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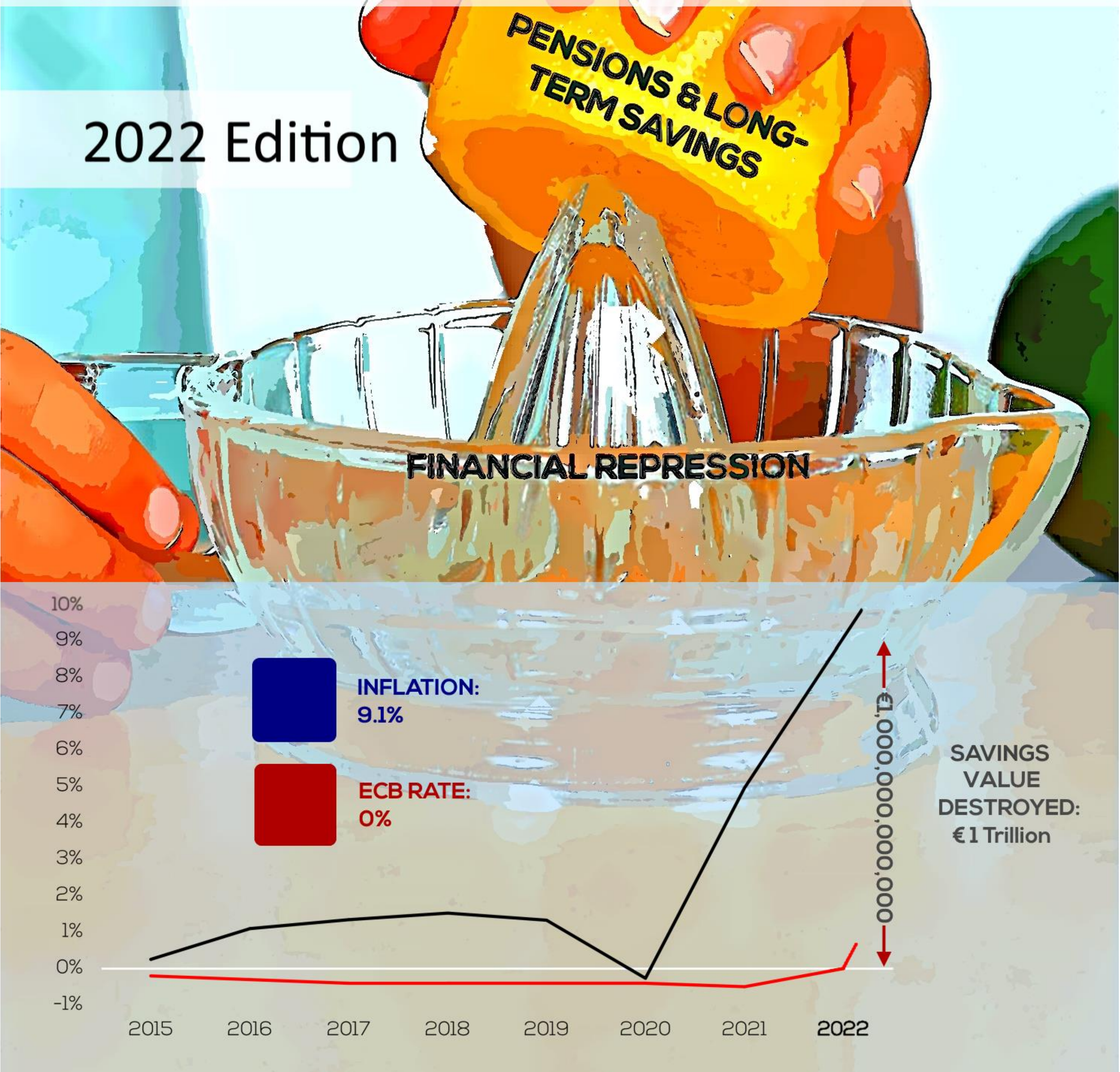
Long-Term & Pension Savings | The Real Return

2022 Edition



Pension Savings: The Real Return

2022 Edition

A Research Report by BETTER FINANCE

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Pension Savings: The Real Return

