# PensionsEurope Report 2022

## – Trends and developments in funded pensions

November 2022

PENSIONS EUROPE

# Contents

# Foreword

## *By Chair of PensionsEurope*

As Chair of PensionsEurope, the leading voice on workplace pensions in Europe, I am pleased to present "PensionsEurope Report 2022 – Trends and developments in funded pensions" report which analyses the recent developments in occupational pensions landscape across Europe.

There has been a fundamental shift post Covid: interest rates up, inflation up, and a shift in the geopolitical landscape. Pension funds have had thoroughly to consider how to best cope with these fundamental changes, as combined they can form a toxic mix e.g., for economy, investments, and savings. This report provides some insights into those questions.

Pension systems in Europe are as diverse as the countries themselves. They contain and reflect numerous cultural, historical, and political developments, specificities, and sensitivities. Particularly, they are built on a foundation of national social, labour and tax law. In many European countries, retirement income is a combination of different pillars, often a state pension complemented by occupational pensions and some individual pension savings.

The increasing old-age to working-age ratio poses big challenges to our pension systems, including all the pillars. Particularly pay-as-you-go systems are increasingly under pressure facing the dual challenge of remaining financially sustainable and being able to provide an adequate income during retirement. While complicated economic and state budgetary circumstances are not helping to solve the dilemma, high inflation has posed further challenges.

To best benefit from occupational pensions, they must be supported and strengthened across Europe. The regulatory and supervisory framework must be fit for purpose to allow pension funds, the vehicles of the social partners and sponsoring companies giving the pension promises, to tackle the current and new challenges. Having eye especially on the upcoming review of the IORP II Directive and various horizontal legislations, overlapping requirements and unnecessary costs and burden to pension funds must be avoided.

Also personal pensions can play an important role in reaching good outcomes as occupational pensions are not available for everyone or need to be supplemented with additional pension savings.

I would like to express my warmest thanks to PensionsEurope's Chief Economist Pekka Eskola for his work on this report. I hope that you will enjoy reading the report and find it interesting and useful!

