with the standard vehicle (Pension Plans) firstly regulated in Spain in 1987/1988 (*vid supra*). This assimilation has been fuelled by converging fiscal treatments for all these products even if some of them continue to have distinctive features of their own.

Very often, market practitioners make the distinction between "financial" and "insurance" solutions when describing the nature of a given retirement solution. It must be said that if a given retirement product is a true, integral "retirement solution", it must contain insurance DNA in its composition. What is also true, instead, is that this insurance part must not necessarily be the heaviest part of any retirement product. Any retirement solution can contain an insurance part all through the accumulation and decumulation cycles of the most comprehensive product one might imagine o just the time span past the life expectancy points of the cohort the buyer belongs to. In between that span, a retirement product may or may not embody insurance features but just financial ones. Insurance-only retirement products tend to be safer and thus costlier for the buyer than financial only products (no insurance features on them, thus). This balance implies per se a rather large array of products, but not necessarily a "very large one". As retirement products are not easy to understand by the common buyer, a very large array of products in the market does not makes things easier for the retirement industry.

According to UNESPA, the Spanish Insurers Association, the total life and saving technical reserves/assets under management of the entire Spanish insurance sector at the end of 2021 amounted to € 252,28 bn, having spotted a healthy 6.3%% increase over 2020. As for the number of insured persons (and plan participants), 2021 ended with 18,9 million, and a 3.3% annual growth rate.

Not all insured persons/participants and technical reserves/assets under management were allocated to straight retirement and/or pension vehicles. But about 14.6 million insured persons and € 190.4 Bn worth of technical reserves were closely related to retirement rights and savings generated within the insurance sector at end 2021. Moreover, insurers established in Spain managed at that date assets worth 61.8 Bn on behalf of 4.3 million

Pension Plans participants displaying a very strong growth in this segment over 2020. The details of these numbers can be seen in Table ES8 below.

Table ES8. Insured Retirement and other Retirement-like vehicles 2021

Broad Category	Type of Vehicle	Persons insured (x000)			Technical provisions (Mn)		
		Pillar II	Pillar III	Both Pillars	Pillar II	Pillar III	Both Pillars
Deferred capital	Insured Pension Plans (PPA)		911,3	911,3		11.400,0	11.400,0
	Company Retirement Plans (PPSE)	36,7		36,7	354,2		354,2
Pension Accruals and Insured Saving Vehicles	Risk	2.277,1		2.277,1	596,9		596,9
	PIAS*		1.137,1	1.137,1		14.629,0	14.629,0
	SIALP**		462,5	462,5		4.320,6	4.320,6
	Deferred capital	196,6	2.298,3	2.494,9	2.913,0	42.008,1	44.921,1
	Annuities***		1.623,8	1.623,8		63.089,6	63.089,6
	Income (acc. phase)	197,0		197,0	13.300,0		13.300,0
	Income (pay-out phase)	281,8		281,8	10.126,0		10.126,0
	Unit/Index- Linked	39,1	1.363,4	1.402,5	1.652,1	17.022,2	18.674,3
Other Group Insurance	Risk	3.366,0		3.366,0	1.072,6		1.072,6
	Defered capital	292,6		292,6	2.499,2		2.499,2
	Pensions (acc. phase)	19,3		19,3	1.053,5		1.053,5
	Pensions (pay-out phase)	54,9		54,9	3.313,0		3.313,0
	Unit/Index-Linked	34,1		34,1	1.089,3		1.089,3
Total		**6.795,0**	**7.796,2**	**14.591,2**	**37.969,7**	**152.469,5**	**190.439,2**
YoY change (in %)		**-1,04%**	**-2,94%**	**-2,07%**	**4,26%**	**-0,14%**	**0,71%**
Pro memoria		**Persons Insured (x1,000)**			**Assets under Management (Mn)**		
Pension Plans managed by Insurers		**4.348,4**			**61.846,19**		
YoY change (in %)		**27,46%**			**28,10%**		

Note : Individual life insurance and long term care insurance are not included in these figures.

* *Standing for* Plan Individual de Ahorro Sistemático *or Regular Individual Saving Plan*

** *Standing for* "Seguro Individual de Ahorro a Largo Plazo" *or Individual Long Term Saving Insurance*

*** *Life and Term Annuities, including tax-qualified asset's conversions into annuities in the year*

Source : own computations based on UNESPA (https://www.unespa.es/notasdeprensa/evolucion-seguro-vida-diciembre-2021/)

Table ES8 above also shows indeed a large variety of retirement and pension vehicles offered by the insurance industry and, it can also be seen, that even as they share an insurance feature that makes then quite different from the purely financial vehicles (as they try to cope with death uncertainty through actuarial techniques) each vehicle responds to a different need by consumers concerning their risk profiles, fiscal rules applying to them, etc.

The most popular insured retirement products are Deferred Capitals and Annuities, covering, respectively, 2.3 and 1.6 million insured persons and totalling technical reserves of € 44.9 Bn and € 63.1 Bn, respectively. Many other products that emerged when the standard Pension Plans were regulated in Spain have a rather moderate presence in the insurance industry. In what follows, some of these different products are explained.

Insured Retirement Plans (PPA)

The Insured Retirement Plans (PPA or *Planes de Previsión Asegurados*, in Spanish) are the insured counterpart of standard Pension Plans previously discussed. Among all insured retirement (or retirement-like) vehicles, PPAs are the most proper for this purpose. Their features concerning taxes, redeemability or other are thoroughly the same as with Pension Plans, but for the fact that interest and principal risks are taken by the insurer, at a cost naturally. In particular, a known and certain interest rate is attached to this product. Once retirement happens, the insured person gets a life annuity (a lump-sum is also a popular option). In a way, technically at least, a PPA is basically a pure deferred annuity. Table ES8 shows that, by December 2021, 0.9 million individuals had adopted this Pillar III retirement vehicle, with total technical reserves amounting to € 11.4 bn, a mere € 12,500 per account.

Company Retirement Plans (PPSE)

These are employer-sponsored Group Insurance aiming a complementary retirement benefit, basically a deferred capital product. They are the insured counterpart to the employer-sponsored Pension Plans (Pillar II), albeit more flexible as they adapt better to SMEs conditions. Table ES8 shows that, as of December 2021, only 36.7 thousand workers have been opted-in in this Pillar II retirement vehicle by their employers, with technical reserves amounting to 354.2 Mn, again a mere € 9,651 per account. Moreover, these products aren't gaining popularity, indeed.

Regular Individual Savings Plan (PIAS)

Regular Individual Saving Plans (PIAS or *Planes Individuales de Ahorro Sistemático*) are, again, insured saving plans to which individuals can contribute regularly. If certain conditions are met and savings are not removed after a long period of time, accumulated assets must be converted into a permanent income at very low (and decreasing with age) fiscal cost (on interest or capital gains). Table ES8 shows that, as of December 2021, more than 1.1 million

individuals have adopted this Pillar III retirement vehicle, with technical reserves amounting to € 14.6 bn, or € 12,866 per account.

Long-Term Individual Saving Plans (SIALP)

Long-term Individual Saving Plans (SIALP or *Seguro Individual de Ahorro a Largo Plazo*) are PIAS-like retirement vehicles. The major difference with a PIAS being that they can be cashed both as an annuity or as a lump-sum. As of December 2021, 462.5 thousand individuals had contracted this product totalling € 4.3 bn technical reserves, barely € 9,343 per account.

Charges

Since inception (19987/1988), the current Pension Plans market in Spain has been characterized by large average charges. This said, there are three aspects that need to be dealt with right away: (i) the market has always been and continues to be very small and this entails a heavy toll on scale and thus on efficiency, (ii) Pillar II schemes bear internationally competitive low fees that, given market size, must be cross subsidized with significantly higher fees charged in Pillar III markets, and (iii) fees have been decreasing in the last years due to intense regulatory pressure on companies.

Data discussed below is eloquent enough about the consequences for savers that stem out of these market conditions. Average fees have been oscillating down in the last decade at around 1% of AuM[237]. Using this figure as a proxy for Total Expense Ratio (TER or total cost ratio for investors), and under basic assumptions, typical investors could bear a Reduction in Yield (RiY) rate, because of charges, of 13%.[238]

As for the insurance part of the retirement market, little is known referring to data directly usable for harmonized comparison, although all relevant data are available in raw from the regulators and the industry itself. The large variety of retirement and pension products available in this market segment, and their varied features complicates enormously the task, however. The work to be done in order to produce directly comparable data cannot be made in the context of this chapter and any initiative to reach that goal should be most welcomed.

Even if regulation itself accounts for part of the extra burden that management and depositary fees pose on consumers, the fact is that too large a chain of intermediaries (managers, commissioners, and retailers) end up by adding to the overall cost for the participant or the insured person. Recently, and regularly, management and depositary fees have been limited

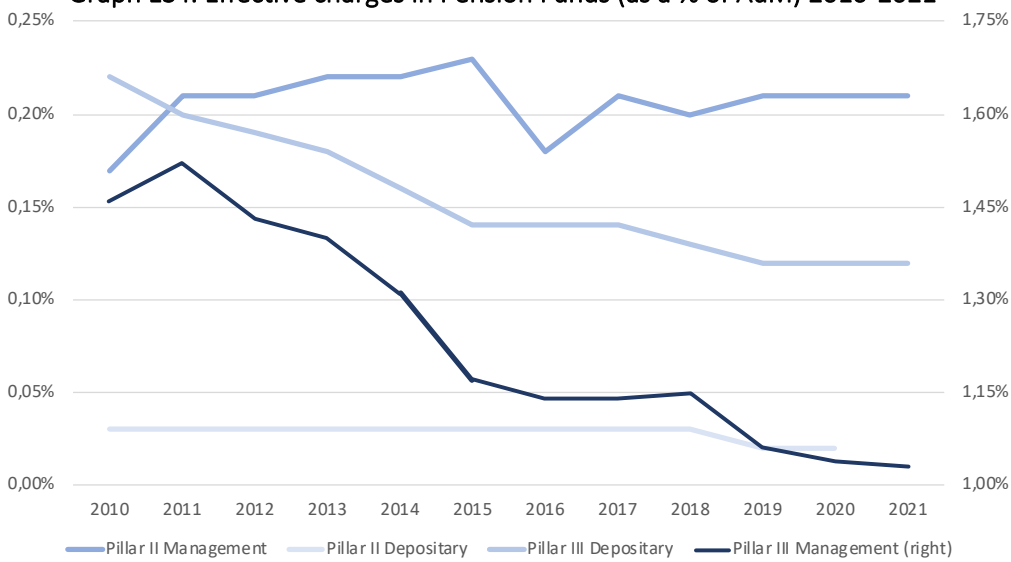
[237] Management and depository, all classes combined, weighted by market shares

[238] It is assumed that a typical investor increases his or her annual savings in retirement assets at 2% per year, for 35 years; total annual fees (TER) are 1% of AuM at the end of the year. Gross yields of AuM are assumed at 2% per year. Total Expenses (TE) from previous year are detracted from AuM for the next year. RiY ratio is then computed as accumulated TC at year 35 as a percentage of gross AuM at year 35.

by law.[239] These regulations however allow variable fees to be set based on yields, within certain limits.

Graph ES4 and Table ES9 and bellow show the evolution of effective average fees charged on Pillars II and III Pension Funds to Plan participants by both managers and depositaries. Note that to management fees, as said before, some retailing fees (not known) may also be added.

Graph ES4. Effective charges in Pension Funds (as a % of AuM) 2010-2021



Source: own elaboration based on Table ES9 bellow.

The most salient feature of the data in the graph is clearly and immediately appreciated at first sight: Pillar II assets (employer-sponsored pension plans) are considerably cheaper to manage (up to almost 6 times cheaper in recent years) whereas depositary fees, that are comparatively lower in both pillars, continue to be 4 times cheaper in Pillar II as compared to Pillar III. The question remains whether just market scale grants such a large difference and, ultimately, large fees (Table ES9).

[239] Royal Decree 304/2004 established specific limits to management and depositary fees. Royal Decree 681/2014 modified this. More recently, Royal Decree 62/2018, set maximum management fees including fees paid to non-managing retailers, depending on the asset classes under management at 0.85% for mostly bonds funds, 1.3% for mixed bonds funds and 1.5% for the rest of funds. Maximum depositary frees were set at 0.2%.

Table ES9. Charges in Pension Funds (as a % of AuM)						
	Pillar II			Pillar III		
	Management	Depositary	Both	Management	Depositary	Both
2010	0,17%	0,03%	0,20%	1,46%	0,22%	1,68%
2011	0,21%	0,03%	0,24%	1,52%	0,20%	1,72%
2012	0,21%	0,03%	0,24%	1,43%	0,19%	1,62%
2013	0,22%	0,03%	0,25%	1,40%	0,18%	1,58%
2014	0,22%	0,03%	0,25%	1,31%	0,16%	1,47%
2015	0,23%	0,03%	0,26%	1,17%	0,14%	1,31%
2016	0,18%	0,03%	0,21%	1,14%	0,14%	1,28%
2017	0,21%	0,03%	0,24%	1,14%	0,14%	1,28%
2018	0,20%	0,03%	0,23%	1,15%	0,13%	1,28%
2019	0,21%	0,02%	0,23%	1,06%	0,12%	1,18%
2020	0,21%	0,02%	0,23%	1,04%	0,12%	1,16%
2021	0,21%	0,02%	0,23%	1,03%	0,12%	1,15%

Source: *http://www.dgsfp.mineco.es/es/Publicaciones/DocumentosPublicaciones/Informe%20del%20sector%202021.pdf (ps. 330 and 333).*

Within this context, industry transparency requirements at the international scale are starting to provide a framework within which generate a comprehensive understanding and common ground for comparison about the cost and the advantages of complementary retirement vehicles as these solutions became increasingly necessary to help cushion the hard landing of Social Security benefits everywhere.

All Pillar III vehicle providers are obliged to advance a Key Information Document (KID) package to their customers. These KID packages are firmly rooted on PRIIPS regulation that is not binding however for pension products. Pillar II products are not obliged to advance a KID package to their customers, albeit they must of course provide information akin to this package regularly.

Taxation

With charges and returns (*vid infra*) taxation is one of the hottest issues around retirement products. But it shouldn't be. Think twice.

Income must be taxed, this everyone admits, but not double taxed. This is unjust and inefficient. One could also admit easily that labour and capital income can be differently taxed, or that tax bases can convey certain policy objectives. But definitely not that the same income concept is taxed twice.

In the absence of ordinary tax deductibility (or tax deferral) of income saved for retirement purposes, as practiced by virtually all countries, that part of income saved for years for future retirement, and the interest earned on that income, would be taxed twice when benefits are received and, correspondingly taxed.

This treatment is often referred to as "tax incentives" or, more plainly, "tax gifts", and questioned by certain social or political agents as unjust or regressive tax benefits. Nothing less true. The conventional tax treatment to which pension assets and products are subject is generally and admittedly the best way to avoid what otherwise would be a case of unacceptable double taxation of personal income. Tax deferral is, moreover, a way to increase the power of capitalization.

The pensions industry must be clear and strong on this if their members want to be perceived as truly looking after the best interest of those who entrust their savings to them. As much as they must be clear and strong, by the way, on transparency, open competition and best-efforts concerning charges and returns.

Normally, taxing retirement vehicles means exempting income as it is saved (as well as interest earned on this income) and taxing benefits as they are cashed in. That's the "Exempt-Exempt-Tax" or EET paradigm most commonly used in the world. Another way to avoid double taxing of income is to tax contributions and interest and make benefits tax exempt (TTE), but this paradigm is rarely used. In truth, neither pure extreme is actually being used as all countries have some limits to deductibility and also some limits to benefits exemption.

Normally too, tax allowances at accumulation of savings are justified because these retirement savings can't be cashed or converted into non-retirement savings before retirement age. This a legitimate way to justify EET schemes. But again, tax authorities only have to claim unpaid taxes back when savings conversion occurs instead of forcing savers to stay fixed on their products.

Taxing retirement savings and benefits remains in the literature and in practice a much-debated issue, just because we don't realize that the best and most fair taxing schedule for these bases should be exactly the same tax regime that Social Security social contributions and SS benefits enjoy, that is full (or almost full) EET.

Even if standard Pension Plans set the tax norm for many other retirement vehicles, there remain important differences, especially at the pay-out phase, among the pension plans and insurance vehicles. Some of these peculiarities are analysed below.

Pension Plans

The fact that tax exemptions during accumulation are important is well reflected in the Spanish market as most of the payments into these vehicles happen at the end of the year when investors seek to improve their final tax bills by deciding up to what limit bring their contributions to retirement saving plans. This has contributed to locate the only and most important attractive of saving for retirement into the tax treatment of this kind of investments. The absolute limit up to which income saved for retirement under a Pension Plan is tax exempt in Spain is currently € 10,000 for occupational Plans up by € 2,000 with respect to 2019) and € 1,500 for personal Plans (down by € 6,500 with respect to 2019). When the absolute limit of € 10,000 for Pillar II schemes is reached, participants can't put a single cent on their personal schemes.

The Budgetary Law for 2022 (December 2021) deepened the move initiated by the Budgetary Law for 2021 (December 2020) that eliminated equal tax treatment for Pillars II and III schemes, with personal retirement savings resulting clearly discriminated. The reason behind seems to be the need to reinforce occupational Plans, something that should not be done at the expense of personal Plans, however.

When withdrawal of benefits at retirement occurs, there are three possible cases:

(i) Retirement income is retrieved as a lump-sum: after a deduction of 40% from this sum the rest is taxed at the current marginal personal income tax rate. No distinction is made between principal and interest earned during accumulation phase, despite the fact that Spain has a dual personal income tax.

(ii) Retirement income is retrieved as a life (or term) annuity: this income is considered labour income and taxed at the current marginal personal income tax rate, again with no distinction whatsoever between principal and interest part of pension benefits.

(iii) Retirement income is retrieved both as a lump-sum and an annuity ("mixed income"): both tax regimes apply, each of them to the corresponding part of the retirement benefit in the first year.

This said, depending on which Spanish region a retiree has his or her fiscal residence, the tax bill may change. Spain has its Personal Income Tax scheme split between the Central Government and its seventeen Autonomous Regions. While the Central Government sub scheme applies uniformly for the whole nation, the regional sub schemes have different income brackets and marginal tax schedules, as it is shown in Tables ES10 and ES11.

Table ES10. Personal Income Tax scale and rates - Central Government*		
Tax Base from…	**To**	**Nominal Marginal Rates****
€ 0,000	€ 12,450	9.5%
€ 12,450	€ 20,200	12.00%
€ 20,200	€ 35,200	15.00%
€ 35,200	€ 60,000	18.50%
€ 60,000	€ 300,000	22.50%
€ 300,000	- -	24.50%

* Spain has several government levels and PIT is roughly split in half between Central and Regional Governments (See Table ES11).

** Only Central Government, only labor income. Interests and dividends are thoroughly taxed at 19%. Effective rates are sensibly lower.

Source: https://sede.agenciatributaria.gob.es/Sede/ayuda/manuales-videos-folletos/manuales-practicos/irpf-2021/capitulo-15-calculo-impuesto-determinacion-integras/gravamen-base-liquidable-general/gravamen-estatal.html

Table ES11. Personal Income Tax - Autonomous Regions		
Region*	**Top Income Bracket (ordered)**	**Top Marginal Tax Rate beyond Top Income Bracket**
Madrid	€ 53.407,20	21.00%
Castila y León	€ 53.407,20	21.50%
Catilla-La Mancha, Galicia, Ceuta y Melilla	€ 60.000,00	22.50%
Región de Murcia	€ 60.000,00	22.90%
Cantabria	€ 90.000,00	25.50%
Andalucía	€ 120.000,00	23.70%
Canarias	€ 120.000,00	26.00%
La Rioja	€ 120.000,00	27.00%
Extremadura	€ 120.200,00	25.00%
Aragón	€ 150.000,00	25.00%
Illes Balears	€ 175.000,00	25.00%
Principado de Asturias, Cataluña	€ 175.000,00	25.50%
Comunitat Valenciana	€ 175.000,00	29.50%

* Two historical Autonomous Regions (Navarra and The Basque Country) are exempted from the Common Tax

Source: https://sede.agenciatributaria.gob.es/Sede/ayuda/manuales-videos-folletos/manuales-practicos/irpf-2021/capitulo-15-calculo-impuesto-determinacion-integras/gravamen-base-liquidable-general/gravamen-autonomico.html

Life insurance products

Since 1999 premiums paid into insured saving are not tax exempt. Retirement capitals or income from these vehicles are not taxed except in its interest and capital gains part. These

capital gains are integrated into the savings tax base and subject to a tax rate schedule of 19% up to the first € 6,000, 21% from € 6,000 to € 50,000 and 23% beyond € 50.000. When benefits are paid as annuities, the tax rate depends on the life of the annuity and the age of the annuitant when payments began. In case of annuitant's death, with remaining capital reverting to them, heirs will have to pay inheritance tax, which may vary considerably depending on the region where they have their fiscal residence, as this tax lies within the regional jurisdiction.

Insured Retirement Plans (PPA)

This vehicle has a similar tax treatment as standard Pension Plans, Contributions to these plans are tax exempted up to an annual limit of € 10,000 and benefits are taxed as labour income considering the recipients age at retirement. Capital gains are subject to a dual income tax scheme. The tax regime of this vehicle thus can be said to be of the EET kind.

Regular Individual Savings Plan (PIAS)

PIAS are a more flexible vehicle than Pension Plans and PPAs, also from the point of view of taxation. As a retirement saving vehicle, annual contributions to it are fully tax deductible up to a limit of € 8,000 per year, as with Pension Plans and PPAs. There is also a global limit for this type of saving plan: € 240,000. Savers can only own one PIAS. At the pay-out phase, if income is received as a lump-sum, taxation intervenes as usual through the dual income tax for labour income (principal) and capital gains income (returns).

But if retirement income is retrieved as a life annuity, capital gains are 100% exempt and principal is taxed according to a rapidly diminishing rates schedule. PIAS can be cashed in well before ordinary retirement age, but when cashed after age 65 the tax rate is 20% falling to 8% when cashed after age 70.

The € 240,000 limit for total saving under a PIAS is relevant here for, as from 2015, individuals aged 65 or more who liquidate any asset they may own (financial, real estate, art works, etc) to buy a life annuity have related capital gains fully exempted from the dual income tax.

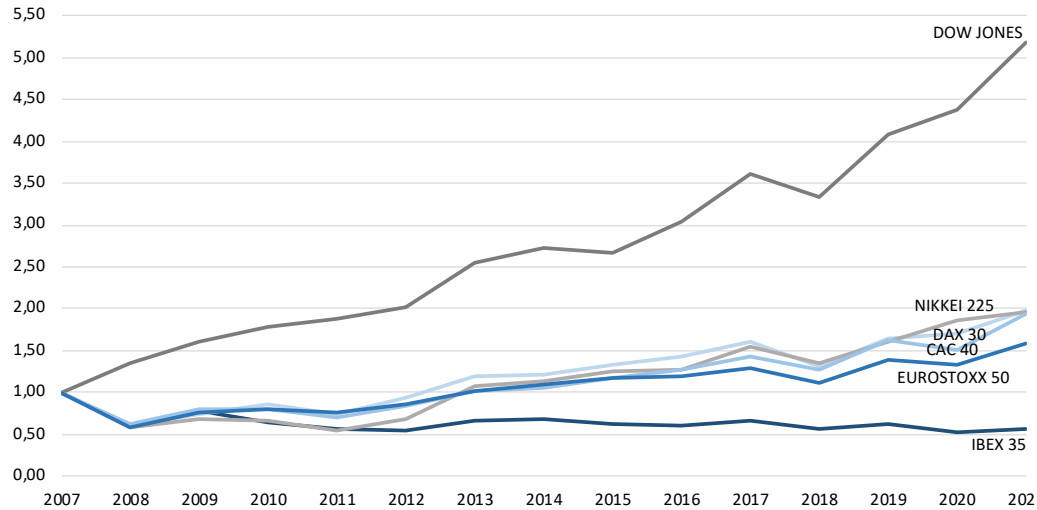
Returns

Spanish capital and debt markets returns

In 2008 major world stock indexes suffered a 40% loss with respect to the previous year. That was a catastrophe. All asset classes linked to stock suffered accordingly. Hundreds of thousands of workers in advanced countries had to postpone their retirement because these losses would mark the value of their retirement incomes for the rest of their lives nearing many of them to poverty at old age. Most of these stock markets recovered the 2007 line by

2012-2013, But the Spanish stock market has barely recovered the 2008 bottom-line. This can be seen in Graph ES5 below.