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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
Bulgaria**	n.a.	2.71%	n.a.	-1.06%	n.a.	2.06%	n.a.	1.96%	-1.35%
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	0.70%	6.11%	6.57%	5.12%	4.24%	6.30%	5.45%	5.78%	2.92%
Poland	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Romania	-2.40%	5.05%	1.61%	1.81%	1.24%	2.68%	2.80%	2.95%	2.02%
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
Bulgaria	n.a	1.91%	n.a	-0.92%	n.a	2.57%	n.a	2.65%	0.17%
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	-2.86%	0.99%	0.60%	0.35%	24.00%	1.53%	1.89%	1.91%	-0.85%
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 spead 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 Graph 17 and Table 18 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. However, 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.

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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

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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: 2,92% 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: 2.92% 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.

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268 Mercer CFA Global Pensions Index, 2021, available at: https://www.mercer.com/content/dam/mercer/attachments/private/gl-2021-global-pension-index-mercer.pdf p. 5.

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 Carsten 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

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[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 for 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 having 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, '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 centered 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 CO_2 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 centered 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 responsibility. 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
Cumultive 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 keywords (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 associations that cover more than half of the sector have agreed a specific sector-wide scheme with relevant labor unions, which by law then become mandatory for

[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.

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%	According to Eurostat, 50% (2021)[276]
Pillar II	Funded by the employer and employee, (mostly) DB, investment plan, contributions tax exempted, return on investment tax exempted, payout 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]	
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	0.70 %	6.57%	4.24%	5.45%	2.92%
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 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

[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).

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 paying the lion's share contribution, often 50% to 70%). This money is subsequently invested in order to fund retirement pay-outs.

[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).

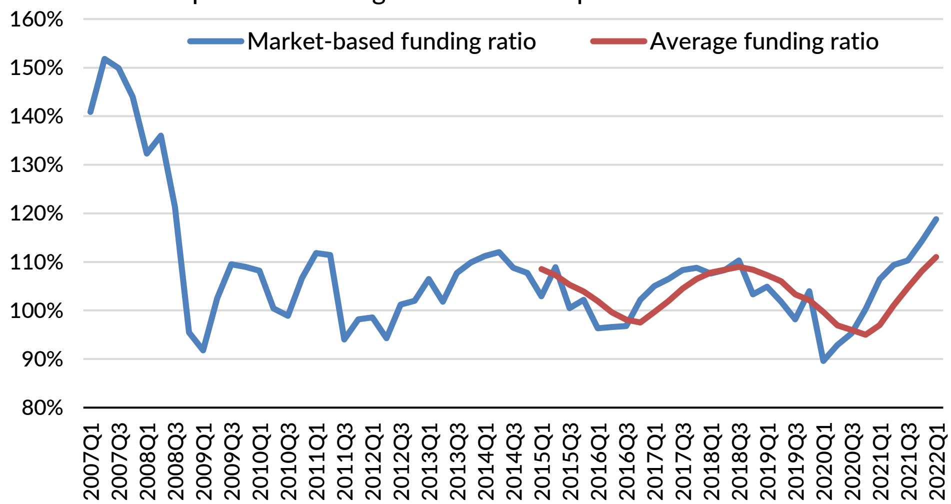
Although enrolment in a Pillar II scheme is not compulsory as such, in many cases it in fact is. The reason for this is that if labour unions and employers in the Netherlands decide to set up a pension scheme for a company or a sector, the government can make enrolment mandatory for everyone working 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

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.

Table NL3. Largest Pension Funds in the Netherlands (2021)

Pension fund	Sector	Invested assets (€ bln)*
ABP	Civil service	525.18
Zorg en Welzijn	Medical services	263.68
Metaal en Techniek	Metal	97.21
Bouwnijverheid	Building companies	74.71
Metalelektro	Electrometal sector	61.85

Source: Own composition based on DNB data, average amount of invested assets over the four quarters of 2021.