**Janwillem Bouma, Chair of PensionsEurope**
**25 November 2022**

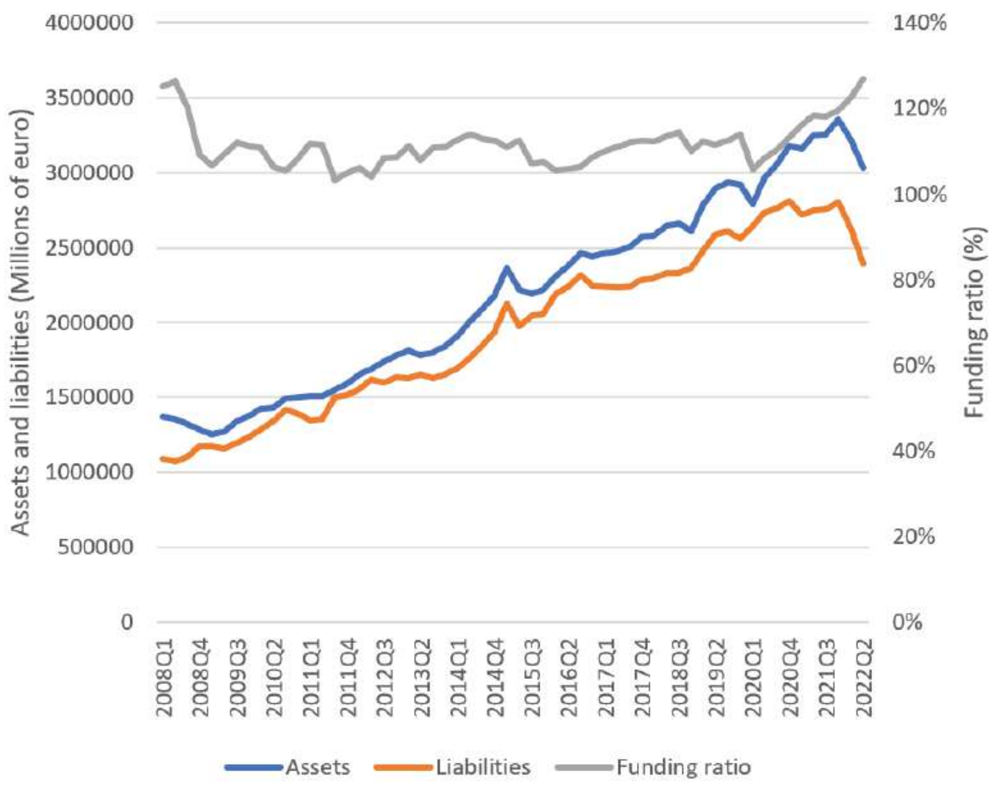
# Executive summary

Through our member associations PensionsEurope represents €7 trillion of assets managed for future pension payments in Europe. In 2020, when the ECB and EIOPA started collecting granular quarterly data from pension funds, PensionsEurope decided to stop gathering portfolio data from its members in order not to increase pension funds' already high reporting burden.

When assessing the development of assets and liabilities of pension funds, particularly the ECB statistics provide a lot of useful and interesting information. PensionsEurope members have analysed the ECB data, and they have confirmed that the ECB statistics give a good picture of the developments across Europe. Therefore, the analysis in this report mainly uses the ECB quarterly data on the developments of assets and liabilities of euro area pension funds.

Until the end of 2021, the assets of euro area pension funds continued growing more than their liabilities, increasing their aggregate funding ratio. A global increase in inflation kicked off in early 2021 and it has stayed very high until today. With rapidly increasing interest rates, the liabilities of pension funds have decreased more than their assets[1], thereby again improving the funding ratio, which was at an all-time high of 127% at the end of 2022Q2 (see Figure 1).

***Figure 1:* Assets, liabilities, and funding ratio of euro area pension funds 2008-2022**




*Data by the ECB and Chart by PensionsEurope*

1. This is the consequence if risk free interest rates are used as discount rates

As part of their long-term investing strategy, many pension funds are using passive investing, in which they buy and hold a diversified mix of assets in an effort to match, but not to beat, the index. The popularity of passive investment funds has been a growing trend over the last decade also amongst pension funds, and it has attracted investors particularly with the promise of lower costs than actively managed alternatives.