Graph ES5. Major Stock Markets performance 2007-2021



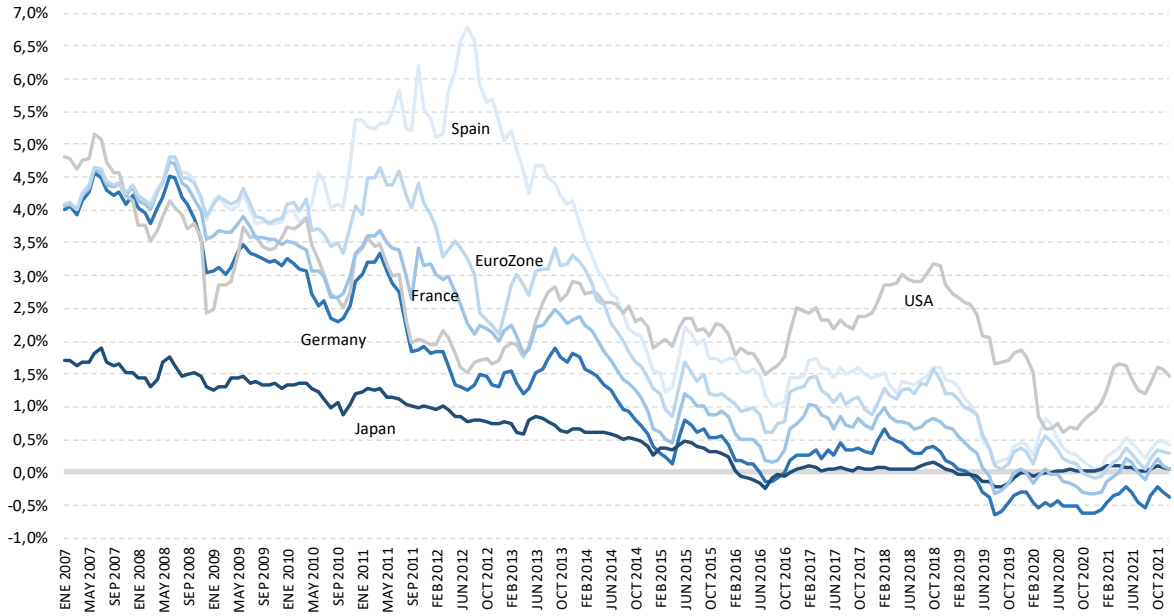
***Sources**: BME*

Happily enough, some would say, Spanish workers have their retirement savings well away from the stock market. In fact, Spanish workers have no (relevant) retirement assets at all as we have been arguing so far. Spanish workers have no relevant retirement savings because they have a rather large (expected) Social Security implicit wealth as pension benefits replace labour income above 80% (OECD) and, additionally, they have almost universal and large stocks of bricks and mortar.

If 2020 wasn't a good year for stocks returns for obvious reasons, 2021 has been exceedingly better so that most exchanges overshot above 2019 levels taking most markets to all-time highs since the beginning of the financial crisis. In the period 2007-2021 the DOW JONES, for instance, grew by around 419% (a cumulative annual rate of 12,5%), or a 97% in the case of the German DAX 30. The Spanish IBEX 35, in 2021, displayed a dismal 57% of its 2007 value.

Sovereign debt markets in advanced countries, on the other hand, haven't been less turbulent. Provoking real roller coaster effects in associated assets and savings. Spanish 10y bond yields reached intervention levels in 2012, at 679 bp in August. Only a EU financial sector rescue package saved the Spanish sovereign market, and perhaps the Euro, at a cost naturally. See Graph ES6 below.

Graph ES6. Major Sovereign Bond Yields (yoy, monthly, 10 years) 2007-2021



***Source**: Banco de España*

Since May 2015, the ECB succeeded calming lenders and sovereigns entered into a considerably quieter environment. By mid-2019 European and Japanese 10y bonds reached around 0 or negative levels. Spanish 10y bonds were quoted at 0.41% in December 2021 (0.04% in December 2020). Only, among advanced economies, Treasury 10y bonds (USA) stood below 1.5% in December 2021, albeit at historical low levels.

All in all, any retirement vehicle has to be invested in a mix of stocks, debt and monetary assets and the performance of these underlying assets determines the returns of those savings. As for vehicles set in advanced countries, the strong recovery of Stock markets in 2021 and the strong appreciation of bonds has undoubtedly been a blessing if management has profited efficiently from these conditions.

Retirement assets' performance (standard Pension Funds)

One of the salient features of the Spanish retirement vehicles market is the large variety of solutions marketed and the small size of the overall market, let apart the small significance of some of its segments. This may seem hard saying, but a way must be found to substantially enlarge the number of workers covered and the size of per account assets and reserves. May be that the newly adopted regulation of "Simplified Pension Plans" helps in this purpose.

So far, as it is shown in the tables below, savings have managed to maintain their purchasing power with few exceptions performing better. Undoubtedly, even if a crude one, the key factor pushing or keeping Spaniards into the complementary retirement savings system is tax deferral (and the locking-in effect it creates), and not as much the real, after fees returns of these assets.

All the evidence produced below belongs to the standard Pension Plans system, not to insured retirement vehicles, due to data limitations. All data comes basically form the web site of INVERCO, the Spanish body representing Mutual Investment Institutions and Pension Funds.

Notice, nevertheless, that retirement products insurance comes at an additional cost (with respect to purely financial vehicles) due to the intrinsic nature of both guaranteeing assets' value, on the one hand, and mutualising longevity, on the other. Even if insurers are good performers also in terms of assets management and enjoy the very long-term premiums of the underlying matching assets they invest in, they need to beat the insurance extra cost that these products embody.

Table ES12 contains the basic information concerning Pillars II and III Pension Funds. Returns are labelled "gross", "net" and "real". Gross means before management and depositary fees and commissions (retailing and other transaction costs are disguised here), net means after management and depositary fees and commissions, being nominal returns, and real means after fees and inflation. At first glance, positive net nominal returns dominate the landscape, and even net real returns, with some years at really good returns on assets invested. On historical basis, average cumulative real returns continue to be clearly positive (INVERCO).

2018 was a bad year for investments returns of all sorts, particularly the stock market. But returns in 2019 overshot. This saga continued in 2020-2021 as the markets suffered everywhere due to the Covid-19 collapse of activity and the corresponding rebound in 2021.

Table ES12. Returns of Spanish Pension Funds (before taxes)						
	Pillar II			Pillar III		
	Gross Return	Net Return	Net Real Return	Gross Return	Net Retrn	Net Real Return
2009	9.47%	9.28%	8.38%	10.39%	8.76%	7.86%
2010	2.21%	2.01%	-0.86%	0.25%	-1.43%	-4.30%
2011	0.24%	0.00%	-2.35%	0.50%	-1.22%	-3.57%
2012	8.28%	8.04%	5.03%	7.29%	5.67%	2.66%
2013	7.95%	7.70%	7.39%	10.30%	8.72%	8.41%
2014	7.39%	7.14%	8.27%	7.77%	6.30%	7.43%
2015	3.14%	2.88%	3.01%	2.52%	1.21%	1.34%
2016	2.95%	2.74%	1.33%	2.97%	1.69%	0.28%
2017	3.42%	3.19%	1.97%	3.85%	2.56%	1.34%
2018	-2.96%	-3.19%	-4.42%	-3.20%	-4.48%	-5.71%
2019	8.97%	8.74%	7.89%	9.99%	8.81%	7.96%
2020	1.76%	1.53%	2.10%	1.45%	0.29%	0.86%
2021	8.32%	8.09%	1.52%	9.82%	8.67%	2.10%
Average 2012-2021	4.92%	4.69%	3.41%	5.28%	3.94%	2.67%
Differences (*)	- -	24	127	- -	133	127

(*) On average, each year, 24 basis points have been given up to managers & depositors and 108 bp to inflation in Pillar II schemes, and 133 bp and 108 bp, respectively in Pillar III schemes
Note: Gross Returns are returns before management and depositary charges, Real Returns are computed using the Spanish HCPI published by Eurostat. See Table ES13 for cumulative and average returns
Source: INVERCO, DGSFP and EUROSTAT

A more vivid landscape emerges when overall returns are followed through time with the help of average cumulative returns computations as presented in Table ES13. This time overall returns for the entire Pension Funds' system are presented and the cumulative perspective is based in 2000. Average cumulative returns at any particular year are thus for the period "2000 to that-particular-year".[240]

In the period 2000-2021, cumulative nominal returns for Pension Funds reached a 181,86 level (base 100 in 2000) and an annual cumulative nominal return of 2.76%. This return is net (after charges) for savers, but inflation must be taken into account. When this is done, cumulative real returns are slightly above the base (115,36 in 2021) so that nominal returns barely helped to match inflation since 2000 to present. The corresponding average cumulative real rate is thus 0.58% for the period. Note that inflation has been negative in five years in the period and relatively moderate over the rest of years.

[240] Average cumulative returns for the last 3, 5, 10 or more years in 2021 or at any other year can be easily computed using the cumulative return data in the corresponding column in Table ES13.

Table ES13. Returns of Spanish Pension Funds (after charges and before taxes)							
	Nominal Returns*			Real Returns*, **			Harmonised Consumer Price Index
	YoY Return	Cum. Return	Average since 2000	YoY Return	Cum. Return	Average since 2000	
2000	2.95%	102.95	2.95%	-1.05%	98.95	-1.05%	4.00%
2001	-1.64%	101.26	0.63%	-4.15%	94.84	-2.62%	2.51%
2002	-4.40%	96.81	-1.08%	-8.41%	86.86	-4.59%	4.01%
2003	5.79%	102.41	0.60%	3.10%	89.55	-2.72%	2.69%
2004	4.46%	106.98	1.36%	1.18%	90.61	-1.95%	3.28%
2005	7.22%	114.70	2.31%	3.50%	93.78	-1.06%	3.72%
2006	5.23%	120.70	2.72%	2.51%	96.14	-0.56%	2.72%
2007	2.18%	123.33	2.66%	-2.10%	94.11	-0.76%	4.28%
2008	-8.05%	113.40	1.41%	-9.50%	85.17	-1.77%	1.45%
2009	7.70%	122.14	2.02%	6.80%	90.96	-0.94%	0.90%
2010	-0.13%	121.98	1.82%	-3.00%	88.24	-1.13%	2.87%
2011	-0.76%	121.05	1.60%	-3.11%	85.50	-1.30%	2.35%
2012	6.59%	129.03	1.98%	3.58%	88.56	-0.93%	3.01%
2013	8.36%	139.81	2.42%	8.05%	95.69	-0.31%	0.31%
2014	6.91%	149.48	2.72%	8.04%	103.39	0.22%	-1.13%
2015	1.78%	152.14	2.66%	1.91%	105.37	0.33%	-0.13%
2016	2.04%	155.24	2.62%	0.63%	106.03	0.35%	1.41%
2017	2.77%	159.54	2.63%	1.55%	107.67	0.41%	1.22%
2018	-4.08%	153.03	2.26%	-5.31%	101.96	0.10%	1.23%
2019	8.80%	166.50	2.58%	7.95%	110.07	0.48%	0.85%
2020	0.67%	167.61	2.49%	1.24%	111.44	0.52%	-0.57%
2021	8.50%	181.86	2.76%	1.93%	113.59	0.58%	6.57%

* Cumulative and average returns (since 2000) are non-weighted.

** Real Returns are computed using the Spanish HCPI published by Eurostat

Source: INVERCO, DGSFP and EUROSTAT

The overall picture shown in the table above, however, hides a much richer detail of returns by type of retirement scheme and the asset classes these schemes are invested in. The summary returns table offered at the beginning of this chapter is retaken here with Tables ES14 to ES16 below for the reader to have a more detailed view. These tables are self-explanatory.

Aggregate summary return table										
	1 year		3 years		7 years		10 years		Since 2000	
	2021	2020	2019-2021	2018-2020	2015-2021	2014-2020	2012-2021	2011-2020	2000-2021	2000-2020
PILLAR II										
Nominal return	8.09%	1.53%	4.93%	3.32%	4.38%	4.33%	4.62%	4.02%	3.18%	2.94%
Real return	1.52%	2.10%	2.25%	2.40%	3.02%	3.86%	2.56%	2.86%	0.89%	0.86%
PILLAR III										
Nominal return	8.67%	0.29%	4.24%	2.25%	3.55%	3.55%	3.78%	2.77%	2.71%	2.42%
Real return	2.10%	0.86%	1.58%	1.33%	2.20%	3.08%	2.26%	1.60%	0.43%	0.35%
Both Pillars										
Nominal return	8.50%	0.67%	1.80%	0.79%	3.83%	3.81%	4.07%	3.22%	2.89%	2.62%
Real return	1.93%	1.24%	1.80%	-0.5%	2.48%	3.34%	2.56%	2.05%	0.61%	0.54%

Source: own calculations based on data from INVERCO

Table ES14. Returns of Spanish Pillar II Schemes (after charges and before taxes)				
	Associate Plans (*)		Occupational Plans	
	Nominal	Real	Nominal	Real
2000	0.93%	-3.07%	-3.62%	-7.62%
2001	0.10%	-2.41%	0.64%	-1.87%
2002	-3.84%	-7.85%	-3.72%	-7.73%
2003	5.61%	2.92%	6.73%	4.04%
2004	6.56%	3.28%	5.52%	2.24%
2005	9.49%	5.77%	8.39%	4.67%
2006	8.16%	5.44%	5.36%	2.64%
2007	3.05%	-1.23%	2.44%	-1.84%
2008	-11.10%	-12.55%	-10.50%	-11.95%
2009	9.23%	8.33%	9.28%	8.38%
2010	0.95%	-1.92%	2.01%	-0.86%
2011	-1.11%	-3.46%	0.00%	-2.35%
2012	6.94%	3.93%	8.04%	5.03%
2013	9.51%	9.20%	7.70%	7.39%
2014	6.88%	8.01%	7.14%	8.27%
2015	2.57%	2.70%	2.88%	3.01%
2016	2.45%	1.04%	2.74%	1.33%
2017	2.99%	1.77%	3.19%	1.97%
2018	-4.32%	-5.55%	-3.19%	-4.42%
2019	10.31%	9.46%	8.74%	7.89%
2020	1.38%	1.95%	1.53%	2.10%
2021	9.00%	2.43%	8.09%	1.52%
Cum. 2000-2021	104.35%	22.54%	92.84%	20.45%
Average 2000-2021	3.30%	1.02%	3.03%	0.85%

(*) Associated Plans are considered personal, Pillar III plans by the Spanish DGSFP

Source: INVERCO, DGSFP and EUROSTAT

Occupational Pension Funds (Pillar II) are much cheaper to manage, as seen before, and obtain a larger net nominal return as seen in Table ES14 above. But their gross performance is not better than that of individual plans once compared in the longer term.

Given the performance of Pillar II pension funds and the overall system performance just discussed, the conclusion emerges that Pillar III funds have performed nominally in the 2000-2021 period only very slightly above inflation, namely 50 basis points above.

Being this the case, it is interesting to look at the asset classes these funds are invested in as these schemes' managers have more flexibility than occupational schemes' managers, rather more constrained by social partners' presence in control boards of these Plans.

Table ES15 below shows returns of debt-based Individual Funds (Pillar III). Due to higher charges (already netted out in data), net returns are sensibly poorer to those of occupational funds, where charges are typically five to six times lower. After inflation adjustment, real returns show a dominant negative pattern that, in averaged cumulative terms over the 2000-2021 period, translate into real investment returns that range between -0.53% for Long-term debt-based funds to -1.16% for Mixed debt-based funds. Average nominal returns cannot beat the 1.67% mark in the best performing class, the long-term debt-based category. Before charges, however, returns for Pillar III funds' investments aren't that different from returns for Pillar II funds' investments.

Table ES15. Returns of Individual Pension Plans - (After charges and before tax)						
	Short-Term Debt		Long-Term Debt		Mixed Debt	
	Nominal	Real	Nominal	Real	Nominal	Real
2000	3.83%	-0.17%	0.68%	-3.32%	-2.20%	-6.20%
2001	3.64%	1.13%	0.62%	-1.89%	-2.41%	-4.92%
2002	3.83%	-0.18%	0.73%	-3.28%	-5.16%	-9.17%
2003	1.95%	-0.74%	2.62%	-0.07%	3.92%	1.23%
2004	1.77%	-1.51%	1.92%	-1.36%	3.16%	-0.12%
2005	1.04%	-2.68%	1.78%	-1.94%	5.33%	1.61%
2006	1.26%	-1.46%	0.34%	-2.38%	3.58%	0.86%
2007	1.94%	-2.34%	0.75%	-3.53%	1.32%	-2.96%
2008	2.13%	0.68%	2.03%	0.58%	-8.79%	-10.24%
2009	1.80%	0.90%	3.96%	3.06%	6.05%	5.15%
2010	0.64%	-2.23%	0.47%	-2.40%	-1.54%	-4.41%
2011	1.38%	-0.97%	1.39%	-0.96%	-2.21%	-4.56%
2012	3.47%	0.46%	4.79%	1.78%	5.41%	2.40%
2013	2.08%	1.77%	4.66%	4.35%	6.11%	5.80%
2014	1.37%	2.50%	8.93%	10.06%	3.61%	4.74%
2015	-0.20%	-0.07%	-0.46%	-0.33%	0.78%	0.91%
2016	0.20%	-1.21%	1.25%	-0.16%	0.71%	-0.70%
2017	-0.11%	-1.33%	0.11%	-1.11%	1.50%	0.28%
2018	-1.79%	-3.02%	-2.01%	-3.24%	-4.08%	-5.31%
2019	0.65%	-0.20%	2.91%	2.06%	5.14%	4.29%
2020	-0.19%	0.38%	1.36%	1.93%	-0.39%	0.18%
2021	-0.64%	-7.21%	-1.59%	-8.16%	4.25%	-2.32%
Cum. 2000-2021	134.47	83.53	143.86	89.00	124.91	77.30
Average 2000-2021	1.36%	-0.81%	1.67%	-0.53%	1.02%	-1.16%

Source: own calculations based on data from INVERCO

As for Individual Pension funds mostly invested in stock, Table ES16 contains further and final evidence telling us that by no means returns for this category can be said to be better than those of debt-based investments. Indeed, average real returns to mostly-stock-based investments, as shown in the table, lie around the 0.17% threshold on average over the 2000-2021 period. Paradoxically, guaranteed funds, despite being the option of more conservative savers manage to obtain a "healthy" 0.84% real return in the last two decades, a 3.03% nominal return and a cumulative 92.93% nominal return over the entire period.

Table ES16. Returns of Individual Pension Plans - (After charges and before tax)						
	Stocks Mixed		Stocks		Guaranteed	
	Nominal	Real	Nominal	Real	Nominal	Real
2000	-4.97%	-8.97%	-10.60%	-14.60%	9.22%	5.22%
2001	-7.73%	-10.24%	-16.30%	-18.81%	0.35%	-2.16%
2002	-17.20%	-21.21%	-30.10%	-34.11%	5.04%	1.03%
2003	8.70%	6.01%	16.18%	13.49%	5.67%	2.98%
2004	5.60%	2.32%	8.88%	5.60%	4.66%	1.38%
2005	12.16%	8.44%	18.73%	15.01%	4.64%	0.92%

2006	10.09%	7.37%	18.30%	15.58%	1.44%	-1.28%
2007	2.96%	-1.32%	3.93%	-0.35%	1.48%	-2.80%
2008	-23.80%	-25.25%	-38.40%	-39.85%	0.68%	-0.77%
2009	14.21%	13.31%	27.20%	26.30%	3.77%	2.87%
2010	-0.82%	-3.69%	1.63%	-1.24%	-3.96%	-6.83%
2011	-7.01%	-9.36%	-10.40%	-12.75%	1.15%	-1.20%
2012	8.62%	5.61%	10.43%	7.42%	5.48%	2.47%
2013	12.51%	12.20%	22.19%	21.88%	9.41%	9.10%
2014	4.77%	5.90%	7.63%	8.76%	11.37%	12.50%
2015	2.50%	2.63%	5.58%	5.71%	0.27%	0.40%
2016	2.70%	1.29%	4.34%	2.93%	2.12%	0.71%
2017	4.54%	3.32%	8.83%	7.61%	0.41%	-0.81%
2018	-6.55%	-7.78%	-10.10%	-11.33%	0.41%	-0.82%
2019	12.17%	11.32%	23.59%	22.74%	4.12%	3.27%
2020	-0.66%	-0.09%	2.93%	3.50%	1.03%	1.60%
2021	11.91%	5.34%	23.42%	16.85%	-0.70%	-7.27%
Cum. 2000-2021	139.63	86.40	169.36	104.20	192.93	120.29
Average 2000-2021	1.53%	-0.66%	2.42%	0.19%	3.03%	0.84%

Source: own calculations based on INVERCO data

Investment strategies

Returns discussed in the previous section are indeed varied. Their diversity, of course, is rooted in a couple of basic factors: (i) the assets in which retirement funds are invested in and (ii) the strategies managers deploy, given the portfolio, in order to get a high return for their customers. In general, few facts can be established concerning the data described above:

- For the for the 2000-2021 period, overall nominal (after charges) returns for Pillars II and III pension funds combined have been 2.76% and real returns have been 0.58% that is, a 218 basis points difference given to inflation (Summary Table).

- In the last decade (2012-2021), for Pillar II pension funds, with (unweighted average) gross nominal returns of 4.92%, net nominal returns of 4.69% and net real returns of 3.41%, barely 24 basis points of assets under management have been given to managers and depositaries every year and 108 basis points per year have been given to inflation (Table ES12).

- However, for Pillar III pension funds, in the same period, with (unweighted average) gross real returns of 5.28%, net returns of 3.94% and real returns of 2.67%, a much higher 133 basis points have been given to management and depositary costs and also 108 basis points to inflation. So that charges have been 109 basis points larger for Pillar III vehicles than for Pillar II ones (Table ES12).

- Up to six different regular portfolios are managed in the Spanish pensions industry, ranging from almost-only debt to almost-only stocks and guaranteed funds (that may contain both bonds and stock in varied proportions). Nominal returns for these broad

categories, for the 2000-2021 period (annual, cumulative) have been 1.36%, 1.67% and 1.02% for, respectively, short-term, long-term and mixed debt vehicles and 1.53%%, 2.42%% and 3.03% for, respectively, mixed stocks, almost-only stocks and guaranteed funds (Tables ES15 and ES16).

As a clue for the reasons behind the widely varied results just discussed, several ones are rather standard irrespective of managers' capacity to beat the most popular categories. Long-term debt yields more than short-term debt, debt is less volatile than stocks and thus less risky and managers' fees are far smaller for Pillar II vehicles than for Pillar III ones. The superior returns of guaranteed funds however defy common sense as these are more conservatively invested and should bear some extra cost due to the guaranty over the principal they embody.

So, to what extent managers have been responsible for the rather mild results that pension funds have obtained in Spain since 2000? To answer this question, one should go fund by fund and manager by manager, which is not the purpose of this chapter[241], but few general comments can be made. Guaranteed funds, that accounted for 4.94% of Pillar III total assets in 2021 (19,47% in 2010) have been much more profitable for participants than the rest, while assumedly they are more expensive to run due to the insurance coverage they embody. On the other hand, Pillar III vehicles are considerably more charged by management fees than their Pillar II counterparts.

Managers in Spain may be restricted by the rigid asset structure in the established portfolios within Pillar III while being rather freer in what concerns Pillar II vehicles (albeit they may eventually be the same). But the fact is that gross (before charges) returns in these two broad categories differ by a mere 35 basis points average (unweighted, Table ES12) in favour of the former in the last ten years. The large difference in net returns (74 bp, same period) being thus almost entirely attributable to managing fees, much lower within Pillar II than within Pillar III, as said above.

All categories or retirement vehicles in Spain invest rather shyly in foreign assets with only few funds specialising in these assets' class. Superior returns in foreign assets however are by no means assured and this investment strategy has extra costs anyway.

Guaranteed funds' managers, finally, which are considerably freer than their non-guaranteed counterparts (being also the same managers eventually) and, besides, do not have to face internal control bodies like their Pillar II counterparts, seem to have profited from this conditions to obtain larger returns for their vehicles' participants.

[241] See Fernández y Fernández-Acín (2019). https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3319461

Conclusion

Spanish retirement assets, through standard Pension Plans are a mere 10.55% of GDP. Insurance retirement (and retirement-like) assets and provisions, a large array of different products not equally qualified as retirement vehicles, could add another 15.82% GDP points to standard Pension Plans. This, by all standards, is a small pensions industry even if some 9.5 million individuals participate in Pension Plans and some 14.6 million individuals are covered by insurance retirement or quasi-retirement vehicles. Assets, technical provisions or other retirement rights barely reach above € 13,000 per contract or account making the whole system an insufficient complement, let alone an alternative, to Social Security retirement benefits. Unfortunately, this state of affairs is common to many other European countries.

The retirement vehicles market in Spain, however, has a rich structure of agents, products and retirement schemes that, on paper, should be able to cover the entire work force and beyond. Two tightly related factors prevent this to happen: the pervasive presence of Social Security pensions, whose old-age variety replaces lost labour income at retirement by around 80% and the reluctancy of employers to sponsor retirement schemes for their employees because of costs reasons, particularly among SMEs.