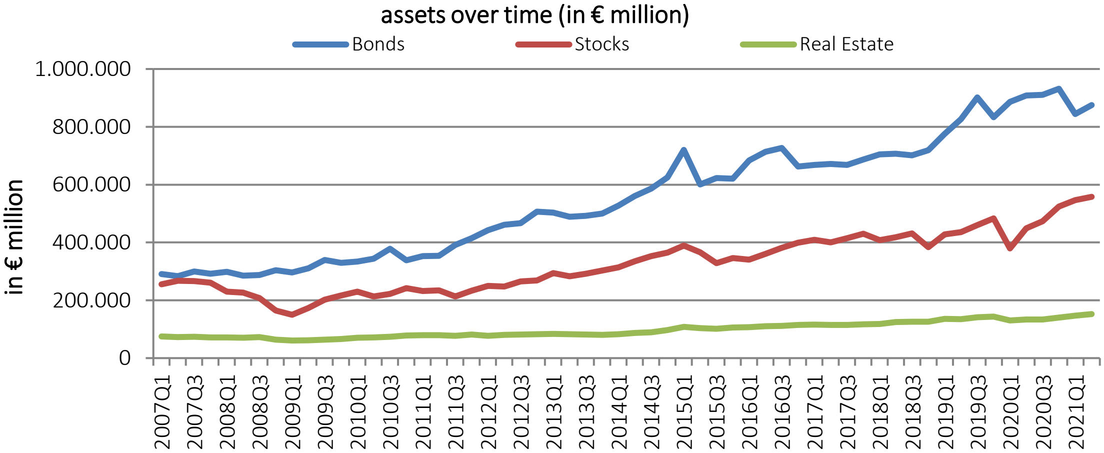
[282] OECD, *Pensions at a Glance 2019. OECD and G20 Indicators*.
[283] https://www.netspar.nl/assets/uploads/Netspar-Design-Paper-68-WEB.pdf and https://opendata.cbs.nl/statline/#/CBS/nl/dataset/71763ned/table?ts=1567116265753.
[284] Based on DNB data, 2022.

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 €1745.95 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.

Graph NL4. Pension fund assets invested in stocks, bonds, real estate and other assets over time (in € million)



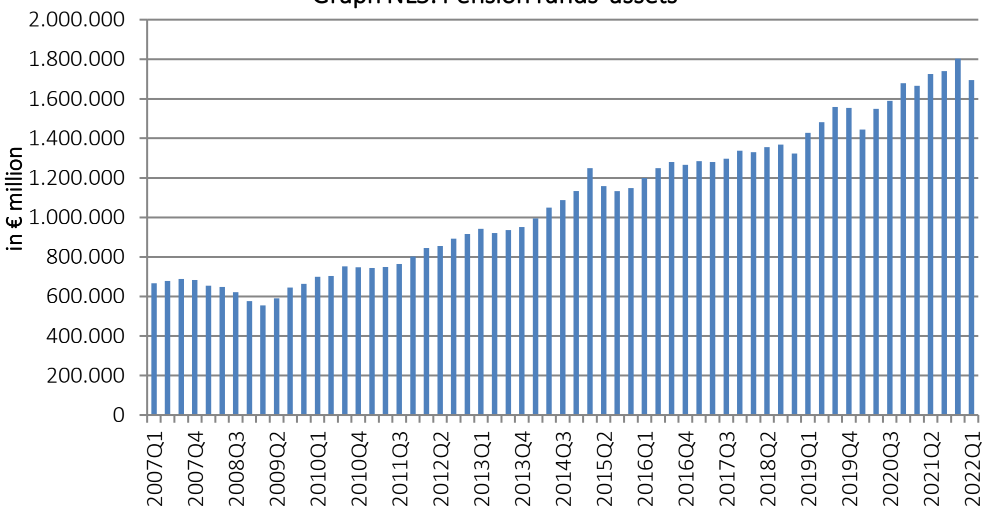
Source: own computations based on DNB data.

[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).

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 fulfills the conditions to enroll 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.

Graph NL5. Pension funds' assets



Source: own composition based on DNB data

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.