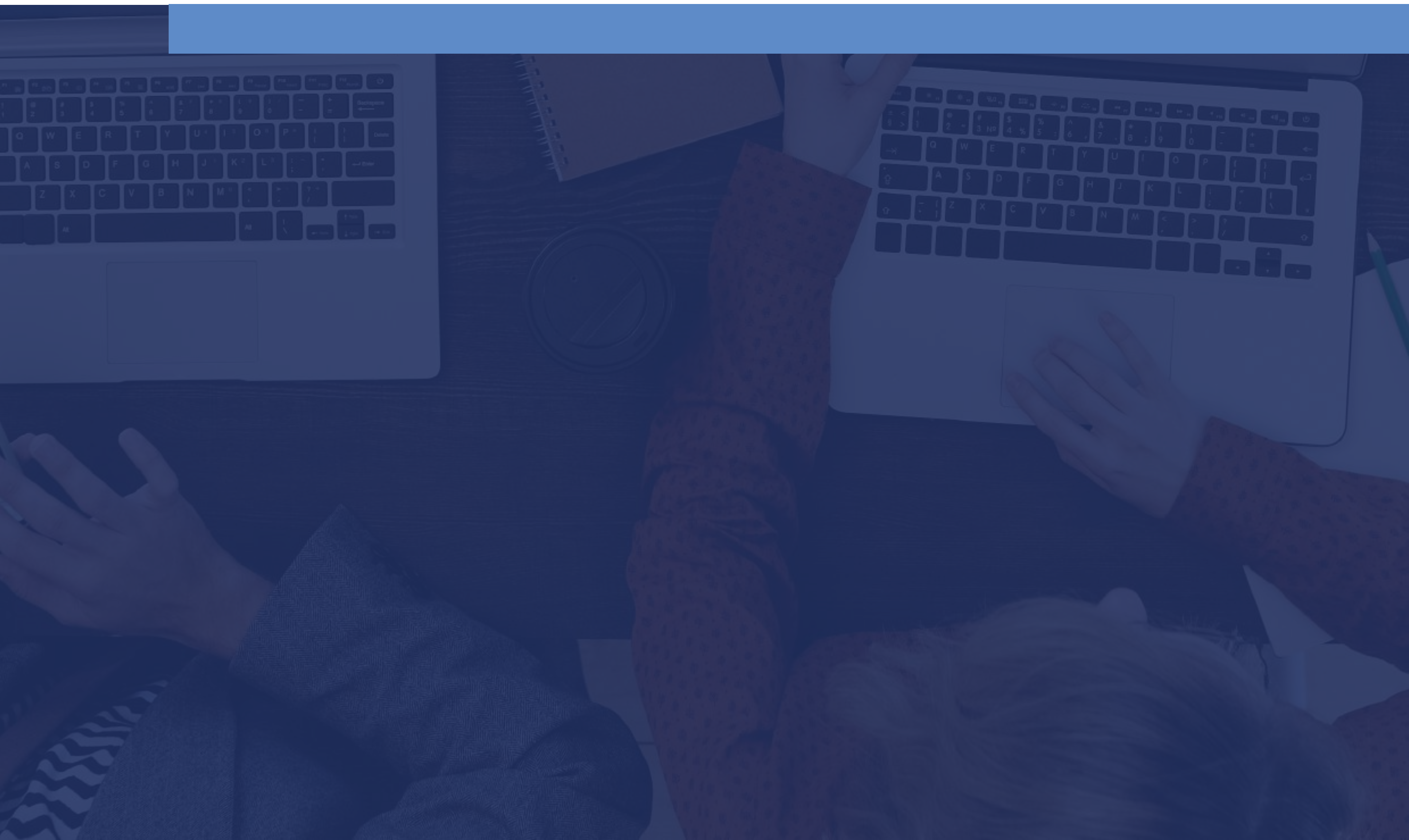
During 2008Q1-2022Q2, the holdings of investment fund shares by pension funds have increased from 23% of their all assets to 45.9%. At the same time, pension funds have relatively decreased their direct investments in equities from 21% to 9% of all assets. According to a rough estimation, all the direct and indirect holdings of public and private equity by euro area pension funds would be around 30% of their all assets.

Pension funds' holdings of debt securities has varied from 23% to 32% of all assets, being 29% in 2008Q1 and 26% in 2022Q2. While defined benefit pension plans have been obliged to invest a certain amount of their assets in 'safe assets', such as sovereign bonds with low (/negative) yields, many pension funds have also successfully searched for yield from corporate bonds. The holdings in real estate funds have been stable and have slightly increased over the past years. In many countries, pension funds are big investors in real estate, which has been a natural inflation protection to them.

The direct impact of inflation on pension funds varies across countries and different kinds of pension schemes (who bears the risk varies) and their various investment strategies. High inflation makes it, in general, more challenging to provide high pension benefits in real terms, both for DB and DC schemes. The precise effect of inflation on a pension fund is determined by the extent of the inflation hedging each individual fund has undertaken, as well as the way in which benefits are linked to inflation.

PensionsEurope will publish its next annual statistical report at the end of 2023. Meanwhile, we will use the pension data (provided by various sources mentioned in this report) particularly in our internal analysis.

# 1.PensionsEurope statistics



# 1.PensionsEurope statistics

PensionsEurope appreciates reliable and good quality pension statistics. In 2020, when the ECB and EIOPA started collecting granular quarterly data from pension funds, PensionsEurope decided to stop gathering portfolio data from its members in order not to increase pension funds' already high reporting burden. However, we continue to collect some basic information from our members on a higher level.

Pension funds have significant assets in Europe and globally. While the global pension fund assets are over US$56 trillion (Thinking Ahead Institute, 2022; OECD, 2021a), through our member associations PensionsEurope represents €7 trillion of assets managed for future pension payments in Europe.