This Spanish pension report, apart general descriptions of the landscape, has gone with a certain detail through some of the most salient features of our Pillars II and III arrangements on, basically, three crucial dimensions: (i) charges, (ii) taxes and (iii) returns.

On charges, we find that these are rather large on average, only because the Individual schemes are considerably costlier to manage than occupational ones. The latter keep their charges very low in line with what is observed in other more advanced and developed markets. Actually, thanks to intense regulatory effort in the last few years, charges in Pillar III schemes have decreased clearly. A continuation of this trend, without a significant increase in market size, continues to look far less affordable for managers.

On taxation, Spain has an EET, tax-deferral regime for retirement assets and incomes, which is the standard in most countries in the world. Spain also has deductibility of contributions to retirement vehicles (up to certain limits), an even more followed standard in most countries in the world. This is the right way to avoid unacceptable double taxation. No tax expert would have any doubt about the importance of keeping the current deductibility of contributions and thus tax deferral. Tax deferral empowers the accumulation of pension rights and may also turn to be a good business for tax authorities in the longer run. Spain however has gone backwards in 2021 and 2022 strongly limiting the deductibility in Pillar III schemes. This has been corrected in part in 2022 with the new legislation regulating the “Simplified Pension Plans” to which independent workers can join in.

Tax deductibility cum deferral should not be seen as gifts or favours, but as the best policy that can be performed to encourage long term savings for retirement. Some ceilings to tax deductibility may be too low or even arbitrary. Less understandable is still the push among some political and social agents to dismantle tax deferral and/or deductibility.

This said, tax deferral in Spain is seen by most agents participating in the retirement market, be they workers, insured persons or even managers and retailers, as the only reason to buy/sell these products. A cultural trait that may explain, jointly with other reasons discussed in this report, the poor development of Pillars II and III in our country.

On returns, it has to be admitted that performance to date has been barely enough to beat inflation. A result that many will find poor. Nominal gross returns for more than two thirds of participants are loaded with heavy charges, as mentioned before, but gross (before charges) returns are not that terrible. Again, it is taxes that come in to help many participants to reach the conclusion that it is still worth putting their money into these vehicles, despite the illiquid nature of most of them. Participants' *revanche*, however, takes the form of a strategic game in which they allocate just enough money every year to these investments as to exhaust the fiscal margin, no more. And this just for some of them, as the rest of participants cannot perhaps afford to put more money into their complementary pension pots and/or, perhaps, they think that Social Security will always be there to give them back retirement benefits with a much higher implicit rate of return (on their contributions) free of management fees and inflation linked.

Pension Savings: The Real Return

2022 Edition

Country Case: Sweden

Swedish summary

Det svenska pensionssytemet består till stor del av avgiftsbestämda/fonderade pensioner. Totalt förvaltas över 7300 miljarder SEK (€726 miljarder) i pensionskapital. I det allmänna pensionssystemet sätts 2.5% av lönen av till den så kallade premiepensionen. I premiepensionen har förvalsalternativet, AP7 Såfa, haft en genomsnittlig realavkastning på 7.78% sedan 2001, jämfört med 4.95% för alla andra valbara fonder. Tjänstepensionssystemet domineras av fyra stora avtal som täcker över 90% av alla arbetstagare. Tjänstepensionerna har till största del gått från att vara PAYG till fonderade pensionssystem.

Summary

The Swedish pension system contains a great variety of different retirement savings products with over SEK 7,300 trillion (€726 billion) in assets under management (AuM). There are funded components in each of the three pillars. In the public pension system, 2.5% of earnings are allocated to the *premium pension*, whereas the default fund, AP7 Såfa, has had an average real rate of return of 7.78% compared to the 4.95% of all other funds over the last 19 years. The second pillar is dominated by four large agreement-based pension plans, covering more than 90% of the workforce. These have largely transitioned from a pay-as-you-go (PAYG) system to a funded system.

Introduction

The Swedish pension system is divided into three pillars:

- Pillar 1 - The national pension
- Pillar 2 - Occupational pension plans
- Pillar 3 - Private pension

The Swedish pension system is a combination of mandatory and voluntary components. Table 1 shows how the pension capital is distributed between the different types of providers in the pension system. In 2020, the total pension capital was estimated at SEK 7,300 billion (€726 billion), which corresponds to fourteen times the size of outgoing pension payments. A share of 50% of the capital is accounted for by the occupational pension system. The fully funded component in the public pension system, the *premium pension*, accounts for 49% of the

pension capital in the first pillar. The remaining 51% is managed by the buffer funds (see next section).

Introductory table: Pension system in Sweden		
Pillar I	**Pillar II**	**Pillar III**
Mandatory	Mandatory*	Voluntary
PAYG/funded	Funded	Funded
DC/NDC	DC/DB**	DC
Flexible retirement age 62-68	ERA of 55 or 62, usually paid out at 65 or 67	Tax rebate abolished in 2016***
No earnings test	Normally a restriction on working hours	
Mandatory	Mandatory*	Voluntary
Quick facts		
Number of old-age pensioners: 2,3 million	Coverage: >90%	Share contributing (2015): 24,2%
Coverage (active population): Universal	Pension plans: 4 major (agreement-based)	Funds: >30
Average monthly pension: 1793 EUR	Average monthly pension: 488 EUR	Average monthly pension: 90 EUR
Average monthly salary (gross, age 60-64): 3,100 EUR	AuM: 364 billion EUR (see Table SE 1)	AuM: 34 billion EUR (see Table SE 1)
Average replacement rate: 58%****		

** Occupational pension coverage is organized by the employer*
*** The defined benefit components are being phased out*
**** Self-employed and employees without occupational pension still eligible*
***** OECD estimate 54%*

Summary returns table. Sweden nominal returns in 1st and 2nd pillar						
	Public pension		Occupational pension*			
	AP7 Såfa	Other funds	ITP1	SAF-LO	PA-16	AKAP-KL
2021	31,5	27,1	24,57	28,93	31,3889	27,47
2020	4,4	8	7,28	7,833	7,62222	7,729
2019	32,2	27,6	23,99	26,64	27,3667	26,98

* For each occupational pension plan, the return is an unweighted average among the available funds.
Source: Tables SE11 and SE14

The average pension in Sweden was €1,792 EUR (SEK 18,798) per month before taxes in 2019; whereof €1,214 (SEK 12,735) came from the national pension, €488 (SEK 5,115) from occupational pensions and €90 (SEK 946) derived from private pension savings. The outcome furthermore differed quite significantly between genders. For women, the average total pension was €1,478 (SEK 15,500) per month before taxes and for men €2,131 (SEK 22,348) per month before taxes[242]. Although a lot of money is locked in the pension system in Sweden, the Swedish household's savings rate is quite high.

Table SE 1. - Capital Managed (billions of sek)												
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Income-based pension	895	873	958	1058	1185	1230	1322	1412	1383	1596	1696	2004
In € (billions)	89	87	95	105	118	123	132	141	138	159	169	204
Premium pension	443	434	515	648	812	896	1024	1182	1180	1549	1678	2173
In € (billions)	44	43	51	65	81	89	102	118	118	154	167	217
Occupational pension	1509	1705	1795	1948	2227	2369	2567	2787	2900	3392	3641	
In € (billions)	150	170	179	194	222	236	256	278	289	338	364	
Private pension	423	406	412	433	465	478	478	484	476	367	358	
In € (billions)	42	40	41	43	46	48	48	48	47	37	36	

Source: Sveriges Pensioner 2006-2020 and Orange Report 2021

In Sweden there is no set age at which people must retire, but the national pension can be drawn from the age of 62 onwards (the earliest eligibility age was raised from 61 in 2020). Nor is there an upper age limit on how long a person may work, and everyone is entitled to work until the age of 68 (the mandatory retirement age was raised from 67 to 68 in 2020). The Swedish Pensions Agency administers the national pension and related pension benefits and provides information about them. The Swedish Social Insurance Inspectorate ensures that the Swedish Pensions Agency conducts its administration with due process and efficiency. The occupational and the private pension can be drawn from the age of 55 onwards.

The new national pension system in Sweden was introduced in 1999. The most important change in the reform was going from a defined benefit system to a defined contribution system. Before the reform, pensions were considered a social right and people were guaranteed a certain percentage of the wage before retirement. Following the reform, the outcome of the pension now consists of the pension savings accumulated during active employment before retirement. In this system, pensions depend on economic and financial development, which means that it is not possible to know in advance how much a retiree's

[242] Based on information retrieved from: https://www.pensionsmyndigheten.se/statistik/pensionsstatistik/. Note that the average pension must be weighted with the number of people receiving a pension from a particular pillar.

pension will be. With the new pension system, the need for information about pensions is even more important. The occupational pension system has developed in the same direction; most of the occupational pension plans are now defined contribution systems or hybrids with both defined contribution and defined benefit components.[243]

Pillar I: The national pension

The national pension consists of an *income-based pension*, a *premium pension* and a *guaranteed pension*. A share of 18.5% of the salary and other taxable benefits up to a maximum level of 7.5 income-base amount[244] per year is set aside for the national retirement pension. A share of 16% is set-aside for the income pension, where the value of the pension follows earnings trends in Sweden. The income-based pension is financed on a pay-as-you-go (PAYG) basis, which means that pension contributions paid in are used to pay retirees the same year. The remaining 2.5% of the salary and other taxable benefits are set-aside for the premium pension, for which the capital is placed in funds. The individual can either choose what fund or funds to place their savings with or, if no choice is made, contributions will be made in the default alternative fund. This system is unique to Sweden and the first individual choices (allocations) were made in 2000. The aim was to achieve a spread of risk in the pension system by placing a part of the national pension on the capital market, enhance the return on capital and enable individual choices in the national pension system.[245] The Swedish pensions Agency calculates that by 2030 the premium pension will constitute 20% of the total pension.

The capital for the income-based system is deposited in five buffer funds: the first, second, third, fourth and sixth national pension funds. The result of the income-based pension system is affected by several key economic and demographic factors. In the short-term, the development of employment is the most important factor, but the effect of the stock and bond markets is also of significance, particularly in case of major changes. In the long-term, demographic factors are most relevant.

Accumulated pension rights and current benefits in the income-based system grow with the increase in the level of earnings per capita. If the rate of growth of one salary would be slower than that of the average salary, for instance as a result of a fall in the size of the work force, total benefits would grow faster than the contributions financing them, which could induce financial instability. If the ratio of assets to liabilities in the income-based system falls below a certain threshold, the automatic balancing mechanism is activated and abandons the indexation by the level of average salaries.

In 2020, the parliament approved a new pension supplement in the national pension. The supplement will be paid out to pensioners with an income-based national pension of SEK 9,200 – 17,400 (€900 – €1700) and amounts to maximum SEK 600 per month. The purpose of the

[243] See Hagen (2017) for a more detailed description of the Swedish Pension System
[244] 54,100 EUR (550,000 SEK) for 2019.
[245] Vägval för premiepensionen, Ds 2013:35

supplement is to increase the living standard for low-income workers during retirement. The supplement has been criticized for deviating from the so-called life-income principle and the fact that it is financed from the state budget (as opposed to the income pension which is financed from pension fees).

The third element of the national pension is the *guaranteed pension*. It is a pension for those who have had little or no income from employment in their life. It is linked to the price base amount calculated annually by Statistics Sweden. The size of the guaranteed pension depends on how long a person has lived in Sweden. Residents of Sweden qualify for a guaranteed pension from the age of 65. To receive a full guaranteed pension, an individual must in principle have resided in Sweden for 40 years after the age of 25. Residence in another EU/EEA country is also credited toward a guaranteed pension. In addition to the national pension, pensioners with low pensions may be entitled to a housing supplement and maintenance support. In June 2022, the parliament passed a historically large increase of the minimum guarantee equal to SEK 1,000. This implies that the maximum benefit for singles is raised from SEK 8,779 to SEK 9,781 and from 7,853 to SEK 8,855 for married individuals, i.e., increases of more than 10%.

There is agreement in the Swedish Parliament to raise the different statutory retirement ages in the public pension system (Pillar I). First, the earliest eligibility age was raised from 61 to 62 in 2020, to 63 in 2023 and to 64 in 2026. Second, the eligibility age for the minimum guarantee will be raised from 65 to 66 in 2023 and is then expected to increase to 67 in 2026. Those who have worked for 44 years or longer will be exempt from these changes. Third, the mandatory retirement age was raised from 67 to 68 in 2020, and then to 69 in 2023. There is also a plan to index these retirement ages to a so-called "target age". The target age will be based on remaining life expectancy, although the details are yet to be laid out.

For administering the income-based pension system, a fee is deducted annually from pension balances by multiplying these balances by an administrative cost factor. In 2020, the fee amounted to 0.03%[246]. The deduction is made only until the insured begins to withdraw a pension. At the current level of cost, the deduction will decrease the income-based pension by approximately 1% compared to what it would have been without the deduction.

The premium pension system is a funded system for which the pension savers themselves choose the funds in which to invest their premium pension savings. The premium pension can be withdrawn, in whole or in part, from the age of 62. The pension is paid out from selling off the accumulated capital. The individual choice in the premium pension system furthermore results in a spread on return on the pension capital depending on the choice of fund or funds. Table SE2 shows the allocation of assets in the premium pension.

[246] *The Swedish Pensions Agency, Orange report 2021*

Table SE2. Funds in the Premium Pension System and Capital Managed 2010–2020, December 31, billions of SEK												
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**
Equity fund	214	159	193	240	295	347	388	441	407	517	582	758
Mixed funds	17	41	51	63	77	67	69	70	66	69	65	75
Generation funds	43	60	71	90	114	128	147	166	167	209	221	282
Interest funds	24	28	24	27	27	25	127	26	30	31	31	30
AP7 Såfa (default)	110	105	132	182	246	272	328	407	433	632	680	915
Total:	**408**	**393**	**471**	**602**	**759**	**839**	**959**	**1110**	**1103**	**1458**	1579	2061
Total € (billions):	**41**	**39**	**47**	**60**	**76**	**84**	**96**	**111**	**110**	**145**	**157**	**203**

Source: Orange report 2021

The premium pension has been criticized for having too many selectable funds and for generating large variation in pension outcomes. In December 2017, the government announced that it will implement the changes that have been proposed by the Pensions Agency to enhance the quality and regulation of the participating companies.[247] The new rules were implemented on 1 November 2018, and include, among other things, that the participating fund companies manage at least SEK 500 million outside the Premium Pension, have three years of operating history, act in the best interest of the retirement savers, fulfil minimum sustainability requirements, and establish one contract per fund (rather than one contract per company) with the Pensions Agency.[248]

The new rules also meant that companies that wished to be part of the Premium Pension had to (re)submit an application to the Pensions Agency. In early 2019, 70 companies had submitted an application covering 553 funds (there were more than 800 funds at the end of 2018). The primary purpose of the new rules is to prevent dishonest and fraudulent companies. The alleged fraud of the fund companies Falcon Funds in 2016, Allra in January 2017, and Solidar in 2018[249] sparked discussions on the issue. As of June 2022, there were 478 eligible funds registered in the Premium Pension, managed by 65 different UCITS.

A government report on the future development of the Premium Pension was published in November 2019. The report highlights that it should be easier for retirement saves to get an overview of and select funds, and for the authorities to exercise control and transparency. The report recommends that the existing, open fund platform should be replaced with a new

[247] The Swedish Pensions Agency, Stärkt konsumentskydd inom premiepensionen
[248] https://www.pensionsmyndigheten.se/nyheter-och-press/pressrum/nytt-avtal-klart-for-premiepensionens-fondtorg
[249] See Cronqvist et al. (2018) for a discussion of the Allra case.

platform where the participating funds have been procured. The procurement and administration of this platform should be administrated by a new government agency, which also should be responsible for managing the state-run default fund option, AP7 Såfa. The number of funds is expected to fall considerably as a result of these changes and the new structure should be in place at the end of 2023.[250] Some actors, including the Swedish Investment Fund Association, argue that the proposed changes may lead to lower pensions, decrease competition among fund providers and limit the freedom of choice for individual investors.[251]

Pillar II: Occupational pensions

The occupational pension system in Sweden is mainly driven by collective agreements. A Swedish company is not required by law to pay a pension to its employees, but an occupational pension plan is mandatory if there is a collective agreement at the workplace. The occupational pension system covers over 90% of the workforce. The self-employed are excluded from occupational pension plans and it is mostly smaller companies in new sectors of business that do not have collective agreements.[252] There are four main collective agreements for the different sectors and each agreement has its own pension plan. The four collective agreements are: the SAF-LO Collective Pension (blue-collar workers) with 2.8 million members, the Supplementary Pension Scheme for Salaried Employees in Industry and Commerce ITP (white collar employees) with 2 million members, the Collectively Negotiated Local Government Pension Scheme (KAP-KL) with 1 million members and the Government Sector Collective Agreement on Pensions PA-03/PA-16 with 500,000 members[253].

In all four collectively negotiated pension schemes, the employees are allowed to choose a fund manager for at least part of the pension amount. To ensure that the employees receive an occupational pension that is as high as possible there is a 'choice centre' for each collective pension plan. The 'choice centre's' task is to contract good managers for the employee's occupational pension. The employees can choose between different types of traditional insurance and/or unit-linked insurance. The size of this individual portion depends on the size of the premiums paid by the employer in the form of an annual pension provision, the length of the period during which they are paid, and how the funds are managed. For two of the collective pension schemes, KAP-KL and SAF-LO, the employees can choose a fund manager for the whole amount. If the individual does not choose a fund manager, the pension capital will be placed in the default alternative, which in all four agreements is a traditional insurance procured by the choice centre of the occupational pension plan.

[250] Socialdepartementet, Ett förbättrat premiepensionssystem, SOU 2019:44
[251] https://www.fondbolagen.se/aktuellt/pressrum/pressmeddelanden/forslagen-i-utredningen-ett-battre-premiepensionssystem-gar-emot-malen-med-premiepensionen/
[252] AMF, "Tjänstpensionerna i framtiden – betydelse, omfattning och trender", p. 17.
ISF Rapport 2018:15," Vem får avsättningar till tjänstepension".
[253] www.pensionsmyndigheten.se/tjanstepensionen-thml

If there is no collective agreement at the workplace, the company can choose to have an individual occupational pension plan for their employees. Among the companies that do not have a collective agreement, some have chosen to have an occupational pension plan, and some do not pay out any pensions at all to their employees. These individual pension plans can vary in shape and level but common to them all is that they often have worse provisions and higher costs compared to the collectively negotiated pension schemes.

In 2017, the Ministry of Finance published a report with several proposals on how to make it easier and cheaper to move occupational pension capital across pension companies and pension plans.[254] Today, the right to move occupational pension is, with some exceptions, limited to pension capital that has been accumulated after 2007 and that has not started to be paid out. There is typically also a fee associated with moving the pension capital to another company, especially in the individual occupational pension plans. Critics argue that this leads to lower competition, lower returns for retirement savers and lock-in effects. In April 2019, the government published a report that highlighted the need for lower moving fees in general and a stipulated maximum moving fee (in SEK).[255] The parliament approved the proposals of the government in November 2019 and recommended the government to pursue the subject further. In March 2020, the Ministry of Finance proposed that the maximum fee should amount to 0.0127 price base amounts (600 SEK/€59.8 for 2020).[256] The new rules were implemented in April 2021. In May 2022, it was decided that the portability right should also apply to pension capital accumulated before 2007.

In December 2016, Sweden transposed the IORP II Directive. The purpose of the new Directive is to ensure the soundness of occupational pensions and better protect pension scheme members by means of stricter capital solvency requirements. The new directive also clarifies the legal framework for actors in the occupational pension business. The new rules have been subject to much discussion. Critics argue that they distort competition in the occupational pension arena because not all companies would be affected. The new rules only apply to pension companies that only provide occupational pension insurance, as opposed to pension companies that also provide other insurance services. The government supplemented the EU Directive with new national legislation in November 2019.[257]

[254] Konkurrensverket, Flyttavgifter på livförsäkringsmarknaden – potentiella inlåsningseffekter bland pensionsförsäkringar, Rapport 2016:12.
[255] Ministry of Finance, "En effektivare flytträtt av försäkringssparande"
[256] Ministry of Finance, "Avgifter vid återköp och flytt av fond- och depåförsäkringar."
[257] Finansutskottets betänkande, "En ny reglering för tjänstepensionsföretag". See https://www.fi.se/sv/forsakring/iorp2/ for more information on IORP II.

Pillar III: Private pensions

Private pension saving is voluntary, but it is subsidized via tax deductions. In 2014, 34.5% of those aged 20 to 64 made contributions to a private pension account.[258] The tax deduction for private pension savings is only profitable for high-income earners.

Private pension savings can be placed in an individual pension savings account (IPS) or in private pension insurance. Money placed in an IPS and in private pension insurance is locked until the age of 55. After that the individual can choose over how many years the pension should be paid out. The minimum pay-out is 5 years in both IPS and private pension insurance. However, only money in private pension insurance can be paid out for life (annuity).

Unlike the national pension plan and the occupational pension plans, private pension plans are individual. This results in less transparency both when it comes to offered products within the private pension plans and the charges on these products.

The deduction for private pension savings has been reduced over the years. From 1 January 2015 it was reduced from €1,195 to €179 (SEK12,000 to SEK 1,800) per year, equivalent to €15 (SEK 150) in monthly savings. On 1 January 2016, the deduction was abolished. The motive for this is that the deduction favours high-income earners. In 2015, the share of private pension savers dropped to 24.2 %. Those who still contribute to private pension accounts are thus subject to double taxation.

Several actors in the pension industry advocate the need for new incentives for people to save privately for retirement. One suggestion is that the government match private contributions, like what is already in place in Germany,[259] matching benefits for low- and medium-income earners as opposed to tax subsidies which tend to favour the rich. The problem is of course that the government must bear the costs of matching in the future when the contributors retire. In addition, the re-distributional outcome of government-subsidized savings may be different than the intended if low- and medium-income earners are less likely to contribute. The effect on total savings may also be limited if there are substitution effects across different saving forms.

ISK

With the abolishment of tax-deductible pension accounts, retirement savers need to find new ways to save for retirement that are not directly related to the pension. The most popular savings vehicle today is called "*Investeringssparkontot*" (Investment and savings account - ISK) and was introduced in January 2012. The purpose of the new account is to make it easier to trade in financial instruments. Unlike an ordinary securities account, there is no capital gains

[258] http://www.statistikdatabasen.scb.se/
[259] OECD Pension Outlook 2018.

tax on the transactions. Capital gains tax has been replaced by an annual standardised tax (more on this in the Taxation section).

After the lowering of the deduction for private pension savings, ISK is now regarded as a low tax alternative to private pension savings. ISK has enjoyed widespread popularity and the number of ISK accounts has increased dramatically. In 2019, the number of unique account holders exceeded 2.6 million (see Table 3). In 2021 ISK funds accounted for 9% of the households' total fund assets as compared to 23% for private pension insurance. The relative importance of ISK is however likely to increase in the future; 34% of net savings in funds in 2020 was allocated to ISK accounts.

Table SE3. ISK accounts

Year	Number of accounts	Number of account holders
2012	222 664	210 895
2013	493 221	453 911
2014	891 550	788 201
2015	1 840 152	1 528 939
2016	2 305 137	1 853 227
2017	2 818 490	2 163 762
2018	3 267 512	2 420 819
2019	3 768 666	2 671 091

Source: Swedish Tax Agency

Table SE4. Household fund assets 2021

Fund type	Fund assets	Net saving (%)	Share of assets (%)
Direct fund investments	563 533	-13	8
ISK	626 579	34	9
IPS	156 325	-2	2
Private pension insurance	1 568 909	17	23
Premium Pension (1st pillar)	2 060 107	14	30
Trustee-registered funds	771 825	24	11
NGOs	136 901	2	2
Swedish companies	733 075	19	11
Others	194 779	6	3
Total:	**6 812 035**	**100**	**100**
Total € (millions):	**670 476**		

Source: Swedish Investment Fund Association

Pension vehicles

Occupational pension plans

ITP

The ITP agreement consists of two parts: defined contribution pension ITP 1 and defined benefit pension ITP 2. Employees born in 1979 or later are covered by the defined contribution pension ITP 1. In ITP 1 the employer makes contributions of 4.5 percent of the salary per year, up to a maximum of 7.5 income base amounts. If the salary exceeds this level, the amount of the contribution is also 30% of the salary above 7.5-income base amount. There is also an additional contribution that the employer organizations can choose to include, the so-called partial pension contribution. This contribution currently varies between 0.2%-1.5%.

Half of the ITP 1 pension must be invested in traditional pension insurance, but the individual can choose how to invest the remaining half. It can be placed in traditional insurance and/or unit-linked insurance. The premiums of those who do not specify a choice are invested in traditional pension insurance with Alecta. The eligible insurance companies for traditional insurance are Alecta, AMF, Folksam, Skandia and SEB and for unit-linked insurance they are Futur Pension (previously Danica pension), SPP, Handelsbanken, Movestic and Swedbank.