Table NL6. Pension fund charges

Year	Asset management costs (% of AuM)	Transaction costs (% of AuM)	Contract management fees (€)
2007	0.21%	*NA*	*NA*
2008	0.25%	*NA*	*NA*
2009	0.19%	*NA*	*NA*
2010	0.15%	*NA*	*NA*
2011	0.20%	*NA*	*NA*
2012	0.22%	*NA*	*NA*
2013	0.25%	*NA*	*NA*
2014	0.19%	*NA*	*NA*
2015	0.39%	0.10%	€ 114
2016	0.38%	0.09%	€ 112
2017	0.39%	0.10%	€ 112
2018	0.37%	0.10%	€ 101
2019	0.36%	0.10%	€ 104
2020	0.48%	0.11%	€ 108
2021	0.69%	0.09%	€ 92

Source: BETTER FINANCE calculations based on DNB (Dutch central bank) data. The figures presented for asset management costs and transactions costs represent the simple average of individual pension funds' cost-to-AuM ratio, based on absolute amounts reported to the DNB. The figures presented for contract management costs are the average of individual pension funds' reported cost per participant weighted by number of participants in each scheme.

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 3pp higher retirement income in the medium-term (25 years).

Over the past 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, asset management costs and contract management costs, for individual pension funds under its supervision. Table NL6 reflects these efforts to account for all costs: For the years 2007 to 2014, the DNB only provided figures for asset management costs, while data on transaction costs and contract management fees were not reported. Since 2015, transactions costs and contract management fees are reported, and we observe a sudden increase in asset management cost figures in 2015 which can be attributed to a more comprehensive calculation of costs under this heading. While transaction costs across Dutch pension funds remained stable over the recent years, we observe an increase in asset management costs in 2020 and 2021 (0.48% and 0.69% of AuM, respectively), deviating from their 2015-2019 trend (average of 0.38% of AuM). For 2021, total costs excluding administrative costs then averaged at 0.78% of AuM across all Dutch pension funds, an increase of 0.19pp compared to 2020.

The more comprehensive cost reporting framework leads to asset management costs figures that are significantly higher since 2015 than they were in years prior to the introduction of this new framework, although relatively stable before and after. This inevitably leads us to conclude that the asset management costs figures for the years prior to 2015 are probably underestimated, which, in turn mean that the net returns we calculate and report later in this section (see Graph NL11 and Tables NL12 and NL15) actually overestimate the performance of Dutch pension funds for these years. This intuition is confirmed by punctual studies of costs: A 2012 study by consultancy bureau Lane, Clark & Peacock put the costs of Dutch pension funds at 0.53% of 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 then several reasons to assume that the levels of total charges, including transaction costs, prior to 2015 were higher than the figures we report for asset management costs.

One should also note that the figures published by DNB for pension funds' nominal returns are net of transaction costs, which are notoriously ambiguous and difficult to account for. In recent years, Dutch pension funds and regulators have made progress to more fully and transparently account for these costs. The consequence, however, is that the actual transaction cost amounts in earlier years were most likely higher than those deducted from the reported nominal return figures that we use for our calculations.

[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

Two more factors lead us to assume that our cost figures for the early years of our reporting period are underestimated. First, Dutch pension funds have invested more in bonds over the last decade and these investments generally incur lower costs. Second, 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

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).

[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.

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 12 pp 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

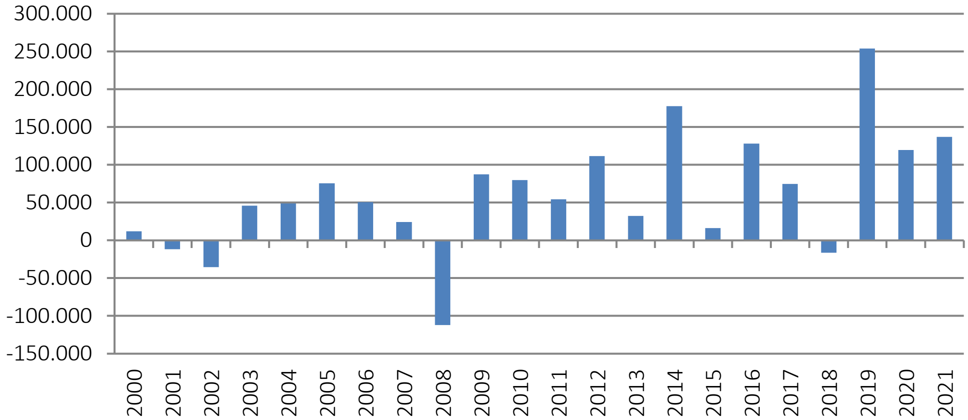
The Dutch supervisor of pension funds, the Dutch central bank, provides investment return figures, in billion euros, for aggregate pension funds[288] and also the quarterly return data for DB and DC pension funds, net of transaction costs. Occupational pension funds' average return can either be calculated 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.