SAF-LO

The SAF-LO occupational pension plan is a defined contribution plan by definition. The terms of the plan were improved in 2007, mostly in response to perceived unfairness in the terms of the pension provisions for blue-collar and white-collar workers. Like for ITP 1 the employer now makes contributions of 4.5 percent of the salary, up to a maximum of 7,5 income base amounts. If the salary exceeds this level, the amount of the contribution is also 30 percent. SAF-LO also contains a partial pension contribution that the employer can choose to add. The additional contribution is currently ranging between 0.7. and 1.7 percent.

The individual can choose how to invest the pension capital and it can be placed in traditional insurance and/or unit-linked insurance. The eligible insurance companies for traditional insurance are Alecta, AMF, Folksam and SEB and for unit-linked insurance they are AMF, Futur Pension, Folksam, Handelsbanken, Länsförsäkringar, Movestic, Nordea, SEB, SPP and Swedbank.

PA 03

The pension plan for central government employees, PA 16 – Avd II (formerly PA 03), is a hybrid of defined contribution and defined benefit. The defined contribution component in PA 03 consists of two parts: individual old age pension and supplementary old age pension. The total premium amounts to 4.5% of the pensionable income up to a ceiling of 30 income base amounts. Of the total premium, 2.5% and 2% is allocated to the individual pension and the supplementary pension respectively. The individual can choose how the contribution of

the individual retirement pension should be placed and managed. Contributions to the supplementary pension cannot be invested by the employee and are instead automatically invested in a traditional low-risk pension insurance fund.

The defined-benefit pension applies to those who earn more than 7.5 income base amounts. If the individual earns between 7.5 and 20 income-base amounts, the defined-benefit pension comprises 60% of the pensionable salary on the component of pay that exceeds 7.5 income base amounts. If the individual earns between 20 and 30 income-base amounts, the defined-benefit pension comprises 30% of the pensionable salary on the component of pay that exceeds 20 income base amounts. There is also a defined benefit pension on income less than 7.5 income base amounts in accordance with transitional provisions due to the implementation of PA 16 – Avd I (below).

In 2016, a new pension plan, PA 16 – Avd I, for central government employees was implemented. PA 16 covers those born in 1988 or later. Just like PA 16 – Avd II, PA 16 – Avd I has two defined contribution components. The individual pension (2.5 % of income up to 7.5 income base amounts) can be invested by the employee, whereas the supplementary pension (2% of income up to 7.5 income base amounts) is invested in a low-risk pension insurance fund. The contribution for earnings above the ceiling amounts to 20% and 10%, respectively. PA 16 also contains a mandatory partial pension contribution amounting to 1.5%. These contributions are invested in a low-risk pension insurance fund.

The eligible insurance companies providing individual retirement pension in the shape of traditional insurance are Alecta, AMF, Kåpan, and as unit-linked insurance they are AMF, Futur Pension, Handelsbanken, Länsförsäkringar, SEB and Swedbank.

KAP-KL

The KAP-KL agreement consists of two parts: the defined contribution pension AKAP-KL and defined benefit pension KAP-KL. Employees born in 1986 or later are covered by the defined contribution pension AKAP-KL. In AKAP-KL, the employer pays in an amount of 4.5% of the salary towards the occupational pension. If the salary exceeds 7.5 income base amounts, the amount is increasing with 30% of the salary that exceeds 7.5 income base amounts up to a maximum of 30 income base amounts. Employees covered by KAP-KL get 4.5% of the salary contributed to their occupational pension. For a salary over 30 income base amounts, no premium is paid. Instead, there is a defined benefit old age pension that guarantees a pension equivalent to a certain percentage of the final salary at the age of retirement.

A new agreement for local government employees, AKAP-KR, was passed in December 2021 and will be phased in from 2023. The new agreement comes with raised contribution rates; 6% and 31.5% for earnings below and above 7.5 income base amounts, respectively.

The individual can choose how to invest the pension capital and it can be placed in traditional insurance and/or unit-linked insurance. The eligible insurance companies for traditional

insurance in AKAP-KL are Alecta, AMF, KPA and Skandia and for the unit-linked insurance in AKAP-KL they are AMF, Futur Pension, Folksam, Handelsbanken, KPA, Länsförsäkringar, Lärarfonder, Nordea, SEB and Swedbank.

Charges

Pillar I

The costs associated with the administration and management of the funds affect the size of outgoing pension payments.

To reduce the costs in the premium pension system, the capital managers associated with the premium pension system are obliged to grant a rebate on the ordinary management fee of the funds. In 2021, the rebates to pension savers were equivalent to a discount in fund management fees of about 0.35 percentage points. The rebates on the ordinary management fees in the premium pension system are of great importance; without them pensions would be approximately 11 % lower. Furthermore, the pension savers are able to influence the costs of their premium pensions by choosing funds with lower management fees. The net charges (after rebates) in the premium pension system are reported in the upper part of Table 5.[260]

The costs in the income pension are shown in the lower part of Table SE5. Management fees in the income pension cover the costs of the buffer funds. The capital managed by the buffer funds is slightly lower than the capital managed in the premium pension (SEK 2,004 billion in 2021). However, returns to scale in the buffer funds imply lower costs than in the premium pension.

Table SE 5. Net charges 1st pillar									
	2013	2014	2015	2016	2017	2018	2019	2020	2021
Premium pension	0.36%	0.33%	0.30%	0.28%	0.27%	0.25%	0.23%	0.20%	0.17%
- Administrative fee	0.10%	0.09%	0.07%	0.07%	0.06%	0.07%	0.04%	0.04%	0.04%
Income pension	0.20%	0.20%	0.21%	0.19%	0.18%	0.16%	0.16%	0.15%	0.13%
- Administrative fee	0.031%	0.033%	0.028%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%

Source: Orange report 2021, p53-54

To meet the new need of information in the new pension system, the orange envelope was introduced in 1999. It contains information about contributions paid, an account statement, a fund report for the funded part and a forecast of the future pension. The purpose of the orange envelope is to get more people interested in their pension and get more attention with the help of the special design, the orange colour and a concentrated distribution once a year. The orange envelope has now become a brand, a trademark for pensions. Banks and insurance companies use it in their sales campaign and in media the orange envelope is used to illustrate pensions.

[260] *The Swedish Pensions Agency, Orange report 2021, page 25*

Pillar II

Legislation from 2007 implies that individuals can choose which company should manage their occupational pension capital. The so-called portability right accrues to capital earned after July 1, 2007. Capital earned before this date can be moved if the default managing company itself has agreed to give their investors this right. It is estimated that around 44 percent of the occupational pension capital today is covered by the portability right.[261] Thus, the share of pension capital that can be moved will increase over time, which will further strengthen the competition and keep the fees low. As discussed in the background section, there are also policy proposals to extend the portability rights and reducing the associated moving costs. In May 2022, the parliament decided to extend the portability rights also to pension capital accumulated before 2007.

The selectable companies within each pension plan are included through a procurement procedure which, especially in the last years, have kept the fees down. The companies and the corresponding charges within each pension plan are listed in Table SE6.

The disclosure of charges in the occupational pension system is quite good, although it can be difficult for the average citizen to understand the information that is available. In the occupational pension system, there is typically a yearly fixed fee and a percentage fee on the capital (i.e., management fee). The fixed fee is usually low and covers administrative costs of the pension company. Table SE6 shows the current fee structure in each of the four major occupational pension plans. The charges are relatively low and range between 0.1% and 0.5%.

[261] SOU 2012:64, page 466

Table SE6. Charges 2nd pillar		
ITP 1		
Traditional insurance	**Fixed cost, SEK**	**Management fee, %**
Alecta (default)	0	0.09
AMF	50	0.17
Folksam	0	0.14
SEB	51	0.08
Skandia	65	0.16
Unit-linked insurance		
Futur Pension	0	0.11-0.19
Handelsbanken	0	0.07-0.13
Movestic	0	0.13-0.24
SPP	0	0.08-0.14
Swedbank	0	0.17-0.18
SAF LO		
Traditional insurance	**Fixed fee, SEK**	**Management fee, %**
Alecta	65	0.17
AMF	40	0.15
Folksam	65	0.12
AMF (default)	40	0.15
SEB	65	0.09
Unit-linked insurance		
AMF	60	0.13-0.20
Folksam LO	50	0.21-0.34
Futur Pension	65	0.19-0.43
Handelsbanken	65	0.37-0.49
Länsförsäkringar	65	0.12-0.20
Movestic	65	0.12-0.17
Nordea	65	0.29-0.38
SEB	45	0.13-0.35
SPP	65	0.14-0.28
Swedbank	65	0.26-0.30
PA 03 & PA 16		
Traditional insurance	**Fixed fee, SEK**	**Management fee, %**
Alecta	75	0.17
AMF	75	0.15
Kåpan Pensioner (default)	0	0.06
Unit-linked insurance		
AMF	75	0.13-0.20

Futur Pension	65	0,44
Handelsbanken	75	0.35
Länsförsäkringar	75	0,41
SEB	75	0.14-0.4
Swedbank	75	0.33-0.4
	AKAP-KL	
Traditional insurance	**Fixed fee, SEK**	**Management fee, %**
Alecta	65	0.17
AMF	65	0.15
KPA (default)	48	0.06
Skandia	65	0.16
Unit-linked insurance		
AMF	65	0.13-0.20
Folksam LO	65	0.22-0.33
Futur Pension	65	0,42
Handelsbanken	65	0.30
KPA Pension	65	0.13-0.30
Länsförsäkringar	65	0,31
Lärarfonder	65	0.35
Nordea	65	0.34-0.38
SEB	65	0.31-0.34
Swedbank	65	0.26-0.30

Source: The Swedish Consumers' Association Bureau 2021

Pillar III

For the private pension system, however, it is difficult to get a good overview of the available pension products and hence the charges on these products. There are two tax-favoured (pre-2016) private pension vehicles: IPS and private pension insurance. The majority of pension providers of IPS and private pension insurance charge a fixed fee (see Tables 7 and 8). These typically range between €10 and €40 per year and are hence higher than in the occupational pension system. In IPS, only two out of eleven providers charge a management fee. Instead, the individual is subject to fund fees which vary substantially by fund type and pension provider. It is also relatively expensive to move the IPS capital to another company. This fee typically amounts to €50, which in relation to the invested capital can be sizable.

In private pension insurance accounts, the fee structure depends on whether the capital is unit-linked or traditional. Traditional insurance only imposes a management fee whereas unit-linked insurance both contains management and fund fees. In some cases, investors also pay a deposit fee of 1% - 2%. The savings invested in these products will decrease since the deduction for private pension savings was abolished in January 2016.

In many private pension products (including individual occupational pension plans), there is a cost to move the capital to another company (not reported here). These fees typically range between 0%-3%, reaching 0% after a specific number of years of investment. These fees have been criticized for causing serious lock-in effects. For many it is simply not worth moving the capital, despite high management fees.

Table SE 7. Individual Pension Savings Account (IPS)– Fees			
	Fixed fee. SEK	Management fee. %	Fund fee (mixed funds). %
Aktieinvest	0	0,00	0.10-1.90
Avanza Bank	0	0,00	0.00-2.00
Danske Bank	150	0,00	0.83-1.25
Handelsbanken	0	2 (max SEK 125)	0.45-1.45
Indecap	125	2 (max SEK 125)	1.34-1.66
Länsförsäkringar Bank	125	0,00	0.20-2.00
Nordea	140	0,00	0.40-2.00
Nordnet Bank	0	0,00	0
SEB	150	N/A	N/A
Skandiabanken	0	0,00	0.90-181
Swedbank	0	2 (max SEK 125)	0.20-1.75

Source: The Swedish Consumers' Insurance Bureau, 2021

Table SE 8. Pension Savings Insurance – Fees			
Traditional insurance	**Fixed fee. SEK**	**Management fee. %**	*Deposit fee. %*
Folksam Pensionsförsäkring	288	0.06	1,00
Nordea Ålderspension	152	0.16	0,00
SEB Traditionell Försäkring	195	0.13	0,00
Skandia Framtid Internet	0	0.03	2,00
Skandia Framtid Rådgivning	0	0.03	2,00
SPP PLUSpension Traditionell	0	0.21	0,00
Unit-linked			*Fund fee. %*
Avanza Pension PrivatPension Depå	0	0	0.09
Folksam Pensionsförsäkring Fond	295	0.7	0.33
Futur Pension PrivatPension Fond	120	0.5	0.54
Futur Pension PrivatPension Netto Fond	0	0	0.54
Handelsbanken Privatpension	60	0.75	0.28
Länsförsäkringar Privatpension Fond	240	0.5	0.28
Movestic Pension Privat Fond	286	0.40-0.55	0.49
Nordea Ålderspension Fond	152	0.4	0.34
Nordnet Privatpension Depå	0	0	0,13
SEB Privat Pensionsförsäkring Fond	316	0.65	0.48
SEB Svensk Depåförsäkring	316	0.65	0.45
Skandia Privatpension Depå	0	0.75	0.35
Skandia Privatpension Internet Fond	0	0	0.37
Skandia Privatpension Rådgivning Fond	360	0.65	0.37
SPP PLUSpension Fond	0	0.35	0.26
Swedbank Pensionsförsäkring Depå	240	0.65	0.18
Swedbank Pensionsförsäkring Fond	240	0.65	0.18

Source: The Swedish Consumers' Insurance Bureau, 2021

ISK

On ISK there is an annual standard rate tax, based on the value of the account as well as the government-borrowing rate. The financial institutions report the standard rate earnings to the tax authorities and there is no need to declare any profit or loss made within the account.

The calculation of the standard rate earnings is based on the average value of the account as well as the government-borrowing rate. The average value of the account is calculated by the account value of the first day of each quarter added together, divided by four, and the sum of all deposits during the year divided by four. The average value of the account multiplied with the government borrowing rate as of 30 November the previous year, plus 1 percentage point (0.75 percentage points before Jan 1, 2018), gives the standard earnings. The standard earnings cannot fall below 1.25%, however. The standard earnings are reported to the tax authority by the financial institutions. The standard earnings are taxed at 30%.

In 2021, the government borrowing rate was 0.23%, which means that the calculated average value of an account is taxed with 0.375% (0.3*0.0125=0.00375). The table below reports the total and average standard earnings for years 2012-2019.

Table SE9. ISK standard earnings				
Year	Standard earnings (msek)	In € (millions)	Average standard earning per account holder	In €
2012	714	71	3 388	338
2013	2 024	202	4 458	444
2014	5 467	545	6 937	691
2015	3 952	394	2 585	258
2016	7 646	762	4 126	411
2017	8 852	882	4 091	408
2018	12 384	1 234	5 116	510
2019	13 854	1 381	5 187	517

Source: The Swedish Tax Agency

In contrast to individual pension savings accounts, the investment and savings accounts are free from management fees. The taxation of the accounts is very favourable, and the Swedish Pensions Agency considers the investment and savings account a great alternative to the individual pension savings account. There is no binding period, and withdrawals can be made free of charge at any given time. The taxation of the account is more favourable during periods with low borrowing rates, as the standard rate earnings are based partially on the government-borrowing rate. The taxation is also more favourable during periods of stock market rise than stock market decline, compared to saving vehicles with standard capital gains taxation.

Since ISK was introduced in 2012, the economy has been characterized by low interest rates and a positive stock market development. This, in combination with the abolishment of the deduction for private pension savings, has contributed to the rapid spread of ISK accounts. Some argue that ISK will replace the old tax-favoured private pension savings accounts. However, critics argue that ISK is more of a regular savings vehicle; ISK capital cannot be withdrawn as a life annuity, and it does not mandate the account holder to save long-term.

Taxation

Taxation during the accumulation phase looks different in the different pillars. In the public pension, individual contributions are deductible from the tax base and there is no tax on returns. Employers can partially deduct contributions to the second pillar.[262] When it comes

[262] Deductible contributions amount to maximum 35% of the wage of the employee. However, the deduction cannot exceed 10 prise base amounts.

to private pension savings, there was a tax deduction of 1,800 SEK (€179) per year available, but it was abolished in January 2016. There is no tax on returns in the first pillar. In contrast, returns in the occupational pension system and in the private pension vehicles are subject to an annual standard rate tax based on the value of the account and the government-borrowing rate. Specifically, the value of the account on January 1st multiplied by the government borrowing-rate gives the standard earnings which are then subject to a 15% tax rate.

During the decumulation phase, all pension income in Sweden is taxed as earned income. The rate varies depending on the size of the pension payment due to the progressive income taxation in Sweden. The Swedish income tax is even higher for pensioners than workers because of the earned income tax credit.[263] The Swedish tax system works as follows. A proportional local tax rate applies to all earned income, including pension income. Furthermore, for income above a certain threshold, the taxpayer also has to pay central government income tax. The marginal tax rate is 20% for incomes above €50,756 (509,300 SEK) and 25% for incomes there above.[264]

Table SE10. Taxation on pension schemes

	National pension	Occupational pension	Private pension
Contributions	Individual contribution deductible, not employer's part	Partially deductible	Non-deductible from January 1, 2016.
Tax on investments	Not subject to tax, instead the capital is taxed with income tax when paid out.	Subject to tax rate on standard earnings (15 % in 2020)	Subject to tax rate on standard earnings (15 % in 2020)
Pay-out	Income tax	Income tax	Income tax

Source: Pensionsmyndigheten, Konsumenternas, Alecta, Swedbank, MinPension

From a phase taxation point of view, Pillar I can be described as EET (contributions exempt-capital gains exempt- pay-outs taxed) and Pillars II and III ETT (contributions exempt – capital gains taxed – pay-outs taxed).

Pension Returns

This section reports on returns on pension capital in the first and second pillars. There are no readily available data on returns in the private pension system (Pillar III) – one would have to turn to the homepage of each pension provider for this information.

[263] The Swedish earned income tax credit is a refundable tax credit for all individuals aged below 65.
[264] Financial year 2020: https://www.skatteverket.se/privat/skatter/beloppochprocent/2020.4.7eada0316ed67d728238ec.html#h-Skiktgrans

Pillar I

Table SE11 shows average annual returns for default investors and those who opted out of the default. The average fee for the default fund and for "active" investors in 2021 is 0.08% and 0.21%, respectively.

Since the start of the premium pension in 2000, the default fund has on average performed better than the average "active" investor. The average annual real return for the default fund and "active" investors amounts to 7.78% and 4.95% respectively. It is important to remember that the "active" investors also include inert investors, i.e., investors that at some point made active contributions but then remained passive. The average returns for the "truly" active investors are therefore underestimated. In fact, Dahlquist et al. (2016) find that investors who are actively involved in managing their pension accounts earn significantly higher returns than passive (inert) investors.

The level of activity has changed significantly since the launch of the Premium Pension in year 2000. A total of 67% of those who entered the system in year 2000 chose their own portfolio of funds. Among those, as many as 32% have not made any subsequent choice. This can be compared with individuals that joined the system in 2010, for example. Of those only 1.6% opted out of the default in the first year. Five years later only 10% had made an active choice. The fact that the default fund on average has outperformed the active investors in most years is probably one explanation why an increasingly larger share chooses to stick with this option.

Table SE11. Average return (%) on Capital in the Premium Pension System

	AP7 Såfa (default)			Other funds		
Year	Nominal	After charges	Net return	Nominal	After charges	Net return
2001	-27,3	-27,41	-29,65	-33,3	-33,9	-35,9
2002	18,4	18,25	16,31	17,3	16,7	14,8
2003	10,1	10,00	8,05	8,1	7,6	5,7
2004	24,9	24,78	23,66	33,0	32,4	31,2
2005	10,5	10,38	9,02	12,9	12,3	11,0
2006	4,6	4,49	2,99	6,0	5,6	4,1
2007	-36,1	-36,26	-37,84	-33,4	-33,8	-35,4
2008	35,0	34,84	32,03	34,5	34,1	31,3
2009	14,6	14,43	11,32	11,3	10,9	7,9
2010	-10,7	-10,85	-12,70	-10,8	-11,1	-13,0
2011	17,6	17,41	16,90	10,2	9,8	9,3
2012	31,8	31,72	30,36	16,8	16,4	15,2
2013	28,9	28,79	28,32	17,0	16,6	16,2
2014	6,3	6,16	5,87	6,5	6,2	5,9
2015	15,2	15,06	14,21	8,6	8,3	7,5

2016	15,2	15,09	13,13	8,6	8,3	6,4
2017	16,4	16,30	14,32	10,5	10,2	8,3
2018	-2,7	-2,79	-4,84	-3,8	-4,1	-6,1
2019	32,2	32,11	29,85	27,6	27,3	25,2
2020	4,4	4,3	3,7	8,0	7,7	7,1
2021	31,5	31,4	25,8	27,1	26,9	21,4
AVG	**9,71%**	**9,58%**	**7,78%**	**7,09%**	**6,70%**	**4,95%**

Source: The Swedish Pensions Agency; Note: methodology to calculate net returns and annualized averages changed slightly compared to previous editions

The two tables below summarise the annualized averages in the Swedish Premium Pension System based on standardised holding periods (1 year, 3 years, 7 years, 10 years and since inception or the latest data available for this report).

Table SE12. Standardised returns for the Premium Pension System (AP7 default)

Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	31,50%	31,40%	25,80%
3-years	21,98%	21,89%	19,21%
5-years	15,50%	15,41%	13,01%
7-year	15,41%	15,31%	13,19%
10-years	17,29%	17,18%	14,63%
Since inception	9,71%	9,58%	7,78%

Source: Table SE11

Table SE13. Standardised returns for the Premium Pension System (other funds)

Holding Period	Gross returns	Net Nominal Annualized Performance	Real Net Annualized Performance
1-year	8,00%	7,70%	7,10%
3-years	9,85%	9,57%	7,97%
5-years	9,73%	9,44%	7,73%
7-year	9,10%	8,80%	7,43%
10-years	10,72%	10,40%	9,23%
Since inception	6,18%	5,77%	4,18%

Source: Table SE11

These two tables (which reiterate data from the summary returns table at the beginning) are meant to provide better comparability with other pension vehicles in the countries analysed in this report.

Pillar II

Table SE12 shows returns for the occupational pension system. The first column shows the average return over the last 3 years. The next three columns display the nominal return, the nominal return net of charges, and the real return (net of charges and inflation) for year 2021,

respectively. The inflation (measured by CPI) in 2020 was 4.5 percent.[265] In 2021, a year characterized by a strong recovery after the Corona pandemic, the unit-linked insurance funds have yielded better returns than the traditional insurance funds. The 3-year average of unit-linked insurance is also higher than the 3-year average of traditional insurance.

Table SE14. Return on capital, 2nd pillar, %				
ITP1				
Traditional insurance	**Av. return 3 yrs**	**Return 2021**	**Net of charges**	**Net return**
Alecta (default)	16,8%	23,8%	23,7%	23,1%
Folksam	16,8%	22,7%	22,5%	21,9%
AMF	15,9%	20,6%	20,5%	19,9%
SEB	5,7%	10,0%	9,9%	9,3%
Skandia	7,7%	13,9%	13,7%	13,1%
Unit-linked insurance				
Futur Pension	23,6%	34,3%	34,1%	33,5%
Handelsbanken	25,7%	27,7%	27,6%	27,0%
Movestic	23,0%	25,5%	25,3%	24,7%
SPP	23,2%	32,1%	32,0%	31,4%
Swedbank	27,5%	35,1%	34,9%	34,3%
SAF-LO				
Traditional insurance	**Av return 3yrs**	**Return 2020**	**Net of charges**	**Net return**
Alecta	16,8%	23,8%	23,6%	23,0%
AMF	16,2%	20,6%	20,5%	19,9%
Folksam	17,7%	22,7%	22,6%	22,0%
AMF (default)	16,8%	20,6%	20,5%	19,9%
SEB	5,7%	10,0%	9,9%	9,3%
Unit-linked insurance				
AMF	23,6%	35,3%	35,1%	34,5%
Folksam LO	25,0%	29,7%	29,3%	28,7%
Futur Pension	23,3%	34,0%	33,7%	33,1%
Handelsbanken	24,4%	31,2%	30,7%	30,1%
Länsförsäkringar	23,6%	35,3%	35,1%	34,5%
Movestic	24,8%	31,5%	31,3%	30,7%
Nordea	23,9%	34,4%	34,0%	33,4%

[265] https://ec.europa.eu/eurostat/web/products-datasets/product?code=tec00118

SEB	25,6%	39,4%	39,1%	38,5%
SPP	23,0%	32,0%	31,7%	31,1%
Swedbank	26,6%	33,4%	33,1%	32,5%
PA-16 - Avd I				
Traditional insurance	**Av return 3yrs**	**Return 2020**	**Net of charges**	**Net return**
Alecta	16,8%	23,8%	23,6%	23,0%
AMF	17,0%	21,2%	21,1%	20,5%
Kåpan (default)	19,5%	34,5%	34,4%	33,8%
Unit-linked insurance				
AMF	23,6%	35,3%	35,1%	34,5%
Futur Pension	21,1%	29,0%	28,6%	28,0%
Handelsbanken	24,0%	32,6%	32,3%	31,7%
Länsförsäkringar	22,1%	32,3%	31,9%	31,3%
SEB	24,0%	39,2%	38,8%	38,2%
Swedbank	30,9%	34,6%	34,2%	33,6%
AKAP-KL				
Traditional insurance	**Av return 3yrs**	**Return 2020**	**Net of charges**	**Net return**
Alecta	16,8%	23,8%	23,7%	23,1%
AMF	16,8%	20,6%	20,5%	19,9%
KPA (default)	10,3%	14,6%	14,4%	13,8%
Skandia	7,7%	13,9%	13,9%	13,3%
Unit-linked insurance				
AMF	23,6%	35,3%	35,1%	34,5%
Folksam LO	25,0%	29,7%	29,4%	28,8%
Futur Pension	21,1%	29,1%	28,7%	28,1%
Handelsbanken	24,0%	32,6%	32,3%	31,7%
KPA Pension	18,3%	14,6%	14,3%	13,7%
Länsförsäkringar	22,1%	32,3%	32,0%	31,4%
Lärarfonder	24,9%	32,9%	32,6%	32,0%
Nordea	23,9%	4,9%	4,5%	3,9%
SEB	22,3%	4,1%	3,8%	3,2%
Swedbank	33,1%	22,3%	22,0%	21,4%

Source: The Swedish Consumers' Insurance Bureau 2021

Based on the data published by the Swedish Consumers' Insurance Bureau and collected by BETTER FINANCE through this report since the 2017 edition (end of 2016), the authors were

able to start aggregating annual return information (based on unweighted averages) for the Swedish second pillar:

Table SE15. Return on capital, 2nd pillar, % (annual)						
AVG	2021	2020	2019	2018	2017	2016
ITP1						
13%	25%	7%	24%	0%	11%	9%
SAF-LO						
14%	29%	8%	27%	-2%	10%	10%
PA-16 - Avd I						
14%	31%	8%	27%	-3%	11%	11%
AKAP-KL						
14%	27%	8%	27%	-2%	11%	10%

Source: Table SE14

What we can observe is that, although the different categories of vehicles under the Swedish occupational pensions pillar have different pension products (in sizes and numbers), the returns are very similar from one year to another, as such the average on the last five years (2016 – 2015) are almost the same.

Conclusion

The Swedish pension system is considered robust and sustainable. The balancing of the income-based system contributes to preserving the system's debt balance and secures the long-term nature of the system. The premium pension, which is a system unique to Sweden, also contributes towards spreading the risk in the system and enhancing the return on capital by enabling people to place part of their national pension capital on the stock market. As a result of the change in the Swedish pension system, individual responsibility will increase, and the occupational pension will constitute a bigger part of the total pension in the future.

The occupational pension system in Sweden covers more than 90 percent of the working population. The collectively negotiated pension schemes are procured for many workers, which leads to lower costs, and more transparent pension plans. Individual occupational pension plans and third-pillar pension accounts are, however, often characterized by higher management fees, deposit fees and less transparency.

The statistics on net returns in the second and third pillar pension plans are quite cumbersome to collect. The Swedish Consumers' Insurance Bureau reports fees and returns in most pension plans, but there is no immediately available information on net returns. It is also difficult to calculate historical returns in the second pillar because the set of funds that the retirement savers can choose from might change, for example due to procurement.

A source of concern is that the pension system is becoming increasingly complex. The number of occupational pension plans per individual is increasing both because job switches across

sectors become more common and because pension capital can be moved between companies. The ongoing transitions between old and new occupational pension plans also contribute to the increased complexity of the second pillar. All three pillars also contain many elements of individual choice both during accumulation and decumulation phase. Pension systems that are too complex risk leading to inertia and distrust, which in turn could lead to worse saving and retirement outcomes. Well-designed default fund options with low fees and appropriate risk exposure as well as comprehensive, user-friendly information/choice centres are necessary features in a complex pension system.

Although the Swedish pension system is considered robust and sustainable there is reason to be concerned. As life expectancy increases, the gap between wages and pensions will increase. The average exit age from the labour force has been increasing ever since the new public pension system was implemented in the late 1990s and is currently 64. However, the average claiming age has been constant.[266] The combination of constant claiming age, later labour force entry among youths, and indexation of pension benefits to life expectancy unavoidably means lower pension benefits.

The concern of decreasing replacement rates in the public pension system has spurred an intense political debate about raising the public pension. In June 2022, the parliament passed a historically large increase of the minimum guarantee equal to SEK 1,000 that will be implemented just prior to the national election of 2022. In addition to raising the minimum guarantee (and the means-tested housing allowance), the pension bill of 2022 also stipulates that a "pension gas" should be introduced in the income pension. The pension gas is the equivalent of the automatic balancing mechanism in the sense that it distributes excess capital to pension savers and retirees when system assets exceed system liabilities by a certain amount.

As calls for pension reforms have intensified, there are also recent reports that give a more nuanced picture of pensioners' finances. A report by the Swedish Fiscal Policy Council[267] which was published on 6 May 2022 found that relative to the income development of the working population, the income of pensioners has also risen throughout the distribution since the reformation of the public pension system in the early 90s. Compared to the 34-64 age group, pensioners' disposable income has developed favourably at both the bottom and top of the income distribution – while the development of those in the median income part of the distribution has been similar to the compared age group. According to the report, new pensioners have been able to sustain relatively high replacement rates mainly due to increased labour income and occupational pensions. Occupational pensions constitute 29% of outgoing pension payments and play a relatively more important role for high-income earners.

[266] This is mainly due to reduced disability pension rates (through stricter eligibility rules), which affects the exit age but not necessarily the claiming age if people claim their pension instead. Another explanation is that individuals who work past the age of 65 do not postpone the withdrawal of their pension.

[267] The main results and conclusions are reported by the Swedish Fiscal Policy Council (2022) while Hagen et al (2022) contain the complete set of empirical analyses.

Since the retirement age has not increased in relation to life expectancy, the accrued pension entitlements have had to suffice for more and more years in retirement. One way to raise pension levels is to increase the pension contribution. But it should be remembered that fee increases reduce the salary space for those who work and are also not a viable path in the long run. The most important thing for pensions is a high level of employment and that working life is extended when we live longer. In particular, the Swedish Fiscal Policy Council points to the low employment rate of low-skilled and foreign-born people as a problem in the future. Also, certain groups on the labour market that are already at risk of receiving a low pension (such as gig workers, self-employed and immigrants) are often not eligible for an occupational pension.

To encourage later retirement, policy makers have agreed to raise various retirement ages in a stepwise manner. By 2026, the minimum claiming age, the eligibility age for the minimum guarantee, and the mandatory retirement are expected to have increased to 64, 67 and 69, respectively (currently at 62, 65 and 68, respectively). The 65-norm is still strong in the second pillar, however. In the private sector, pensions are usually paid out automatically at this age, and pension rights are in most cases not earned after this age. As replacement rates fall, individuals also need to take more responsibility for their private pension savings. This makes accessible good pension savings products with low fees even more important.

Policy recommendations:

- Expand the portability right of second pillar pension capital.
- Improve information on historical net returns and other fund characteristics in second and third pillar pension plans.
- The digital pension tool www.minpension.se makes it possible for individual retirement savers to collect information on their total pension savings. Since 2019, there is a related tool for planning pension withdrawals. A useful extension would be to allow users to execute their pension fund choices from this site.
- Replace automatic payment of occupational pensions at a certain age (usually 65) with a claiming requirement (as in the public pension system). Alternatively, raise the automatic payment age to 68 or higher.

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Pension Savings: The Real Return

2022 Edition

Country Case: The Netherlands

Samenvating

In veel opzichten bevinden de Nederlanders zich in een benijdenswaardige positie wat hun pensioenen betreft. Het Nederlandse pensioenstelsel staat, naast het Deense en het IJslandse, voor het vierde jaar op rij bovenaan in de Mercer CFA Institute Global Pensions Index als een A-klasse stelsel, wat betekent "*een eersteklas en robuust pensioeninkomensstelsel dat goede uitkeringen biedt, duurzaam is en een hoog niveau van integriteit heeft*". De tweede en derde grootste pensioenfondsen (naar beheerd vermogen) in "*Europe's top 1000 pension funds*" zijn het ABP en PFZW, alleen het Pensioenfonds van de Noorse regering staat op de tweede plaats. De Nederlandse bedrijfspensioenfondsen komen in ons rapport ook op de tweede plaats wat betreft reële nettorendementen, na het Zweedse premiepensioenstelsel. Maar terwijl het particuliere pensioenstelsel in Nederland beter presteert met zijn fondsen, blijven de verzekeringen achter: de sector is bijna tien keer kleiner in termen van activa (24% van het bbp tegen 239%) en de vergelijking van het reële nettorendement over 22 jaar tussen bedrijfspensioenfondsen en levensverzekeringen van pijler III spreekt voor zich: 2,80% tegen 0,02%. Het vertrouwen van Nederlandse werknemers in de toereikendheid van hun pensioen is de afgelopen 10 jaar echter gedaald van 75% (het vertrouwen dat hun pensioen voldoende zal zijn om hun levensstijl bij pensionering voort te zetten) naar 66%. Het Nederlandse stelsel maakt een belangrijk moment door, aangezien de wet inzake de overgang van toegezegd-pensioenregelingen (DB) naar collectieve toegezegde-bijdrageregelingen (CDC) momenteel in behandeling is.

De lage rente (tot juli 2022) maakte het voor pensioenfondsen moeilijk om hun dekkingsgraad boven de vereiste quota te houden, een situatie die veranderde door de verschuiving in het monetaire beleid in de eurozone.

In dit rapport geven we een schets van het Nederlandse pensioenstelsel, kijken we naar de jaarlijkse beleggingsrendementen van pensioenfondsen en berekenen we het reële rendement, waarbij we het nominale rendement corrigeren voor diverse lasten, belastingen en inflatie. Daarnaast heeft het onderzoeksteam de openbaarmaking van duurzaamheidsinformatie van de vijf grootste bedrijfspensioenfondsen in Nederland geanalyseerd. In de eerste paragraaf wordt dit laatste onderwerp behandeld, waarna de traditionele Nederlandse landencasus wordt gepresenteerd.

Summary

In many ways, the Dutch are in an enviable position as far as their pensions are concerned. The Dutch pension system, next to the Danish and Icelandic ones, ranked for the fourth year in a row highest in the Mercer CFA Institute Global Pensions Index[268] as an A-grade system, meaning "*a first class and robust retirement income system that delivers good benefits, is sustainable and has a high level of integrity*". The second and third largest pension funds (by assets under management) in "Europe's top 1000 pension funds" are the ABP and PFZW, only outranked by the Norwegian Government's Pension Fund.[269] Dutch occupational pension funds also rank second best in our report in terms of real net returns, after the Swedish premium pension system. Nevertheless, while the private retirement system in the Netherlands outperforms with its funds, insurances lag behind: the sector is almost 10 times smaller in terms of assets (24% of GDP compared to 239%) and the 22-year real net return comparison between occupational pension funds and pillar III life insurances speaks for itself: 2.80% vs 0.02%. However, Dutch workers' trust in the adequacy of their pensions has been decreasing from 75% (trusting that their pension will be sufficient to continue their lifestyle at retirement) to 66% in the last 10 years.[270] The Dutch system is passing through a key moment as the law on the transition from defined-benefit (DB) to collective defined-contribution (CDC) plans is currently work in progress.

Low interest rates (until July 2022) made it difficult for pension funds to maintain their funding ratios above the required quota, situation which changed with the shift in monetary policy in the Eurozone.

In this report we will provide an outline of the Dutch pension system, take a look at the annual returns on investment of pension funds and calculate the real return, adjusting the nominal return for various charges, taxes and inflation. In addition, the research team also analysed the sustainability information disclosure from the top five occupational pension funds in the Netherlands. The first section addresses the latter topic and afterwards the traditional Dutch country case is presented.

[268] Mercer CFA Global Pensions Index, 2021, available on p.5 at: https://www.mercer.com/content/dam/mercer/attachments/private/gl-2021-global-pension-index-mercer.pdf
[269] Investment & Pensions Europe, *2022 European Pensions Guide* (Supplement to the September 2022 issue of Investment & Pensions Europe magazine), p. 11.
[270] Frank van Alphen, 'Dutch Workers Expect Lower Pensions in DC System' (IPE.com, 29 June 2021), accessed 7 October 2021, available at: https://www.ipe.com/news/dutch-workers-expect-lower-pensions-in-dc-system/10053757.article.

Sustainability disclosure analysis

Integrating sustainability risks into the investment policies and asset management strategies of capital markets products ranks high as a priority for individual, non-professional investors. Given the very large capital managed by pension funds (in general), these investment vehicles will prove pivotal for achieving sustainability targets and must lead by example in terms of disclosure and exemplary compliance with investor protection rules, most notably regarding greenwashing.

As such, the BETTER FINANCE research team decided to start analysing sustainability disclosures in pension systems. The methodology is in its incipient phase and this exercise has been done only for the Netherlands and for France on a selection of pension vehicles. In the case at hand, the research team chose the five largest occupational pension funds. The data source are the annual reports published by these funds, available on their websites. The methodology paper is published as an Annex at the end of this country case.

The research team benchmarks its methodology with the Dutch pension funds with two other publications: the VBDO Benchmark on Responsible Investment for Dutch Pension Funds and Insurers and an ESG Methodology developed by Zielke Research GmbH.

VBDO (*Vereiniging van Beleggers voor Duurzame Ontwikkeling* – Dutch Association of Investors for Sustainable Development) produced as early as 1995 a methodology to evaluate responsible investments of Dutch pension funds and insurance companies and has been reviewing these aspects ever since. Two annual publications, the Benchmark on Responsible Investment for pension funds and insurance companies, occupy a central pillar in sustainability reviews in the Netherlands.

The reports evaluate how these investment institutions "*formulate, govern, report their responsible investment policies*" to their beneficial owners based on a robust methodology: four categories of factors are considered and weighted in a score that is given to the 50 largest pension funds [271]and 30 largest insurance[272] companies: governance (16.6%), policy (16.6%), implementation (50%), and accountability (16.6%).

The methodology equates responsible investments with a *summa divisio* of E, S, and G factors and sustainability. The main instruments to achieve responsible investments are, according to VBDO, exclusion, engagement, ESG integration, voting, and impact investing. Most recently (2021), the methodology has been updated to incorporate a key factor for responsible investments in the governance of institutional investors: the level of specific knowledge and/or training of board members. We find this key as the very governance of institutional

[271] VBDO, *Benchmark on Responsible Investments of Pension Funds in the Netherlands 2020: From Board Governance to Portfolio Implementation – Closing the Gap* (2021) available at: https://www.vbdo.nl/wp-content/uploads/2020/10/VBDO-Benchmark-pensioenfondsen-2020-web.pdf.

[272] VBDO, *Benchmark on Responsible Investments of Insurance Companies in the Netherlands 2021: Welcome to the Real World* (2022) available at: https://www.vbdo.nl/wp-content/uploads/2021/08/VBDO-Benchmark-Verzekeraars-2021_DIG.pdf.

investors cannot truly achieve the stated targets if their boards are not prepared or knowledgeable in the field.

As part of the main findings of the most recent evaluations, VBDO noted that Dutch occupational pension funds overperform insurance companies "*on their approach on climate change*"[273] and that the former generally lack board members with specific responsible investment knowledge. Moreover, it seems that some responsible investment instruments are widely employed but inconsistently across asset classes, next to responsible investment policies being misaligned with the portfolios of pension funds. Lastly, the report finds that the pension funds that implement responsible investment strategies and instruments do not follow up and measure their actual impact.[274]

BETTER FINANCE welcomes these assessments as key to drive change in the sector that has the largest resources to implement sustainability standards and ensure that the preferences of individual, non-professional savers are truly taken into account (not a marketing gimmick).

Our sustainability disclosures analysis is presented below and comprises our evaluation based on three key questions:

- How do the annual reports of the pension funds explain and define non-financial returns, ESG/sustainability risks, or other relevant information, and if/how is the importance of these factors explained to beneficial owners?
- How does the annual report of a pension fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc)? and
- Does the annual report provide detailed information on risks, opportunities, and impacts on investment returns to pension savers?

The order of the pension funds is simply taken by the size of Assets under Management (AuM).

ABP

Does the fund provide explanations or definitions on non-financial returns, ESG/sustainability risk, or other relevant information, and why such factors are important for the pension saver?

ABP briefly describes its non-financial returns information and claims it will expand its scope in the future (p. 40). According to their survey, the importance that their stakeholders place on sustainable and responsible investments has dropped by 5% in 2021 (p. 20) but remains as a high importance index of contributing to sustainable objectives and others (p. 28). Regarding ESG and sustainability risks, ABP notes on its assessment of the portfolio of companies that it invests in (p. 40) and relies on its own composition of a risk taxonomy which includes environmental, strategic and other risks as part of its risk management framework (p. 81).

[273] See VBDO, *Dutch Institutional Investors and Climate Change* (2022) available at: https://www.vbdo.nl/wp-content/uploads/2022/01/VBDO_Dutch-Institutional-Investors-and-Climate-Change-2022_DIG.pdf.
[274] VBDO, *Benchmark on Responsible Investments of Pension Funds in the Netherlands 2020: From Board Governance to Portfolio Implementation – Closing the Gap* (2021), p. 12, available at: https://www.vbdo.nl/wp-content/uploads/2020/10/VBDO-Benchmark-pensioenfondsen-2020-web.pdf.

Does the fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc.)?

The investment models employed by ABP include focus on transition, inclusion and exclusion policy and investments across Sustainable Development Goals (SDGs) (p. 37). The fiscal policy is centred around investment procedures, international collaboration, and awareness and engagement with policymakers and legislators (p. 48). ABP's sustainable investment policy targets transitional challenges such as climate change and sustainable energy sources, conservation of natural resources and digitization of society. It also extends to three SDGs and aims to have at least 20% of total investments classified as sustainable development investments in the years ahead. Regarding its inclusion policy, this is mainly reflected by their classification of "leaders" and "laggards" whereby companies are scored on how well investments can generate return, minimise risk, cost and remain sustainable in their operations. Whereas their exclusion policy is targeted at tobacco companies and companies involved in the manufacture of certain weapons. (p. 36-49).

Is detailed information on risks, opportunities, and impacts on investment returns given?

Risks | Financial risks are presented at large throughout the annual report (for instance, p. 42, 50, 59-60, 80-83, 104, 118,143-155, 194). Non-financial, particularly those related to sustainability and ESG implementation are also detailed in the annual report (see p. 40, 46, 80-81, 83). The fund provides clear definitions and the scope of risks associated with both financial and non-financial returns. ABP includes a comprehensive risk framework and identifies various risk taxonomies (classifications) that address environmental and strategic risks.

Opportunities | Non-financial opportunities are briefly mentioned (p. 100) and not with a luxury of details. Improvements in terms of reporting on this section are recommended.

Impacts on investment returns | The impacts on investments are integrated in the annual report and showcase divestments from fossil fuel producers and a shift to cleaner energy supply for the automotive and aviation industries. Such efforts also extend to positive impacts on human rights for companies that ABP invests in, particularly in Myanmar.

Pensioenfonds Zorg en Welzijn (PFZW)

Does the fund provide explanations or definitions on non-financial returns, ESG/sustainability risk, or other relevant information, and why such factors are important for the pension saver?

Non-financial risks are mentioned across the report in reference to the necessary risk management and internal control. The risks are grouped into financial, operational, strategic and governance related. Only in Q3 of 2021 was ESG risk added substantially within the overall risk framework of PFZW (pg78-80), thus there isn't much available data regarding the specificities of ESG and sustainability related risks. There are limited references to non-financial returns and the same applies for the importance stakeholders place on sustainable matters throughout the annual report. However, the Sustainable Investment Policy as well as

the Sustainable Investment Annual Review 2021 shed more light on PFZW's approach to sustainability.

Does the fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc.)?

PFZW uses a range of sustainable investment instruments such as exclusion, steering capital, ESG integration, engaged share ownership and impact measurement. These feed into two wider objectives, namely 'Sustainable World' whereby reducing negative impact of investments is prioritized, and 'Responsible Basis' which aims to uphold minimum sustainability requirements across the entire portfolio of PFZW. There are two reasons for not investing in companies or countries as stipulated under the exclusion model, issues related to product and conduct. Thus, the exclusion list is made up of companies associated with tobacco, coal and tar sands, certain weapons, as well as oil and gas drilling in the Arctic (pg42). Regarding the steering of capital, PFZW employs the model to enhance investments that contribute to the SDGs on one hand and on the other to support companies with lower CO2 emissions. The ESG integration model is used to determine certain climate risks and guide their climate strategy. While engaged share ownership is employed to encourage companies to improve sustainability performance through dialogues among market participants and shareholders, the impact measurement model reflects PFZW's ambition to standardize indicators and methodologies for impact measurement. (reference to Sustainable Investment Policy, p. 37, further details can be found on the SIP on pp. 18-21).

Is detailed information on risks, opportunities, and impacts on investment returns given?

Risks | The risks discussed include changes to interest rates, climate and transition among others, while ESG risks are only briefly mentioned together with a pledge to initiate a more comprehensive monitoring and reporting tool that can address ESG related risks.

Opportunities | Opportunities of investments are addressed to a very limited extent throughout the annual report and other supporting documents.

Impacts on investment returns: The impacts on investment returns are identified throughout the report, encompassing contributions to seven of the UN's SDGs development goals. In the 'Sustainable Investment Policy' stimulating sustainability within companies through involving stakeholders is also mentioned as a positive non-financial impact on investment returns. The 'Sustainable Investment Annual Review 2021' also supports this through a commitment to increase investments to SDGs to 20% of all current investments.

Pensioenfonds Metaal en Techniek (PMT)

Does the fund provide explanations or definitions on non-financial returns, ESG/sustainability risk, or other relevant information, and why such factors are important for the pension saver?

PMT discusses non-financial information regarding environmental and social affairs as well as policies related to ESG risk throughout its annual report. Based on opinions and preferences by its stakeholders, climate was found to be one of the main priority areas for participants.

While non-financial returns are not clearly explained in the annual report, ESG and sustainability risks are briefly mentioned and explored. Additionally, PMT's 'Strategic Investment Framework 2020-2022' and 'Responsible Investment Policy 2021' include further detail that builds upon the sustainability approach and considerations that are taken for stakeholders' benefit.

Does the fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc.)?

PMT's sustainable investment measures include focusing on exclusion, impact investing, engagement and ESG integration. The exclusion policy is centred around 'conscious selection' and 'ad hoc' exclusion, whereby PMT uses ESG ratings to determine whether or not to invest in certain companies and countries, and equally, proceed with immediate exclusion due to very serious incidents and/or controversies that may come from certain investments. Impact investing has grown to € 1.622 million (as of December 2021) which is expected to increase to € 2 billion and mainly focus on energy transition. Regarding its engagement approach, PMT has added new themes for biodiversity and responsible tax policy. The number of companies with which PMT discusses to assess ESG performance has also increased by over 50% in 2021.

Is detailed information on risks, opportunities, and impacts on investment returns given?

Risks | PMT notes on its risks principles which includes strategic, integrity, financial and non-financial risks.

Opportunities | The annual report does not provide details on sustainability opportunities.

Impacts on investment returns | While PMT has not fully excluded the entire sector of fossil fuel companies, its ongoing effort to enter discussions with over 500 companies in the sector in order to influence and ultimately minimise their CO2 emissions, shows the potential benefits and positive impacts on investment returns i.e., increasing the number of companies that address climate change and human rights. The biggest improvement in this regard can be seen in the Electricity Utilities sector according to PMT's own data, as a number of companies with high emissions are no longer part of PMT's portfolio.

BPF Bouwnijverheid (bpfBOUW)

Does the fund provide explanations or definitions on non-financial returns, ESG/sustainability risk, or other relevant information, and why such factors are important for the pension saver?

While bpfBOUW does not explain non-financial returns, it does note on the meaning and focus of ESG and sustainability risks throughout its annual report. The pension fund is interested in sustainability and places high importance on ESG for higher financial returns and stimulating transition efforts of companies as part of its responsible investing approach (pg52-59). Within sustainability risks, a risk taxonomy (classification) is placed at the forefront and encompasses financial, strategic and operational risks. In order to minimize certain sustainability risks for example, bpfBOUW uses the 'Global Real Estate Sustainability Benchmark' to ensure participation of the most sustainable funds for real estate investments (p. 42-51).

Does the fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc.)?

bpfBOUW's 'Responsible Investment Policy 2021-2025' and subsequent sustainable investment models are identified as impact, engagement and exclusion. With its impact approach, the focus is on extending Sustainable Development Investments (SDIs), currently at 24% of all invested assets (data as of December 2021). Examples of such investments include rental housing and elderly care homes and related real estate across the Netherlands which incorporate climate change targets such as transition to renewable energies. Other examples include but are not limited to bonds with sustainable purposes which have increased by €0.7 billion from 2020 to end of 2021. Engagement practices are followed with exercising of influence and actively exercising voting rights. Finally, exclusion policy is centred around companies involved with manufacture of tobacco, nuclear and chemical weapons and sovereign government bonds which are associated with restrictions of democratic practices and human rights.