At this stage, we have calculated the time-weighted nominal returns on investment for each year between 2000 and 2021 (in percentages, net of transaction costs). 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 2019 was a truly exceptional year in terms of returns, closely followed by 2021 and 2020. The annual weighted nominal return achieved by pension funds in 2021 was 7.85%, higher than in many other jurisdictions analysed in this report. This was due to a good performance of stock markets, which compensated for the low interest rates on bonds. With these positive results,

[288] http://www.statistics.dnb.nl/financieele-instellingen/pensioenfondsen/index.jsp

2020 and 2021 raised the geometric yearly average since 2000 from 5.07% to 5.31%, continuing the growth trend.

Graph NL8. Investment returns of Dutch pension funds
(in € million, net of transaction costs)

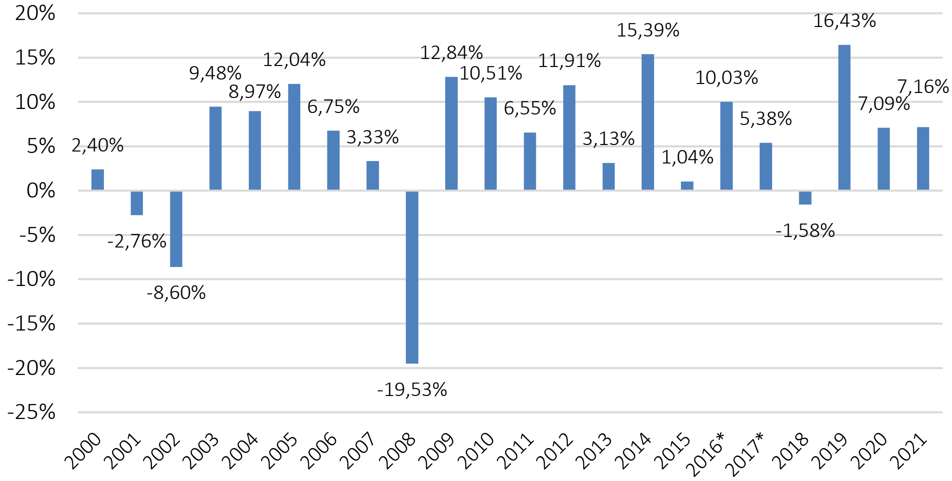


Source: own calculations based on DNB data (tables 8.4 and 8.18, nominal returns are reported net of transaction costs).

Table NL9. Annual nominal return of all Dutch pension funds	
Year	Return as % of AuM
2000	2.61%
2001	-2.55%
2002	-8.39%
2003	9.68%
2004	9.18%
2005	12.25%
2006	6.96%
2007	3.54%
2008	-19.28%
2009	13.03%
2010	10.66%
2011	6.75%
2012	12.13%
2013	3.38%
2014	15.58%
2015	1.43%
2016	10.41%
2017	5.77%
2018	-1.20%
2019	16.79
2020	7.57%
2021	7.85%
Average 2000-2021	5.31%

Source: own calculations based on DNB data (tables 8.4 and 8.18, nominal returns are reported net of transaction costs).