Is detailed information on risks, opportunities, and impacts on investment returns given?

Risks | ESG risks are identified through a bpfBOUW criteria which separates companies into 'leaders' and 'laggards', whereby the latter refers to companies that score less on sustainability.

Opportunities | The annual report does not provide details on sustainability opportunities.

Impacts on investment returns | The annual report does not provide details on the impact on investment returns of sustainability considerations.

Pensioenfonds van de Metalelektro (PME)

Does the fund provide explanations or definitions on non-financial returns, ESG/sustainability risk, or other relevant information, and why such factors are important for the pension saver?

The non- financial returns are referenced in the annual report in relation to country framework whereby PME makes investments decisions based on the degree of democratic practices and thus excludes some countries from its list to enable responsible. ESG risks are clearly defined in PME's risk taxonomy (classification) as "risk that when monitoring the existing investment portfolio or entering into new investments, aspects around environmental, social and corporate governance, such as climate change, human rights, working conditions, directors' remuneration and/or diversity, are insufficiently weighted or underestimated". To determine the level of associated ESG risks, PME uses data from MSCI to rank companies based on ESG performance. (pg.28, 31, 193)

Does the fund describe the different types of sustainable investment models (e.g., engagement, impact, exclusion etc.)?

The sustainable investment models under PME's policy include exclusion, engagement and investing with impact. PME excludes companies that are involved with the production of weapons, tobacco, fur, tar sands and coal. All of PME's investments in fossil fuel and gas

extraction have also been sold. Furthermore, the exclusion policy extends to government bonds to countries that may be subject to international sanctions and companies that are not willing to engage in dialogue. Shareholder engagement is another pillar of PME's investment model, which not only conducts dialogue with companies but also demands increasing responsibility for companies' approach to climate change, biodiversity and other social issues. The engagement also extends to PME's own stakeholders with specific surveys to determine views and preferences on responsible investing. According to their data, 85% of members place sustainability as very important. While PME has no set target for the UN's SDGs, 15% of its investments are already classified as sustainable development investments. PME's investments with impact are mainly in the energy transition, innovation loans and circular economy activities. (pg43-54)

Is detailed information on risks, opportunities, and impacts on investment returns given?

Risks | ESG risks include but are not limited to financial damage due to regulation or other government intervention, as well as financial risk due to climate change and disruptive economic changes. PME's risk taxonomy broadly includes strategic, financial, operational and compliance risks which is accompanied with an integrated risk management and strategy that monitors and analyses control measures.

Opportunities | Sustainability-related information on opportunities is not provided in the annual report.

Impacts on investment returns | PME has increased its impact investments by €376 million in the period 2020-2021 whereby the main activities associated with a positive and sustainable impact on investments comes from initiatives with climate and labour themes.

Ranking results

Once we determined individual scores for risks, opportunities and impacts, we calculated a cumulative score for the pension funds by adding together those individual scores we gave for each of the three categories (risks + opportunities + impacts). For example, ABP has the highest cumulative score for the information it provided (2) while bpfbouw has the lowest (-2). PME and PFZW have equal cumulative scores of (1), while PMT's cumulative score adds up to (0). Following the calculation of the cumulative score for each pension provider, we created a ranking system (0-5) as there are 5 pension funds where 1 represents last place (least transparent based on methodology above) and 5 representing the top position regarding information provided.

Category | Fund	ABP	PFZW	PMT	bpfBOUW	PME
Risks	1	0	0	0	1
Opportunities	0	0	-1	-1	-1
Impact	1	1	1	-1	1
Cumulative score	2	1	0	-2	1
Ranking	1	2	3	5	2

In line with the findings of the VBDO benchmarking report mentioned above, ABP ranked highest in our methodology as well for sustainability disclosure, followed by the Zorg en Welzijn pension fund and Metaalelektro pension funds. Although the former two have the same cumulative score, PME ranked better on risk disclosure, whereas PFZW performed better on explaining opportunities.

Methodology

We looked at five Dutch pension funds, using their annual reports, sustainability reports and other associated documents on their websites. To qualify each pension provider and assess the level of transparency regarding sustainability information, we attributed a points-based system depending on the available data encompassing qualitative and when applicable quantitative features. We used three categories to determine the scope of information: risks, opportunities and impacts on investment returns. For each of the categories we determined how much information was addressed in the following way: 0 for information that was addressed to some extent (lacking level of detail but mentioned throughout reports); -1 for information that was missing (not clearly defined or addressed in dedicated chapters of report) and +1 for detailed information (including case studies, clear definitions of concepts and practicality). We used a qualitative judgement for the scope and level of detail for each category and identified the frequency of key words (such as ESG; sustainability; non-financial returns; ESG risks and sustainability risks) to support our final score, whereby higher frequency and use of the key words would lead to higher overall score for each of the three categories.

Introduction

The Dutch pension reform: transitioning from defined-benefit to collective defined-contribution

For a long period of time, the occupational pension pillar in the Netherlands was characterised by mandatory participation defined-benefit (DB) pension funds, organised by professions through sectoral bargaining agreements. Demographic pressures and the decrease of nominal (and real) interest rates have continuously put pressure on sponsors' (employers') capacity to meet pension liabilities, triggering many, but small, changes in the functioning and conditions of these pension arrangements.

In the end, the architecture of these occupational pension schemes shifted from DB schemes to de facto *collective defined-contribution* (CDC) schemes.[275] Besides consolidation, the number of DB pension funds decreased significantly: altogether, the total number of schemes decreased from 913 in 2007 to 278 in 2021 (DNB data).

These shifts motivated social partners (employee and employer representatives) to start a process with the Dutch Government on reforming the pension system, formalise the CDC system and pre-empt any new DB schemes. The process materialised in a Pension Agreement (*Pensioenakkoord*) which was transposed through a draft bill (*Wet toekomest pensioenen*) submitted to the Dutch Parliament in March 2022.

According to the *Pension Future Bill*, which is expected to enter into force in January 2023 with a transitional period of 4 years, all pension arrangements will have to be renewed. The most important changes may be the introduction of two new types of CDC schemes, the solidarity contribution scheme and the flexible contribution scheme.

In essence, a CDC scheme is said to be a mix between DB and DC schemes: the employer will commit to a certain contribution to the scheme but will not be liable for meeting payments of a defined pension level. In exchange, schemes must target a certain level of pension (an "*expectation*" at 75% of the average salary over 40 years of contributions, but which will fluctuate according to the market, i.e., upwards and downwards.

The Dutch pension system rests on three pillars, which will be described in what follows:

- Pillar I – the contributory scheme that provides the Dutch state pension, organised as a social insurance system and implementing the Pay-As-You-Go (PAYG) principle;
- Pillar II – fully funded, mostly tax-exempted and (for now) mostly defined-benefit (DB) pension schemes comprising investment funds and life insurance contracts, for which participation is mandatory in sectors in which representative trade

[275] Ed Westerhout, Eduard Ponds, Peter Zwaneveld, Completing Dutch Pension Reform (August 2021) CPB Netherlands Bureau for Economic Policy Analysis, available at: https://www.cpb.nl/sites/default/files/omnidownload/CPB-Background-Document-Completing-Dutch-pension-reform.pdf, p. 5.

associations that cover more than half of the sector have agreed a specific sector-wide scheme with relevant labour unions, which by law then become mandatory for the entire sector at hand. In practice this means that most sectors of the economy are covered by these (sector-specific) mandatory schemes;

- Pillar III – composed of pre- and post-retirement fully funded and completely defined-benefit (DB) pension saving products, for which participation is voluntary.

Table NL1. The Dutch pension system

Pillar	Characteristics	Coverage	Replacement ratio
Pillar I	PAYG, DB, social insurance, taxed as income on pay out	100%	
Pillar II	Funded by the employer and employee, (mostly) DB, investment plan, contributions tax exempted, return on investment tax exempted, pay-out taxed at progressive income tax rates, formed of: occupational pension funds (278, €2 trillion AuM,[277] % of total managed) and the premium pension institutions (€22 bln AuM,[278] 1.09% of total managed)	Approx. 75% coverage[279]	According to Eurostat, 50% (2021)[276]
Pillar III	Funded by individual, DC, contributions subject to a limit, contributions tax exempted, pay-out taxed at progressive income tax rates	n.a.	

Source: BETTER FINANCE own composition; OECD data

Summary Return Table - Pensions in the Netherlands

	1 year	3 years	7 years	10 years	whole reporting period
	2021	2019-2021	2015-2021	2012-2021	2000-2021
Pension funds	0.85%	6.58%	3.94%	5.00%	2.80%
Life insurances	-2.29%	-0.04%	1.19%	0.33%	0.02%

Source: own computations based on Table NL15

Pillar I

Pillar I is a social insurance scheme and consists of the Dutch state pension, called AOW (*Algemene Ouderdomswet* or General Old-Age Law). It provides a lifelong state pension for all

[276] Eurostat Aggregate Income Replacement Rate, Total, Netherlands, 2021.
[277] DNB Statistieken, Balans van Pensioenfondsen (Kwartaal; breukvrij), 2021Q4.
[278] DNB Statistieken, Balans Premiepensioeninstellingen, 2021Q4.
[279] Based on the data published by the Dutch Central Bank on the number of participants in Dutch pension funds (5,957,899, 2021) and in the premium pension institutions (1,189,929, 2021Q4), divided by the occupied force labour (World Bank Data, 2021, 9,897,689, minus 408,000 –unemployment rate).

elderly inhabitants of the Netherlands, regardless of their nationality and employment history. For a long time, 'elderly' (for the purpose of this law) meant 65 years or older. Recently the age was increased beyond 65 (66 to 71 depending on date of birth, with a 'transition age' of retirement between 66 and 67 for people who reach those ages over the next few years), mainly to maintain the system's viability in the future as, due to ageing, the costs threaten to reach unsustainable levels. While the original intention was to raise the "AOW-age" continually on a par with life expectancy, the recently concluded Pension Accord between government, trade organizations and labour unions, on an 8-month increase for every full year that life expectancy rises. The rationale behind raising the age at which citizens start receiving these pensions is that AOW is a pay-as-you-go (PAYG) system: this part of the retirement income is financed by those in the workforce at that particular moment in time. In 2019 the "AOW-age" was 66 plus 4 months. It will remain that way until 2022.[280] Each person between 16 and 66 years of age, either working, self-employed or on benefits, contributes to the AOW-financing via a deduction (social premium) on the salary or benefit. In addition, the AOW is partially financed by taxes collected by the government every year. Every inhabitant of the Netherlands is automatically enrolled in the AOW-system in such a way that he or she is entitled to 2% of the maximum monthly allowance for each year he/she has lived in the Netherlands between the ages of 16 and 66 (so someone living in the Netherlands that entire period is entitled to a full monthly AOW-allowance as 66-16 = 50 x 2% = 100% of the allowance).

A single person is entitled to a monthly allowance (gross) of €1,228.22. People who are married, or couples living together, receive (gross) €843.78 per month each. In addition, 8% of the monthly allowance is set aside by the Government to be paid out in May as a holiday allowance. Typically, women are more dependent than men on Pillar I, the AOW, due to the fact that in the past and to some extent still in the present, women are employed less often than men, less often have full-time jobs and generally have lower incomes.

Pillar II

Pillar II is a system of collective pension schemes operated by pension funds, entities which are legally independent from their (often corporate) sponsors, or by insurance companies. Little over a decade ago, there were over 1,000 pension funds operating in the Netherlands (913 in 2007). Over the years, several of these pension funds merged or were liquidated (with their assets and liabilities transferred to other pension funds or insurance companies) to reach 278 at the end of 2021 and 272 in 2022 (DNB data).[281]

Whereas Pillar I (AOW) is a PAYG scheme, the Pillar II is financed by capital funding. Each person enrolled in a pension fund contributes directly or indirectly to it (with the employer

[280] https://www.rijksoverheid.nl/onderwerpen/pensioen/toekomst-pensioenstelsel/aow-leeftijd-stijgt-minder-snel.
[281] Based on data from the Dutch Central Bank (https://statistiek.dnb.nl/downloads/index.aspx#/details/onder-toezicht-staande-pensioenfondsen-jaar/dataset/fd267edd-3135-4628-8313-85e968197b57/resource/12ac9dff-d047-4803-9fa4-9d31373e9ac0).

paying the lion's share contribution, often 50% to 70%). This money is subsequently invested in order to fund retirement pay-outs.

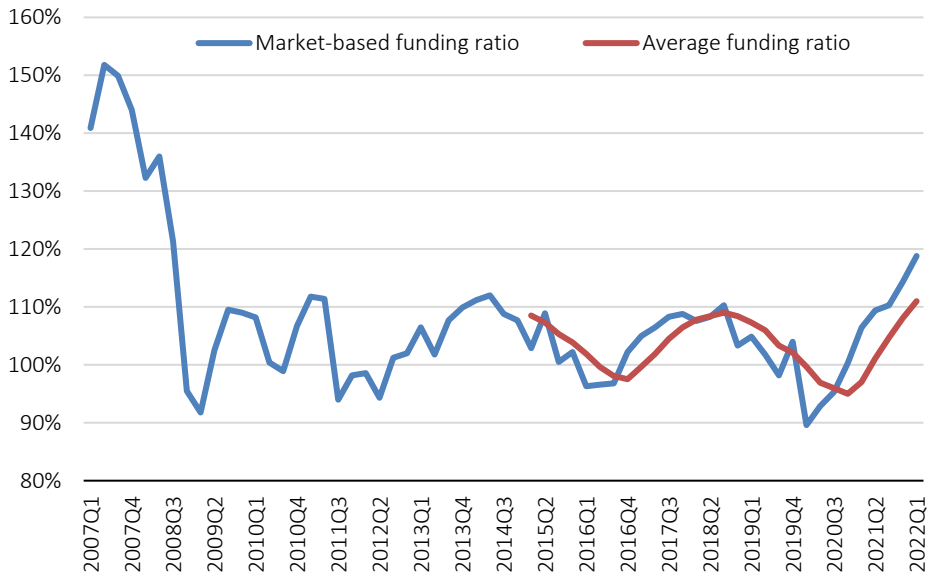
Although enrolment in a Pillar II scheme is not compulsory as such, in many cases it in fact is. The reason for this is that if labour unions and employers in the Netherlands decide to set up a pension scheme for a company or a sector, the government can make enrolment mandatory for everyone working in that company or sector. In practice this means that almost every working person is enrolled in a pension scheme: according to figures from the DNB and World Bank data, about 75% of the occupied labour force in the Netherlands is covered by the occupational pensions pillar: 5.96 million in pension funds and 1.18 million with premium pension institutions.

The government makes it mandatory in order to achieve economies of scale that, in turn, makes it possible for pension funds to operate more efficiently in terms of costs and fees. In addition, mandatory sectoral enrolment prevents a 'race to the bottom' in paid pension premiums - an expensive but notoriously oblique wage element - through labour cost competition between rival companies. An employee can be enrolled in more than one pension fund if he/she, for example, moves to another job in another sector. In such cases he/she starts building his/her pension with the pension fund of the new sector or company. The old pension capital can be left in the former pension fund or subject to specific rules, transferred to the new pension fund. By law, pension funds are currently required to maintain a funding ratio of at least 105% (approximately) and even larger reserves are required to allow for increases of pensions in line with inflation. According to the provisions of the recent Pension Accord, which will go into effect, these mandated reserves will be scrapped in favour of more flexible pension results.

Under the still current system, the "coverage ratio" ("dekkingsgraad" in Dutch) or funding ratio is calculated by discounting the future pension liabilities (i.e., future nominal retirement outflows) with the use of an interest rate curve mandated and regularly updated by the Dutch Central Bank. The current value of pension liabilities up to 20 years in the future are determined by using the actual market-based interest swap curve. The discount interest rates for periods from 20 years onwards are calculated by the Dutch central bank. The interest rates calculated in this way are called Ultimate Forward Rates (UFR) and the Dutch Central Bank imposes a UFR on Dutch pension funds that is more 'prudent' than the European UFR determined by EIOPA. Prior to 2015, this UFR was fixed at 4.2%. Starting from mid July 2015, the UFR is a 120-month moving average of the 20-year forward rate which, in effect, means that it is much lower than the 4.2% used previously. Hence, the funding ratio of the Dutch pension funds fell. The UFR has been lowered even further as of June 2019 to mirror more closely the trend of falling market rates. The lower the interest rates on financial markets, and hence the UFR, the higher the value of future liabilities and the greater the chance that the required coverage ratio (in Dutch "*dekkingsgraad*") falls below 105%. When the coverage ratio falls below this threshold, a pension fund is required to submit a plan detailing how to restore it to above 105% within a period of five years. It must also submit contingency plans in case

recovery remains elusive. Failure to recover to the 105% threshold means that pensions must be lowered within the current regime. Furthermore, indexation by pension funds is not allowed if the funding ratio is lower than 110% and only fully allowed when the funding ratio has reached the level of a fund-specific "sustainable indexation funding ratio" (*toekomstbestendige indexatie dekkingsgraad*), which usually falls somewhere between 120% and 130%. These indexation-constraining regulations are designed to minimize the risk of future insolvency, thereby protected younger members within pension funds from the risk of large pension cuts in the future. However, these regulations are very controversial – both politically and among Dutch pension experts/professionals – as large financial "buffers" have to be maintained to the detriment of current pensioners. Under the newly agreed Pension Accord pensions will be raised *and* lowered more quickly, although some buffers will still be mandated.

Graph NL2. Funding ratios of Dutch pension funds



Source: own composition based on DNB data, 2022

Pillar III

Pillar III is made up of individual pension products sold by insurance companies. Life insurance is one example. Another product used in the Netherlands is the so-called "*pensioensparen*", a special-purpose savings account, with the purpose of accumulating supplementary income after retirement. Anyone in the Netherlands can enrol in this pillar, either to save for retirement (there are those who do not fall in Pillar II scheme described above, for example entrepreneurs or those working in a sector or a company without a pension fund of its own) or to supplement the retirement income from Pillar I and II. Purchasing Pillar III products is attractive due to particular tax benefits associated with them.

According to a recent OECD report on pensions, the net replacement ratio (the ratio of earnings after and just before retirement) in the Netherlands stood at 80% for the average income earner in 2018. This replacement ratio differs little between income groups in the Netherlands, in contrast to most other OECD countries.[282] Other research suggests that the retirement income from Pillar I and II, on average, equals 70% of the average income before retirement. However, data from Eurostat on the aggregate replacement ratio for pensions is much lower, at 50% for 2021. Statistics Netherlands painted a similar picture for 2014 (the most recent year it provides such data on). Early data (2014) used to be calculated on the total replacement ratio of all three income streams (public, occupational, voluntary pensions) in the Netherlands by age, sex, and marital status: the average net replacement ratio of 105% was obtained by the contributors for 2014.[283] However, the data series was discontinued afterwards, and thus we must rely on individual calculations.

Pension vehicles

Second pillar

Note on Premium Pension Institutions (PPIs): *Premium Pension Institutions are not analysed separately in this report (in particular under Pension Returns). According to the leading Dutch outlet for pension-related news* (PensioenPro)*, which based its figures on DNB sources, there were 1.18 million workers enrolled in PPIs (out of some 5.96 million enrolled in pension funds) at the end of 2021 and the schemes had invested assets of some €22 billion (total AuM of Dutch pension funds is around €2 trillion).[284] This share is small because it is only offered by firms that do not have their own or sectoral pension arrangement (if there is one, it is mandatory to enrol and almost every sector has its pension scheme). In practice, this means that such schemes are generally limited to small- and medium-sized enterprises is certain sectors. Nevertheless, PPIs have been growing fast over recent years so may play a bigger role in the future.*

The Dutch private pension system is dominated by pension funds. However, their number has declined greatly in recent decades and this consolidation is expected to continue in the future. Some of the funds are financial giants, with millions of people enrolled and hundreds of billions of euros in assets, while others several thousand participants and several hundred million euros under management. In the table below, we provide some statistics for the 5 largest pension funds in the Netherlands.

[282] OECD, *Pensions at a Glance 2019. OECD and G20 Indicators*.
[283] https://www.netspar.nl/assets/uploads/Netspar-Design-Paper-68-WEB.pdf and https://opendata.cbs.nl/statline/#/CBS/nl/dataset/71763ned/table?ts=1567116265753.
[284] Based on DNB data, 2022.

Table NL3. Largest Pension Funds in the Netherlands		
Pension fund	**Sector / company**	**Assets (€ bln)***
ABP	Civil service	599.36
Zorg en Welzijn	Medical services	303.29
Metaal en Techniek	Metal	110.30
Bouwnijverheid	Building companies	96.56
Metalelektro	Electrometal sector	68.19

Source: The 2021 annual reports of these 5 largest pension funds.

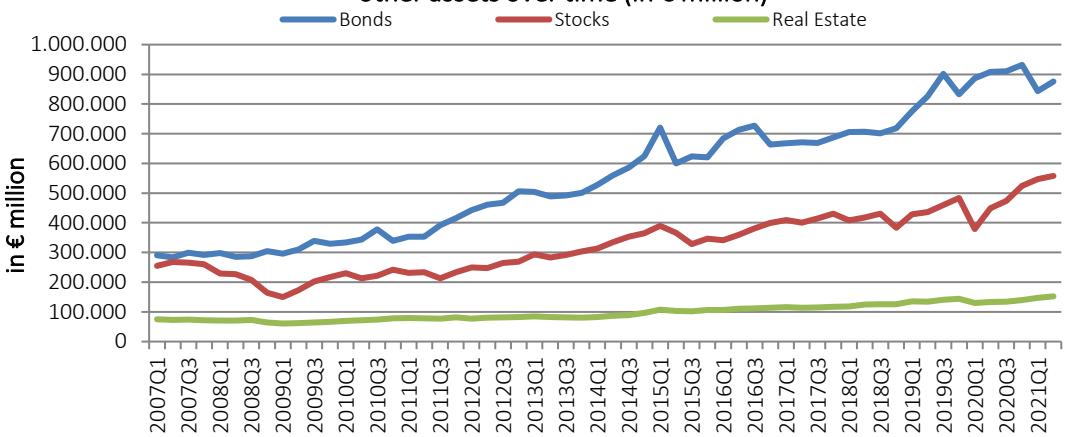
There are four kinds of pension funds in the Netherlands. First, there are the industry-wide pension funds. Those administer and operate the pensions for an entire sector, such as food companies or civil service. The civil service pension fund, ABP, is by far the largest in the country (and second largest in Europe) with assets worth over half a trillion euros at the end of 2021. Secondly, there are corporate pension funds, administrating and operating pension schemes for (often) major corporations. Thirdly, there are several pension funds for independent professionals, such as medical specialists. Finally, there are the relatively new General Pension Funds, which are allowed to ringfence and can incorporate several (former) corporate pension funds under a single administrative umbrella to achieve economies of scale and improve governance.

Pension funds are independent entities, i.e., they are strictly separated from the company (if applicable) on whose behalf they administer and run the pension scheme. One of the consequences is that if a company files for bankruptcy, employees know that their pensions are not affected.

By the end of 2021, Dutch pension funds in Pillar II had assets worth €1,979.9 billion in total, representing almost 99% of the total assets managed in the occupational pensions pillar in the Netherlands and the second largest occupational system in the EU judging by its size to the national GDP (exceeded only by Denmark). Although the 2020 turmoil due to COVID-19 restrictions caused losses in the first and second quarters, stock markets caught up and were, again, the main driving force behind this increase. Dutch gross domestic product in 2021 was approximately €796 billion, so the net equity of NL households in pension funds was reported by Eurostat at 240% of Dutch GDP.[285] The five largest Dutch pension funds combined managed 68% of these assets.

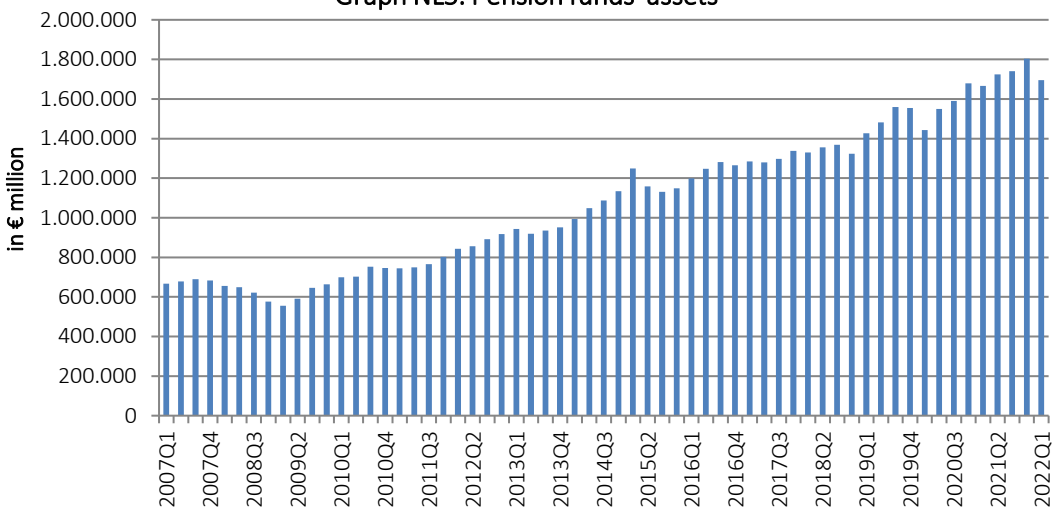
[285] Eurostat lists Dutch GDP in 2020 as €795.9 billion (https://ec.europa.eu/eurostat/tgm/refreshTableAction.do?tab=table&plugin=1&pcode=tec00001&language=en).