Graph NL10. Returns after charges and before inflation (% of AuM)

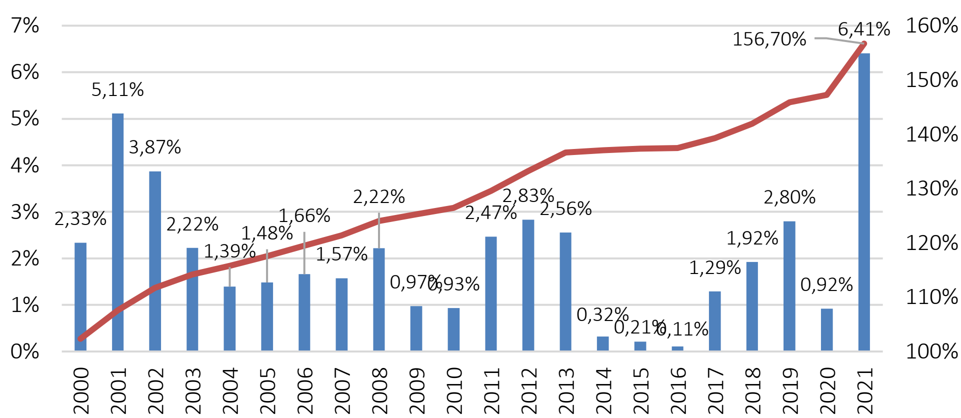


Source: Derived from tables NL6 and NL9

After establishing the nominal returns, we now want to calculate the returns net of costs. Since transactions costs are already deducted from nominal returns, we only deduct asset management costs. The results are visible in Graph NL 10.

The next step on the way to calculating the real net return on investment of the Dutch pension funds is factor in the effect of inflation on returns. Inflation in the Netherlands (calculated based on M12 to M12 change of Eurostat's HICP monthly index for the Netherlands, see Graph NL11), which had reached 2,8% in 2019 but deflated considerably in 2020, due to COVID-19 restrictions (0.92%) has spiked in 2021, with a 6.41% increase in the level of prices.

Graph NL11. Annual inflation rate in the Netherlands



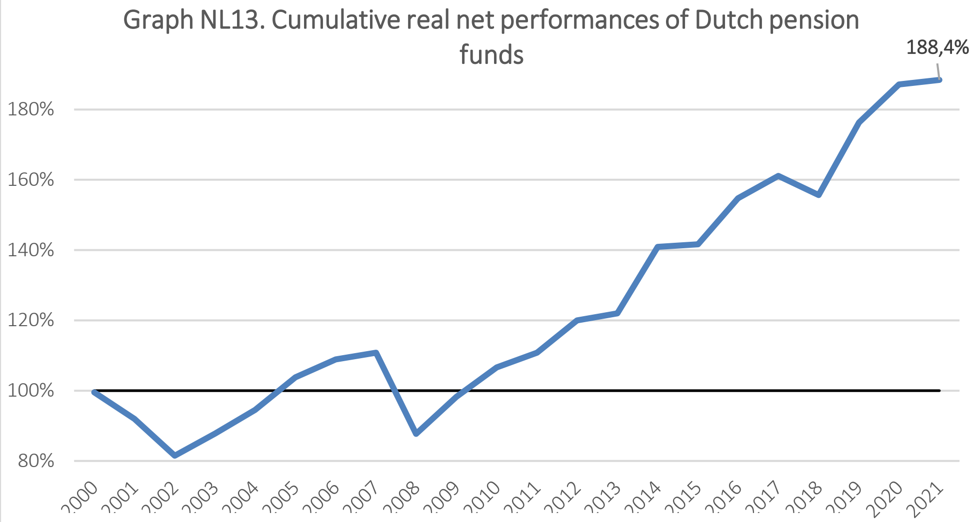
Source: Own calculations based on Eurostat HICP monthly index for the Netherlands (2015 = 100). Annual inflation rates are calculated as M12 to M12 change.

The result of the net real returns calculation for Dutch pension funds is depicted in Table NL12:

Table NL12. Return after charges and inflation	
2000	-0.50%
2001	-7.52%
2002	-11.45%
2003	7.77%
2004	7.61%
2005	9.84%
2006	4.95%
2007	1.71%
2008	-20.83%
2009	12.03%
2010	8.50%
2011	3.95%
2012	8.25%
2013	1.70%
2014	15.46%
2015	0.54%
2016	9.22%
2017	4.11%
2018	-3.35%
2019	13.26%
2020	6.11%
2021	0.70%
Average 2000-2021	2.92%

Source: Own calculations based on tables NL6, NL9 and Eurostat HICP

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 -20.83% in 2008, the year the collapse of Lehman Brothers threw global financial markets into a tailspin, to 15.46% 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



Source: Own composition based on table NL12 and Eurostat HICP.

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. In 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 were 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 2.92% 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 91.75% 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.

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	3.91%	2.92%	0.97%
2001	2,593	76,960	3.37%	5.15%	-1.69%
2002	240	68,535	0.35%	3.21%	-2.77%
2003	2,793	76,814	3.64%	1.58%	2.03%
2004	2,306	82,755	2.79%	1.27%	1.50%
2005	3,322	95,972	3.46%	2.00%	1.43%
2006	3,935	99,693	3.95%	1.72%	2.20%
2007	6,951	100,755	6.90%	1.58%	5.23%
2008	-5,580	87,460	-6.38%	1.65%	-7.90%
2009	2,070	101,246	2.04%	0.72%	1.31%
2010	180	106,624	0.17%	1.84%	-1.64%
2011	-460	105,555	-0.44%	2.50%	-2.87%
2012	360	110,790	0.32%	3.37%	-2.95%
2013	2,208	106,480	2.07%	1.40%	0.66%
2014	-2,988	111,112	-2.69%	-0.06%	-2.63%
2015	3,547	104,934	3.38%	0.49%	2.87%
2016	2,819	110,160	2.56%	0.74%	1.80%
2017	3,179	103,093	3.08%	1.22%	1.84%
2018	3,280	85,634	3.83%	1.83%	1.96%
2019	3,069	95,938	3.20%	2.80%	0.39%
2020	2,735	98,744	2.77%	0.92%	1.83%
2021	4,098	103,143	3.97%	6.41%	-2.29%
AVERAGE 2000-2021			2.07%	2.05%	0.02%

Source: Own composition based on DNB data (investment results are Resultaat netto, table 7.3, Resultaat uit gewone bedrijfsuitoefening na belastingen, table tl2 and table 7.14 for the periods 2000-2006, 2007-2015 and 2016-2021, respectively; investments on behalf of policy holders are Beleggingen voor risico polishouders, table 7.2 and Technische voorzieningen - geïndexeerd en unit-linked, table 7.7 for the periods 2000-2015 and 2016-2021, respectively, all life insurance companies operating in the Netherlands, with the exception of foreign insurers operating on the basis of a European Passport.

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. We present in Table NL14 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).

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%).

Table NL15 summarises the results for both pension funds and life insurance contracts in the Netherlands.

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	2.61	3.91	2.92	0.21	-0.50	0.97
2001	-2.55	3.37	5.15	0.21	-7.52	-1.69
2002	-8.39	0.35	3.21	0.21	-11.45	-2.77
2003	9.68	3.64	1.58	0.21	7.77	2.03
2004	9.18	2.79	1.27	0.21	7.61	1.50
2005	12.25	3.46	2.00	0.21	9.84	1.43
2006	6.96	3.95	1.72	0.21	4.95	2.20
2007	3.54	6.9	1.58	0.21	1.71	5.23
2008	-19.28	-6.38	1.65	0.25	-20.83	-7.90
2009	13.03	2.04	0.72	0.19	12.03	1.31
2010	10.66	0.17	1.84	0.15	8.50	-1.64
2011	6.75	-0.44	2.50	0.20	3.95	-2.87
2012	12.13	0.32	3.37	0.22	8.25	-2.95
2013	3.38	2.07	1.40	0.25	1.70	0.66
2014	15.58	-2.69	-0.06	0.19	15.46	-2.63
2015	1.43	3.38	0.49	0.39	0.54	2.87
2016	10.41	2.56	0.74	0.38	9.22	1.80
2017	5.77	3.08	1.22	0.39	4.11	1.84
2018	-1.20	3.83	1.83	0.37	-3.35	1.96
2019	16.79	3.2	2.80	0.36	13.26	0.39
2020	7.57	2.77	0.92	0.48	6.11	1.83
2021	7.85	3.97	6.41	0.69	0.70	-2.29
Avg.	5.31%	2.07%	2.05%	0.28%	2.80%	0.02%

Source: own calculations based on tables NL12 and NL14.

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.

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[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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