Graph NL4. Pension fund assets invested in stocks, bonds, real estate and other assets over time (in € million)



Source: own computations based on DNB Dutch Central Bank

Graph NL5. Pension funds' assets



Source: Own calculations based on DNB Dutch Central Bank

Third pillar

The third pillar is not mandatory and is run by private insurance companies offering various pension-like products such as life insurance. Every employee can choose whether or not to take part in it, sometimes provided he/she fulfils the conditions to enrol as stated by the law. The most important condition in order to benefit from tax benefits associated with these products is that one has to have a shortfall in his/her pension (called *pensioentekort* in Dutch). There is an annual maximum amount any Dutch inhabitant can pay in towards his/her retirement income. This maximum, determined by the Dutch tax authority on an annual basis, ensures an acceptable retirement income. If for any reason contributions fall under the maximum amount allowed, the contributor is considered to have a pension shortfall and can

deposit the amount equal to the difference between the maximum allowed retirement contribution and the paid contributions into a savings account for retirement income. There is a tax benefit involved since contributions can be deducted from the taxable income, effectively reducing the income tax one has to pay. Moreover, the pay-off upon retirement is taxed at a lower tax rate than the current income. Once a pension shortfall has been identified, and the decision has been taken to deposit the difference on a special-purpose savings account, the deposit(s) cannot be withdrawn before retirement.

The share of those third-pillar products in the retirement mix of the Dutch households is relatively low. According to Statistics Netherlands, Pillar III products only accounted for 6% of the accrued pension rights of Dutch households. By comparison, Pillar I accounts for around 54% with Pillar II assuming a share of 40% (2014 figures, unknown afterwards as data was discontinued).

Charges

Obviously, in order to make money, pension funds and insurance companies must spend money, i.e., there are various fees and other costs involved with investing their assets on the financial markets.

However, information on these costs was difficult to obtain and where available, they must still be interpreted with a great deal of caution. For example, even the Dutch central bank stated in an article from May 2014 that 'there are reasons to believe that not all costs are reported'. The reason is not that the pension funds do not want to report them, but rather that even they are not able to determine them. For example, some companies investing assets of pension funds do not report all costs separately, because it is not in their interest to do so. The Dutch financial markets supervisor (*Autoriteit van Financiële Markten*, AFM) has called upon these companies to disclose all costs. Another difficulty is that information on transaction costs, i.e., costs associated with transactions in the financial markets such as purchase or sale of stocks and bonds or shares in investment funds for example, is not always available.

The consequence is that in previous years when DNB asked the Dutch pension funds to provide the supervisor with, among others, an analysis and details of all the costs they incur, 70 pension funds were not able to report all costs associated with their investments. According to the AFM, 'readers of annual reports are not able to get a clear picture of the relationship between costs, returns and risks pension funds are taking[286]. Just to illustrate how important costs are in the big picture: according to the AFM, lowering costs by a 0.1 percentage point (pp) leads to a 3 pp higher retirement income in the medium-term (25 years).

[286] Research report by AFM on information on various charges pension funds incur and how they report those in their annual reports, entitled 'Op naar een evenwichtige verantwoording over deze kosten in jaarverslagen van pensioenfondsen', July 2014

During the last five years, much effort has gone into making sure all costs are accounted for. Since 2015, the Dutch central bank has published the total charges, including transaction costs, for individual pension funds under its supervision. For the years, 2017, 2018 and 2019 we have used the data that The Pension Rating Agency (TPRA) has collected from the annual reports of more than 65% of Dutch pension funds, as the data in annual reports has all been validated by an accountant, whereas the data pension funds provide to the Dutch central bank are often provisional and not always readily comparable from one pension fund to the other. The utilized dataset includes all Dutch sectoral pension funds and all of the largest corporate pension funds in the country. The latest 3-year average charge is close to 54 basis points. For 2020, as the TPRA ceased to exist and the aggregated data (from public sources) was no longer available, the research team gathered one by one the costs of the 40 largest occupational pension funds in the Netherlands, representing 85% of pillar II in terms of Assets under Management. The costs (management costs and transaction costs) were calculated as a simple average and amount to 0.45%.

Table NL6. Pension fund charges (% of total assets)	
Year	Charges
2007	0.20%
2008	0.24%
2009	0.19%
2010	0.15%
2011	0.19%
2012	0.21%
2013	0.23%
2014	0.17%
2015	0.50%
2016	0.50%
2017*	0.55%
2018*	0.52%
2019*	0.54%
2020**	0.45%
2021**	0.58%

** Weighted average of the total investment costs (including direct and indirect costs, transaction costs and performance fees) as % of average AuM reported by 172 pension funds for 2017, 174 pension funds for 2018 and 143 for 2019. The average AuM (belegd vermogen voor risico fonds) over the course of a year was estimated by taking the average between the AuM at the start and end of the year; ** average cost from the Annual Reports of the 40 largest pension funds by average invested capital (gemmiddeld vermogen, both risico fonds and risico deelnemers) representing 85% of the AuM in Pillar II (80% in 2020).*

Source: DNB Dutch Central Bank / TPRA data derived from annual reports of pension funds / BETTER FINANCE own calculations

We would like to remark that the real annual return in the years prior to 2015 is most likely lower than calculated, given the fact that the new data sets shows that total charges were significantly higher than in previous years. In 2019 average charges were 0.54% of total assets, more than double the charges the central bank reported for 2014 and previous years. Another indicator is some sporadically conducted research on total charges undertaken in previous years. For example, in 2012 researchers at consultancy bureau Lane, Clark & Peacock put

those costs for the Dutch pension funds at 0.53% of their assets. CME Benchmarking, a Canadian global benchmarking company, calculated that the average cost of the Dutch pension funds in 2012 amounted to, on average, 0.44% of their assets, with the median being 0.41%. There are several reasons to assume that the levels of total charges, including transaction costs, prior to 2015 were higher still, higher in fact than the current level of 0,54%. Transaction costs are notoriously ambiguous and difficult to account for. In recent years, presumably, some progress has been made to account for these costs more fully as pension funds and Dutch regulators have focused heavily on making these costs more transparent. Furthermore, Dutch pension funds have invested more in bonds over the last decade and these investments generally incur lower costs. Lastly, pension funds have largely eliminated the payment of performance fees from their contracts with asset managers, which has served to lower costs.

Taxation

Pension funds are exempted from company taxes in the Netherlands[287]. The money Dutch employees pay into their pension funds during their working life is deducted from their gross income and therefore not taxed. In this sense, they enjoy a tax subsidy as their taxable income decreases and, hence, they fall into a lower tax bracket. As stated, pension funds then invest these funds in order to be able to pay an income upon reaching retirement age. The returns, i.e., the increase in pension rights, is not taxed either. When the Dutch reach retirement, however, their pension is subject to the personal income tax rates in the pay-out phase. This so-called deferred taxing of pensions means that the Dutch get another tax benefit as tax rates are lower for retirees than taxes on non-retiree income.

In the Netherlands, income is taxed at various rates, progressively relative to the level of income. The tax rates are lower for those aged 66 and older. Just as an example, in the table below, we provide the tax rates for the persons older and younger than 66 years of age in 2021, as provided by the Dutch Tax Authority.

In short, contributions to pension savings products are exempt from tax, investment returns are also exempt, but investment pay-outs are subject to income tax, thus rendering an "EET" taxation regime.

Table NL7. Income tax brackets for various age cohorts		
Income bracket / age	Younger than 66	66 and older
€0 – €35,473	37.07%	19.17%-35.58%
€35,473-€69,399	37.07%	37.07%
over €69,399	49.50%	49.50%
€0 – €35,473	37.07%	19.17%-35.58%

Source: own elaboration based on information from the Dutch Tax Authority

[287] Article 3 of the law, available via (in Dutch) http://www.rijksoverheid.nl/documenten-en-publicaties/besluiten/2009/12/15/vennootschapsbelasting-subjectieve-vrijstellingen-artikel-5.html.

This means that the tax deferral of pensions constitutes an advantage to an individual, as his/her tax rate is lower when he/she turns 66. The average tax tariff in 2020 for those age 66 and older was 37.10%. We have used the tariffs for the first three brackets on income tax as these are the tax brackets that apply to the vast majority of Dutch retirees in practice (the fourth and highest bracket only applies to income over €68,508 which is almost twice the modal income level in The Netherlands).

As stated earlier, contributions towards pensions are deducted from the gross income. In order to calculate the net tax advantage, we have to compare the average tax rate applied to pensions (as stated: 37.07%) and the average tax rate that would have applied if contributions towards pension income was not tax exempt. We can estimate this average tax rate by computing the average of the first three brackets for people younger than 66 years of age. The second and third bracket are the same for this age group but are counted separately to establish an average comparable to the average rate for people aged over 66. The gap between the two averages can be seen as a tax advantage for the older group. The average for those younger than 66 years of age in 2021 was 37.07% which means that the average person in the Netherlands enjoys nearly a 12pp tax advantage on his/her pension scheme due to pension contributions being tax exempt and only pension income is taxed.

Pension returns

As stated, the pensions Dutch employees receive upon reaching the statutory retirement age depend on their pension funds achieving enough return on their investments. We will report nominal annual, aggregate returns for all Dutch pension funds from 2000 onwards. This is done by using the statistics available at the Dutch central bank, which supervises pension funds and insurance companies. Annual returns will be reported for life insurance companies as well.

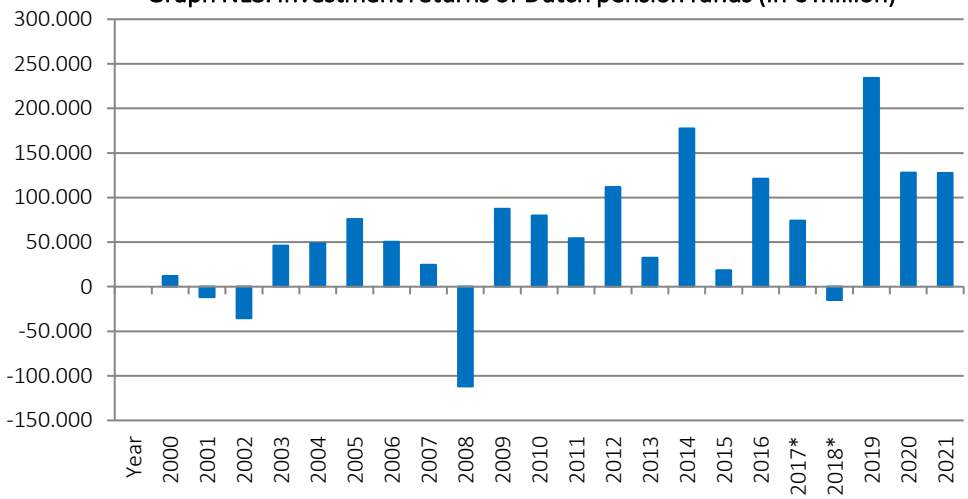
We will then focus on various charges and fees pension funds must pay. These costs must be subtracted from the returns, as only net return is available for retirement income. In order to establish the real rate of return, we will control for the annual inflation in the Netherlands (Harmonized Index of Consumer Prices).

Pension funds

The Dutch supervisor of pension funds, the Dutch central bank, provides investment return figures, in billion euros, for aggregate pension funds[288] and also the quarterly return data for DB and DC pension funds. Occupational pension funds' average return can either be calculated as the ratio between the total investment results and AuM or as a weighted average – by quarter – of returns reported by the DNB. The results are the same.

[288] http://www.statistics.dnb.nl/financieele-instellingen/pensioenfondsen/index.jsp

Graph NL8. Investment returns of Dutch pension funds (in € million)



Source: own composition based on DNB data

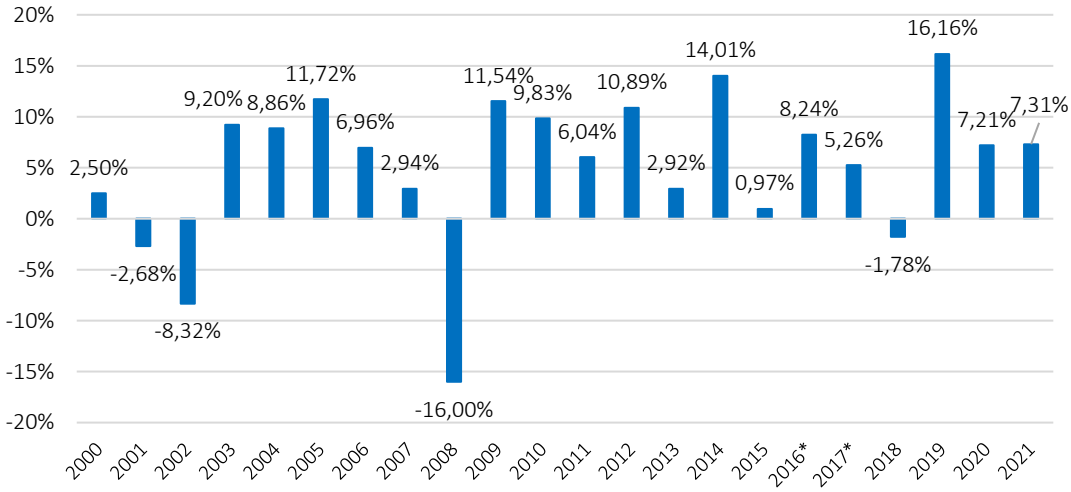
At this stage, we have calculated the time-weighted nominal returns on investment for each year between 2000 and 2021 (in percentages). Using the quarterly returns reported by the Dutch regulator DNB we have determined the weighted overall investment return of all pension funds for the 2021 as well. The results show that both 2019 and 2021 was a truly exceptional year in terms of returns, but also followed close by in 2020. The annual weighted nominal return achieved by pension funds was 7.89%, higher than in many other jurisdictions analysed in this report. This was due to a combination of stock markets, which compensated for the low interest rates on bonds. With this positive result, 2020 raised the geometric yearly average since 2000 with more than half a percentage point, from 4.95% to 5.08%, continuing the growth trend.

Table NL9. Annual nominal return of all Dutch pension funds	
Year	Return as % of total assets
2000	2.70
2001	-2.48
2002	-8.12
2003	9.40
2004	9.06
2005	11.92
2006	7.16
2007	3.14
2008	-15.76
2009	11.73
2010	9.98
2011	6.23
2012	11.1
2013	3.15
2014	14.18
2015	1.47
2016	8.74
2017	5.81
2018	-1.26
2019	16.70
2020	7.66
2021	7.89
Average 2000-2021	5.21

Source: own calculations based on DNB data

After establishing the nominal returns, we have subtracted the average charges from the average return (which are generally exempted from taxation). The results are visible in the graph below.

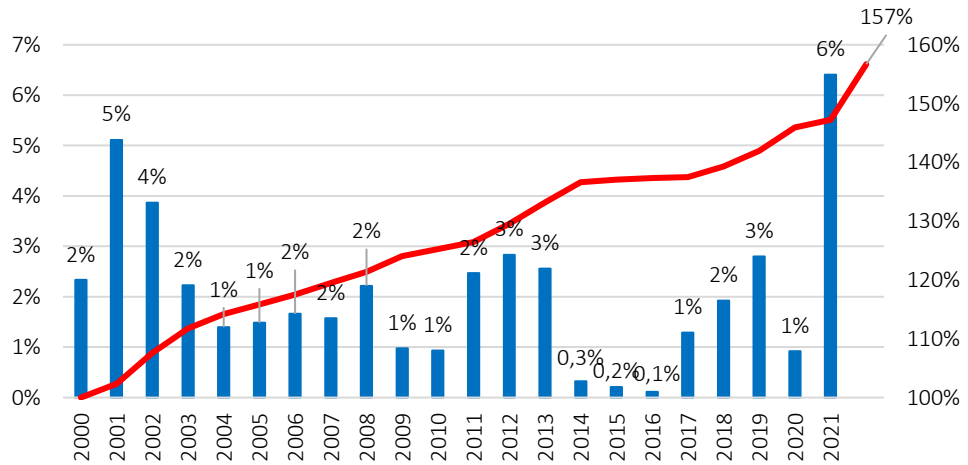
Graph NL10. Returns after charges and before inflation



Source: *Derived from tables NL3 and NL5*

The next step on the way to calculating the real return on investment of the Dutch pension funds is to control for the annual inflation rate which reached 2,7% in 2019 but deflated considerably in 2020, due to COVID-19 restrictions, to 0.92%.

Graph NL11. Annual inflation rate in the Netherlands



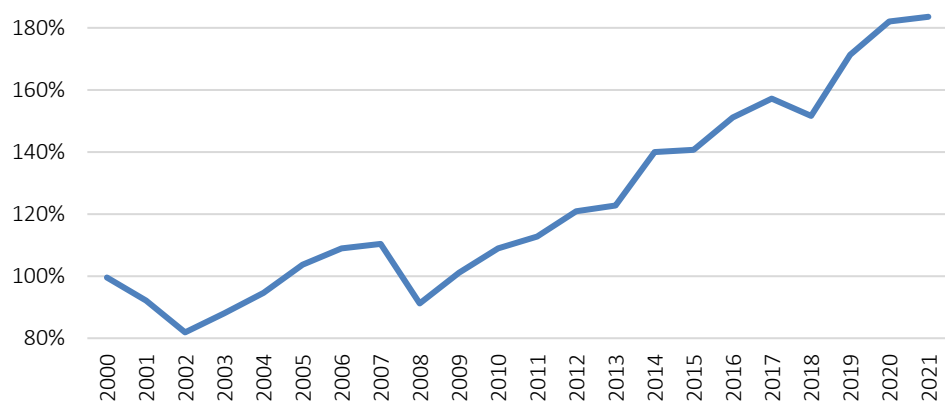
Source: Own calculations based on Eurostat data

When we use the inflation data from Eurostat (M12 to M12 change) from 2000 and adjust the return after charges for inflation, we get the following outcome:

Table NL12. Return after charges and inflation	
2000	0.16%
2001	-7.41%
2002	-11.73%
2003	6.82%
2004	7.36%
2005	10.09%
2006	5.21%
2007	1.34%
2008	-17.82%
2009	10.46%
2010	8.82%
2011	3.49%
2012	7.84%
2013	0.35%
2014	13.64%
2015	0.76%
2016	8.12%
2017	3.92%
2018	-3.63%
2019	13.00%
2020	6.23%
2021	0.85%
Average 2000-2021	2.8%

Source: Own calculations based on Annual report data

Graph NL13. Cumulative real net performances



Source: Own composition based on Table NL12

Over the last 22 years, Dutch pension funds collectively have had very variable, even volatile, annual results in terms of real returns. Real annual returns ranged from -17,36% in 2008, the year the collapse of Lehman Brothers threw global financial markets into a tailspin, to 14,08%

in 2014 when the European Central Bank did its utmost to lift the Eurozone out of its debt crisis and stagnation. Even as Dutch pension funds invest relatively heavily in bonds and other securities, their returns have proved greatly dependent on volatile financial markets in an age of low interest rates. This is partly due to the fact that interest rate changes have a greater impact on the durations and value of securities when the starting rates are close to zero, compared to situations in which interest rates at the start of year are at higher levels. Much of these returns, however, remain unrealized as pension funds hold on to their bond assets to continue matching their long-term liabilities, which are even more interest-rate dependent.

Between 2009 and 2021, high annual returns distinguished these years together with 2009 (a bounce back year) and 2014. During the aftermath of the dotcom bubble in the early 2000s, in 2008 when the financial crisis was at its height and in 2018, real returns have been disappointingly negative. Overall, the last 22 years have produced solidly positive real returns for Dutch pension funds, with the geometric annual average real return reaching 2.8% by the end of 2021. While the first decade of the 21st century was a lost decade in terms of real returns, cumulative yields since the start of 2010 have added 84% to the real value of pension savings.

Pillar III vehicles

Third-pillar products in The Netherlands have been wrought with problems in The Netherlands. In 2006 the largest financial scandal in Dutch history erupted when it was revealed that commercial life insurance and pension products had hidden cost structures that greatly penalized savers. This *woekerpolis-affaire* (usurious insurance affair) seriously dented the Dutch public's trust in the financial sector and sparked a host of regulations designed to increase transparency and limit or eliminate profiteering. The momentum for such regulations was strengthened even further by the global financial crisis which started two years later. These regulations threw the market for third pillar products into turmoil, forced the reform or abolishment of some of these products themselves, and greatly limited the profits that could be made with them by providers and (especially) by middlemen. On the upside, consumer interest became better protected and the impetus to increase transparency has made The Netherlands one of the global forerunners in terms of detailed and accurate reporting on the fortunes and expenses of financial products and institutions.

Afterwards, new products were introduced, some of which depended on interest rates. But these have remained so low over the past decade that all pension products based on guaranteed benefits have become unsustainably expensive to purchase and have all but disappeared from the Dutch third-pillar market. Virtually all life insurances and pension products sold to individuals currently have higher risk profiles. Furthermore, tax regime changes implemented in 2015 have also meant that pension saving has become less fiscally attractive for those with high incomes. Nevertheless, the third-pillar market in The Netherlands is still alive and may see a change of fortunes in this century's third decade,

especially if the coming reform of pension schemes and pension funds (resulting from the Pension Accord) does not go smoothly and further erodes the Dutch public's trust in Pillar II.

Life insurance schemes constitute a large part of the third pillar products and hence can be used as a proxy for the returns in this pillar. Below we present the total return after charges and taxes, but before inflation, and the amount invested on behalf of owners of life insurance policies. It is important to note that an unknown percentage of the pension plans executed by life insurance companies fall under Pillar II (employer-related pension) rather than Pillar III (personal pension). So, as stated, the returns of the life insurance companies are merely a proxy for Pillar III returns (data on the returns of another pension vehicle active in both the second and third pillar, the PPI, are missing entirely).

Table NL14. Real Return of Life Insurance Companies in the Netherlands

Year	Investment result (after charges and taxes) (in mln EUR)	Investments on behalf of policy holders (in mln EUR)	Nominal return (net of charges)	HICP Inflation	Real return (net of charges, inflation)
2000	2,771	70,928	4%	2%	2%
2001	2,593	76,960	3%	5%	-2%
2002	240	68,535	0%	4%	-3%
2003	2,793	76,814	4%	2%	1%
2004	2,306	82,755	3%	1%	1%
2005	3,322	95,972	3%	1%	2%
2006	3,935	99,693	4%	2%	2%
2007	6,951	100,755	7%	2%	5%
2008	-5,580	87,460	-6%	2%	-8%
2009	2,070	101,246	2%	1%	1%
2010	180	106,624	0%	1%	-1%
2011	-460	105,555	0%	2%	-3%
2012	360	110,790	0%	3%	-2%
2013	2,208	106,480	2%	3%	0%
2014	-2,988	111,112	-3%	0%	-3%
2015	3,547	104,934	3%	0%	3%
2016	2,819	110,160	3%	0%	2%
2017	3,179	103,093	3%	1%	2%
2018	3,280	85,634	4%	2%	2%
2019	3,069	95,938	3%	3%	0%
2020	2,735	98,744	2.77%	1%	1.83%
2021	4,098	103,143	3.97%	6.41%	-2.29%
AVERAGE 2000-2021			2.07%	2.05%	0.02%

Source: Own calculations, Statistics Netherlands, DNB

The average annual return after charges, but before inflation, for life insurance companies in the Netherlands between 2000 up to and including 2021 amounts to 2.07%. The average annual inflation rate in the Netherlands over the same period was 2.05%. Therefore, the average real annual return of insurance companies in the Netherlands for the period between 2000 and 2021 stands at virtually nil (0.02%).

Presenting all these calculations together, we get the following table:

Table NL15. Average real return of pension funds and insurance companies in the Netherlands						
	Nominal return pension funds (1)	Return insurance companies after charges (2)	HICP annual inflation rate (3)	Charges pension funds (4)	Real return pension funds ((1-4)/3)	Real returns insurance companies (2/3)
2000	2.7	3.91	2.33	0.2	0.16	1.54
2001	-2.48	3.37	5.11	0.2	-7.41	-1.66
2002	-8.12	0.35	3.87	0.2	-11.73	-3.39
2003	9.4	3.64	2.22	0.2	6.82	1.38
2004	9.06	2.79	1.39	0.2	7.36	1.38
2005	11.92	3.46	1.48	0.2	10.09	1.95
2006	7.16	3.95	1.66	0.2	5.21	2.25
2007	3.14	6.9	1.57	0.2	1.34	5.24
2008	-15.76	-6.38	2.22	0.24	-17.82	-8.41
2009	11.73	2.04	0.97	0.19	10.46	1.06
2010	9.98	0.17	0.93	0.15	8.82	-0.75
2011	6.23	-0.44	2.47	0.19	3.49	-2.84
2012	11.1	0.32	2.83	0.21	7.84	-2.44
2013	3.15	2.07	2.56	0.23	0.35	-0.47
2014	14.18	-2.69	0.32	0.17	13.64	-3.00
2015	1.47	3.38	0.21	0.5	0.76	3.16
2016	8.74	2.56	0.11	0.5	8.12	2.45
2017	5.81	3.08	1.29	0.55	3.92	1.77
2018	-1.26	3.83	1.92	0.52	-3.63	1.87
2019	16.70	3.2	2.80	0.54	13.00	0.39
2020	7.66	2.77	0.9	0.45	6.23	1.83
2021	7.89	3.97	6.4	0.58	0.85	-2.29
Avg.	5.21%	2.07%	2.05%	0.29	2.80%	0.02%

Source: own calculations based on DNB data and the annual reports of the largest pension funds in the Netherlands.

Acronyms

AIF	Alternative Investment Fund
AMC	Annual Management Charges
AuM	Assets under Management
BE	Belgium
BG	Bulgaria
Bln	Billion
BPETR	'Barclay's Pan-European High Yield Total Return' Index
CAC 40	'Cotation Assistée en Continu 40' Index
CMU	Capital Markets Union
DAX 30	'Deutsche Aktieindex 30' Index
DB	Defined Benefit plan
DC	Defined Contribution plan
DE	Germany
DG	Directorate General of the Commission of the European Union
DK	Denmark
DWP	United Kingdom's Governmental Agency Department for Work and Pensions
EBA	European Banking Authority
EE	Estonia
EEE	Exempt-Exempt-Exempt Regime
EET	Exempt-Exempt-Tax Regime
ETF	Exchange-Traded Fund
EIOPA	European Insurance and Occupational Pensions Authority
ES	Spain
ESAs	European Supervisory Authorities
ESMA	European Securities and Markets Authority
EU	European Union
EURIBOR	Euro InterBank Offered Rate
EX	Executive Summary
FR	France
FSMA	Financial Services and Market Authority (Belgium)
FSUG	Financial Services Users Group - European Commission's Expert Group
FTSE 100	The Financial Times Stock Exchange 100 Index
FW	Foreword
GDP	Gross Domestic Product
HICP	Harmonised Indices of Consumer Prices
IBEX 35	Índice Bursátil Español 35 Index

IKZE	'Indywidualne konto zabezpieczenia emerytalnego' – Polish specific Individual pension savings account
IRA	United States specific Individual Retirement Account
IT	Italy
JPM	J&P Morgan Indices
KIID	Key Investor Information Document
LV	Latvia
NAV	Net Asset Value
Mln	Million
MSCI	Morgan Stanley Capital International Indices
NL	Netherlands
OECD	The Organisation for Economic Co-Operation and Development
OFT	United Kingdom's Office for Fair Trading
PAYG	Pay-As-You-Go Principle
PIP	Italian specific 'Individual Investment Plan'
PL	Poland
PRIIP(s)	Packaged Retail and Insurance-Based Investment Products
RO	Romania
S&P	Standard & Poor Indexes
SE	Sweden
SK	Slovakia
SME	Small and Medium-sized Enterprise
SPIVA Scorecard	Standard & Poor Dow Jones' Indices Research Report on Active Management performances
TEE	Tax-Exempt-Exempt Regime
TCR/TER	Total Cost Ratio/ Total Expense Ratio
UCITS	Undertakings for the Collective Investment of Transferable Securities
UK	United Kingdom

Glossary of terms

Accrued benefits* – is the amount of accumulated pension benefits of a pension plan member on the basis of years of service.

Accumulated assets* – is the total value of assets accumulated in a pension fund.

Active member* – is a pension plan member who is making contributions (and/or on behalf of whom contributions are being made) and is accumulating assets.

AIF(s) – or Alternative Investment Funds are a form of collective investment funds under E.U. law that do not require authorization as a UCITS fund.[289]

Annuity* – is a form of financial contract mostly sold by life insurance companies that guarantees a fixed or variable payment of income benefit (monthly, quarterly, half-yearly, or yearly) for the life of a person(s) (the annuitant) or for a specified period of time. It is different than a life insurance contract which provides income to the beneficiary after the death of the insured. An annuity may be bought through instalments or as a single lump sum. Benefits may start immediately or at a pre-defined time in the future or at a specific age.

Annuity rate* – is the present value of a series of payments of unit value per period payable to an individual that is calculated based on factors such as the mortality of the annuitant and the possible investment returns.

Asset allocation* – is the act of investing the pension fund's assets following its investment strategy.

Asset management* – is the act of investing the pension fund's assets following its investment strategy.

Asset manager* – is(are) the individual(s) or entity(ies) endowed with the responsibility to physically invest the pension fund assets. Asset managers may also set out the investment strategy for a pension fund.

Average earnings scheme* – is a scheme where the pension benefits earned for a year depend on how much the member's earnings were for the given year.

Basic state pension* – is a non-earning related pension paid by the State to individuals with a minimum number of service years.

Basis points (bps) – represent the 100th division of 1%.

Benchmark (financial) – is a referential index for a type of security. Its aim is to show, customized for a level and geographic or sectorial focus, the general price or performance of the market for a financial instrument.

[289] See Article 4(1) of Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and amending Directives 2003/41/EC and 2009/65/EC and Regulations (EC) No 1060/2009 and (EU) No 1095/2010, OJ L 174, 1.7.2011, p. 1–73.

Beneficiary* – is an individual who is entitled to a benefit (including the plan member and dependants).

Benefit* – is a payment made to a pension fund member (or dependants) after retirement.

Bonds – are instruments that recognize a debt. Although they deliver the same utility as bank loans, i.e., enabling the temporary transfer of capital from one person to another, with or without a price (interest) attached, bonds can also be issued by non-financial institutions (States, companies) and by financial non-banking institutions (asset management companies). In essence, bonds are considered more stable (the risk of default is lower) and in theory deliver a lower, but fixed, rate of profit. Nevertheless, Table EX2 of the Executive Summary shows that the aggregated European Bond Index highly overperformed the equity one.

Closed pension funds* – are the funds that support only pension plans that are limited to certain employees. (e.g., those of an employer or group of employers).

Collective investment schemes – are financial products characterised by the pooling of funds (money or asset contributions) of investors and investing the total into different assets (securities) and managed by a common asset manager. Under E.U. law collective investment schemes are regulated under 6 different legal forms: UCITS (see below), the most common for individual investors; AIFs (see above), European Venture Capital funds (EuVECA), European Long-Term Investment Funds (ELTIFs), European Social Entrepreneurship Funds (ESEF) or Money Market Funds.[290]

Contribution* – is a payment made to a pension plan by a plan sponsor or a plan member.

Contribution base* – is the reference salary used to calculate the contribution.

Contribution rate* – is the amount (typically expressed as a percentage of the contribution base) that is needed to be paid into the pension fund.

Contributory pension scheme* – is a pension scheme where both the employer and the members have to pay into the scheme.

Custodian* – is the entity responsible, as a minimum, for holding the pension fund assets and for ensuring their safekeeping.

Deferred member* – is a pension plan member that no longer contributes to or accrues benefits from the plan but has not yet begun to receive retirement benefits from that plan.

Deferred pension* – is a pension arrangement in which a portion of an employee's income is paid out at a date after which that income is actually earned.

Defined benefit (DB) occupational pension plans* – are occupational plans other than defined contributions plans. DB plans generally can be classified into one of three main types, "traditional", "mixed" and "hybrid" plans. These are schemes where "the pension payment is defined as a percentage of income and employment career. The employee receives a thus pre-defined pension and does not bear the risk of longevity and the risk of investment. Defined

[290] See European Commission, 'Investment Funds' (28 August 2019) https://ec.europa.eu/info/business-economy-euro/growth-and-investment/investment-funds_en.

Benefits schemes may be part of an individual employment contract or collective agreement. Pension contributions are usually paid by the employee and the employer".[291]

"Traditional" DB plan* – is a DB plan where benefits are linked through a formula to the members' wages or salaries, length of employment, or other factors.

"Hybrid" DB plan* – is a DB plan where benefits depend on a rate of return credited to contributions, where this rate of return is either specified in the plan rules, independently of the actual return on any supporting assets (e.g. fixed, indexed to a market benchmark, tied to salary or profit growth, etc.), or is calculated with reference to the actual return of any supporting assets and a minimum return guarantee specified in the plan rules.

"Mixed" DB plan* – is a DB plans that has two separate DB and DC components, but which are treated as part of the same plan.

Defined contribution (DC) occupational pension plans* – are occupational pension plans under which the plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions to an ongoing plan in the event of unfavourable plan experience. These are schemes where "the pension payment depends on the level of defined pension contributions, the career and the returns on investments. The employee has to bear the risk of longevity and the risk of investment. Pension contributions can be paid by the employee and/or the employer and/or the state".[292]

Dependency ratio* – are occupational pension plans under which the plan sponsor pays fixed contributions and has no legal or constructive obligation to pay further contributions to an ongoing plan in the event of unfavourable plan experience.

Early retirement* – is a situation when an individual decides to retire earlier later and draw the pension benefits earlier than their normal retirement age.

Economic dependency ratio* – is the division between the number of inactive (dependent) population and the number of active (independent or contributing) population. It ranges from 0% to 100% and it indicates how much of the inactive population's (dependent) consumption is financed from the active population's (independent) contributions.[293] In general, the inactive (dependent) population is represented by children, retired persons and persons living on social benefits.

EET system* – is a form of taxation of pension plans, whereby contributions are exempt, investment income and capital gains of the pension fund are also exempt, and benefits are taxed from personal income taxation.

[291] Werner Eichhorst, Maarten Gerard, Michael J. Kendzia, Christine Mayrhruber, Connie Nielsen, Gerhard Runstler, Thomas Url, 'Pension Systems in the EU: Contingent Liabilities and Assets in the Public and Private Sector' EP Directorate General for Internal Policies IP/A/ECON/ST/2010-26.
[292] Ibid.
[293] For more detail on the concept, see Elke Loichinger, Bernhard Hammer, Alexia Prskawetz, Michael Freiberger, Joze Sambt, 'Economic Dependency Ratios: Present Situation and Future Scenarios' MS13 Policy Paper on Implications of Population Ageing for Transfer Systems, Working Paper no. 74, 18th December 2014, 3.

Equity (or stocks/shares) – are titles of participation to a publicly listed company's economic activity. With regards to other categorizations, an equity is also a security, a financial asset or, under E.U. law, a transferable security.[294]

ETE system* – is a form of taxation whereby contributions are exempt, investment income and capital gains of the pension fund are taxed, and benefits are also exempt from personal income taxation.

ETF(s) – or Exchange-Traded Funds are investment funds that are sold and bought on the market as an individual security (such as shares, bonds). ETFs are structured financial products, containing a basket of underlying assets, and are increasingly more used due to the very low management fees that they entail.

Fund member* – is an individual who is either an active (working or contributing, and hence actively accumulating assets) or passive (retired, and hence receiving benefits), or deferred (holding deferred benefits) participant in a pension plan.

Funded pension plans* – are occupational or personal pension plans that accumulate dedicated assets to cover the plan's liabilities.

Funding ratio (funding level) * – is the relative value of a scheme's assets and liabilities, usually expressed as a percentage figure.

Gross rate of return* – is the rate of return of an asset or portfolio over a specified time period, prior to discounting any fees of commissions.

Gross/net replacement rate – is the ratio between the pre-retirement gross or net income and the amount of pension received by a person after retirement. The calculation methodology may differ from source to source as the average working life monthly gross or net income can used to calculate it (divided by the amount of pension) or the past 5 year's average gross income etc. (see below **OECD net replacement rate**).

Group pension funds* – are multi-employer pension funds that pool the assets of pension plans established for related employers.

Hedging and hedge funds – while hedging is a complex financial technique (most often using derivatives) to protect or reduce exposure to risky financial positions or to financial risks (for instance, currency hedging means reducing exposure to the volatility of a certain currency), a hedge fund is an investment pool that uses complex and varying investment techniques to generate profit.

Indexation* – is the method with which pension benefits are adjusted to take into account changes in the cost of living (e.g., prices and/or earnings).

Individual pension plans* – is a pension fund that comprises the assets of a single member and his/her beneficiaries, usually in the form of an individual account.

[294] Article 4(44) of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU, OJ L 173, p. 349–496 (MiFID II).

Industry pension funds* – are funds that pool the assets of pension plans established for unrelated employers who are involved in the same trade or businesses.

Mandatory contribution* – is the level of contribution the member (or an entity on behalf of the member) is required to pay according to scheme rules.

Mandatory occupational plans* – Participation in these plans is mandatory for employers. Employers are obliged by law to participate in a pension plan. Employers must set up (and make contributions to) occupational pension plans which employees will normally be required to join. Where employers are obliged to offer an occupational pension plan, but the employees' membership is on a voluntary basis, these plans are also considered mandatory.

Mandatory personal pension plans* - are personal plans that individuals must join, or which are eligible to receive mandatory pension contributions. Individuals may be required to make pension contributions to a pension plan of their choice normally within a certain range of choices or to a specific pension plan.

Mathematical provisions (insurances) – or *mathematical reserves* or *reserves*, are the value of liquid assets set aside by an insurance company that would be needed to cover all current liabilities (payment obligations), determined using actuarial principles.

Minimum pension* – is the minimum level of pension benefits the plan pays out in all circumstances.

Mixed indexation* – is the method with which pension benefits are adjusted taking into account changes in both wages and prices.

Money market instruments – are short-term financial products or positions (contracts) that are characterized by the very high liquidity rate, such as deposits, short-term loans, repo-agreements and so on.

MTF – multilateral trading facility, is the term used by the revised Markets in Financial Instruments Directive (MiFID II) to designate securities exchanges that are not a regulated market (such as the London Stock Exchange, for example).

Multi-employer pension funds* – are funds that pool the assets of pension plans established by various plan sponsors. There are three types of multi-employer pension funds:

a) for related employers i.e., companies that are financially connected or owned by a single holding group (group pension funds);
b) for unrelated employers who are involved in the same trade or business (industry pension funds);
c) for unrelated employers that may be in different trades or businesses (collective pension funds).

Money-Weighted Returns (MWR) - also referred to as the internal rate of return, is a measurement of performance that takes into account cash flows (contributions) when calculating returns.

NAV – Net Asset Value, or the amount to which the market capitalisation of a financial product (for this report, pension funds' or insurance funds' holdings) or a share/unit of it arises at a given point. In general, the Net Asset Value is calculated per unit or share of a collective investment scheme using the daily closing market prices for each type of security in the portfolio.

Net rate of return* – is the rate of return of an asset or portfolio over a specified time period, after discounting any fees of commissions.

Normal retirement age* – is the age from which the individual is eligible for pension benefits.

Non-contributory pension scheme* – is a pension scheme where the members do not have to pay into scheme.

Occupational pension plans* – access to such plans is linked to an employment or professional relationship between the plan member and the entity that establishes the plan (the plan sponsor). Occupational plans may be established by employers or groups of thereof (e.g., industry associations) and labour or professional associations, jointly or separately. The plan may be administrated directly by the plan sponsor or by an independent entity (a pension fund or a financial institution acting as pension provider). In the latter case, the plan sponsor may still have oversight responsibilities over the operation of the plan.

Eurostat aggregate replacement rate for pensions refers to median individual pension income of population aged 65-74 relative to median individual earnings from work of population aged 50-59, excluding other social benefits.

Old-age dependency ratio - defined as the ratio between the total number of elderly persons when they are generally economically inactive (aged 65 and above) and the number of persons of working age.[295] It is a sub-indicator of the economic dependency ratio and focuses on a country's public (state) pension system's reliance on the economically active population's pensions (or social security) contributions. It is a useful indicator to show whether a public (Pillar I) pension scheme is under pressure (when the ratio is high, or the number of retirees and the number of workers tend to be proportionate) or relaxed (when the ratio is low, or the number of retirees and the number of workers tend to be disproportionate). For example, a low old-age dependency ratio is 20%, meaning that 5 working people contribute for one retiree's pension.

Open pension funds* – are funds that support at least one plan with no restriction on membership.

Pension assets* – are all forms of investment with a value associated to a pension plan.

Pension fund administrator* – is(are) the individual(s) ultimately responsible for the operation and oversight of the pension fud.

Pension fund governance* – is the operation and oversight of a pension fund. The governing body is responsible for administration, but may employ other specialists, such as actuaries,

[295] See Eurostat definition: http://ec.europa.eu/eurostat/web/products-datasets/product?code=tsdde511.

custodians, consultants, asset managers and advisers to carry out specific operational tasks or to advise the plan administration or governing body.

Pension fund managing company* – is a type of administrator in the form of a company whose exclusive activity is the administration of pension funds.

Pension funds* – the pool of assets forming an independent legal entity that are bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits. The plan/fund members have a legal or beneficial right or some other contractual claim against the assets of the pension fund. Pension funds take the form of either a special purpose entity with legal personality (such as a trust, foundation, or corporate entity) or a legally separated fund without legal personality managed by a dedicated provider (pension fund management company) or other financial institution on behalf of the plan/fund members.

Pension insurance contracts* – are insurance contracts that specify pension plans contributions to an insurance undertaking in exchange for which the pension plan benefits will be paid when the members reach a specified retirement age or on earlier exit of members from the plan. Most countries limit the integration of pension plans only into pension funds, as the financial vehicle of the pension plan. Other countries also consider the pension insurance contract as the financial vehicle for pension plans.

Pension plan* – is a legally binding contract having an explicit retirement objective (or – in order to satisfy tax-related conditions or contract provisions – the benefits cannot be paid at all or without a significant penalty unless the beneficiary is older than a legally defined retirement age). This contract may be part of a broader employment contract, it may be set forth in the plan rules or documents, or it may be required by law. In addition to having an explicit retirement objective, pension plans may offer additional benefits, such as disability, sickness, and survivors' benefits.

Pension plan sponsor* – is an institution (e.g., company, industry/employment association) that designs, negotiates, and normally helps to administer an occupational pension plan for its employees or members.

Pension regulator* – is a governmental authority with competence over the regulation of pension systems.

Pension supervisor* – is a governmental authority with competence over the supervision of pension systems.

Personal pension plans* - Access to these plans does not have to be linked to an employment relationship. The plans are established and administered directly by a pension fund or a financial institution acting as pension provider without any intervention of employers. Individuals independently purchase and select material aspects of the arrangements. The employer may nonetheless make contributions to personal pension plans. Some personal plans may have restricted membership.

Private pension funds* – is a pension fund that is regulated under private sector law.

Private pension plans* – is a pension plan administered by an institution other than general government. Private pension plans may be administered directly by a private sector employer acting as the plan sponsor, a private pension fund or a private sector provider. Private pension plans may complement or substitute for public pension plans. In some countries, these may include plans for public sector workers.

Public pension plans* – are pensions funds that are regulated under public sector law.

Public pension plans* – are the social security and similar statutory programmes administered by the general government (that is central, state, and local governments, as well as other public sector bodies such as social security institutions). Public pension plans have been traditionally PAYG financed, but some OECD countries have partial funding of public pension liabilities or have replaced these plans by private pension plans.

Rate of return* – is the income earned by holding an asset over a specified period.

REIT(s) or Real Estate Investment Trust(s) is the most common acronym and terminology used to designate special purpose investment vehicles (in short, companies) set up to invest and commercialise immovable goods (real estate) or derived assets. Although the term comes from the U.S. legislation, in the E.U. there are many forms of REITs, depending on the country since the REIT regime is not harmonised at E.U. level.

Replacement ratio* – is the ratio of an individual's (or a given population's) (average) pension in a given time period and the (average) income in a given time period.

Service period* – is the length of time an individual has earned rights to a pension benefit.

Single employer pension funds* – are funds that pool the assets of pension plans established by a single sponsor.

Summary Risk Reward Indicator - a measurement developed by the European Securities and Markets Authority (former CESR) to be included in the Key Investor Information Document (KIID) for UCITS (undertakings for collective investment in transferable securities) to reflect the risk profile of a certain fund.

Supervisory board* – is(are) the individual(s) responsible for monitoring the governing body of a pension entity.

System dependency ratio* – typically defined as the ratio of those receiving pension benefits to those accruing pension rights.

TEE system* – is a form of taxation of pension plans whereby contributions are taxed, investment income and capital gains of the pension fund are exempt, and benefits are also exempt from personal income taxation.

Time-Weighted Returns (TWR) - is the standard method of calculating returns (and performance) of an investment and simply represents the growth/decrease in value without incorporating the distorting effects of cash inflows and outflows (for pensions, that means contributions and

Trust* – is a legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).

Trustee* – is a legal scheme, whereby named people (termed trustees) hold property on behalf of other people (termed beneficiaries).

UCITS – or Undertakings for Collective Investment in Transferable Securities, is the legal form under E.U. law for mutual investment funds that are open to pool and invest funds from any individual or institutional investor, and are subject to specific authorisation criteria, investment limits and rules. The advantage of UCITS is the general principle of home-state authorisation and mutual recognition that applies to this kind of financial products, meaning that a UCITS fund established and authorised in one E.U. Member State can be freely distributed in any other Member State without any further formalities (also called *E.U. fund passporting*).

Unfunded pension plans* – are plans that are financed directly from contributions from the plan sponsor or provider and/or the plan participant. Unfunded pension plans are said to be paid on a current disbursement method (also known as the pay as you go, PAYG, method). Unfunded plans may still have associated reserves to cover immediate expenses or smooth contributions within given time periods. Most OECD countries do not allow unfunded private pension plans.

Unprotected pension plan* – is a plan (personal pension plan or occupational defined contribution pension plan) where the pension plan/fund itself or the pension provider does not offer any investment return or benefit guarantees or promises covering the whole plan/fund.

Voluntary contribution – is an extra contribution paid in addition to the mandatory contribution a member can pay to the pension fund in order to increase the future pension benefits.

Voluntary occupational pension plans - The establishment of these plans is voluntary for employers (including those in which there is automatic enrolment as part of an employment contract or where the law requires employees to join plans set up on a voluntary basis by their employers). In some countries, employers can on a voluntary basis establish occupational plans that provide benefits that replace at least partly those of the social security system. These plans are classified as voluntary, even though employers must continue sponsoring these plans in order to be exempted (at least partly) from social security contributions.

Voluntary personal pension plans* – Participation in these plans is voluntary for individuals. By law individuals are not obliged to participate in a pension plan. They are not required to make pension contributions to a pension plan. Voluntary personal plans include those plans that individuals must join if they choose to replace part of their social security benefits with those from personal pension plans.

Wage indexation* – is the method with which pension benefits are adjusted taking into account changes in wages.

Waiting period* – is the length of time an individual must be employed by a particular employer before joining the employer's pension scheme.

Winding-up* – is the termination of a pension scheme by either providing (deferred) annuities for all members or by moving all its assets and liabilities into another scheme.

World Bank multi-pillar model – is the recommended design, developed by the World Bank in 1994, for States that had pension systems inadequately equipped to (currently and forthcoming) sustain a post-retirement income stream for future pensioners and alleviate the old-age poverty risk. Simpler, it is a set of guidelines for States to either enact, reform or gather legislation regulating the state pension and other forms of retirement provisions in a form that would allow an increased workers' participation, enhance efficiency for pension savings products and a better allocation of resources under the principle of solidarity between generations.

The standard design of a robust pension system would rely on five pillars:

a) the non-contributory scheme (pillar 0), through which persons who do not have an income or do not earn enough would have insured a minimum pension when reaching the standard retirement age;

b) the public mandatory, Pay-As-You-Go (PAYG) scheme (**Pillar I**), gathering and redistributing pension contributions from the working population to the retirees, while accumulating pension rights (entitlements) for the future retirees;

c) the mandatory funded and (recommended) privately managed scheme (**Pillar II**), where workers' contributions are directed to their own accumulation accounts in privately managed investment products;

d) the voluntary privately managed retirement products (**Pillar III**), composed of pension savings products to which subscription is universal, contributions and investments are deregulated and tax-incentivised;

e) the non-financial alternative aid scheme (pillar IV), through which the state can offer different forms of retirement support – such as housing or family support. Albeit the abovementioned, the report focuses on the "*main pillars*", i.e., Pillar I, II and III, since they are the most significant (and present everywhere) in the countries that have adopted the multi-pillar model.

Definitions with "*" are taken from OECD's Pensions Glossary - http://www.oecd.org/daf/fin/private-pensions/38356329.pdf.

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