**PensionsEurope Member Associations represent:**

| PENSION PLANS (Only the 2nd pillar) | |
|---|---|
| Total assets: | € 5938,34 bn |
| Number of Members:[2] | 39 257 352 |
| Number of Beneficiaries: | 52 165 576 |

| BOOK RESERVES | |
|---|---|
| Total assets: | € 358,78 bn |
| Number of people covered: | 10 604 548 |

| GROUP INSURANCE | |
|---|---|
| Total assets: | € 356,58 bn |
| Number of people covered: | 5 221 412 |

| THE 3RD PILLAR PERSONAL PENSIONS | |
|---|---|
| Total assets: | € 338,48 bn |
| Number of people covered: | 13 580 992 |

| ALL PENSION ARRANGEMENTS | |
|---|---|
| **Total assets:** | **€ 6992,19 bn** |

The Annex 1 of this report contains information on various occupational pensions statistics.

2. The number of Members and Beneficiaries might contain some double counting.

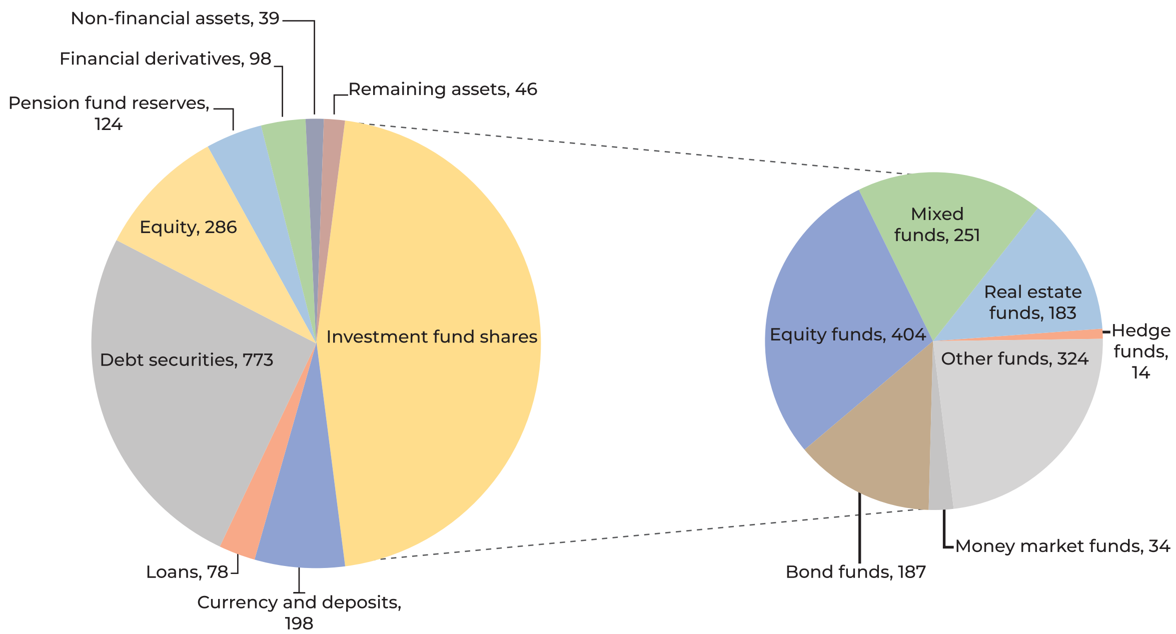
# 2.Pension funds assets

# 2.Pension funds assets

When assessing the development of pension funds' assets, particularly the ECB statistics provide a lot of useful information. PensionsEurope's members have analysed the ECB data, and they have confirmed that the ECB statistics give a good picture of the developments across Europe. That is the reason why in the analysis below, we mainly use the ECB quarterly data on the developments of assets of euro area pension funds, even though not all of our members are included in the ECB data[3].

In 2022Q2, the total assets of euro area pension funds were €3,031 bn. Investment fund shares accounted for 45.9% of the total assets, while the second largest category of holdings was debt securities (25.5%), followed by equity (9.4%). According to a very rough estimation, all the direct and indirect holdings of public and private equity by euro area pension funds would be around 30% of their all assets, including investments in: equity fund shares (€404 bn, 13.3% of all assets), equity (€286 bn, 9.4% of all assets), and mixed, hedge, and 'other' funds.

***Figure 2: Assets of euro area pension funds (bn euro), 2022Q2***




*Data by the ECB and Chart by PensionsEurope*

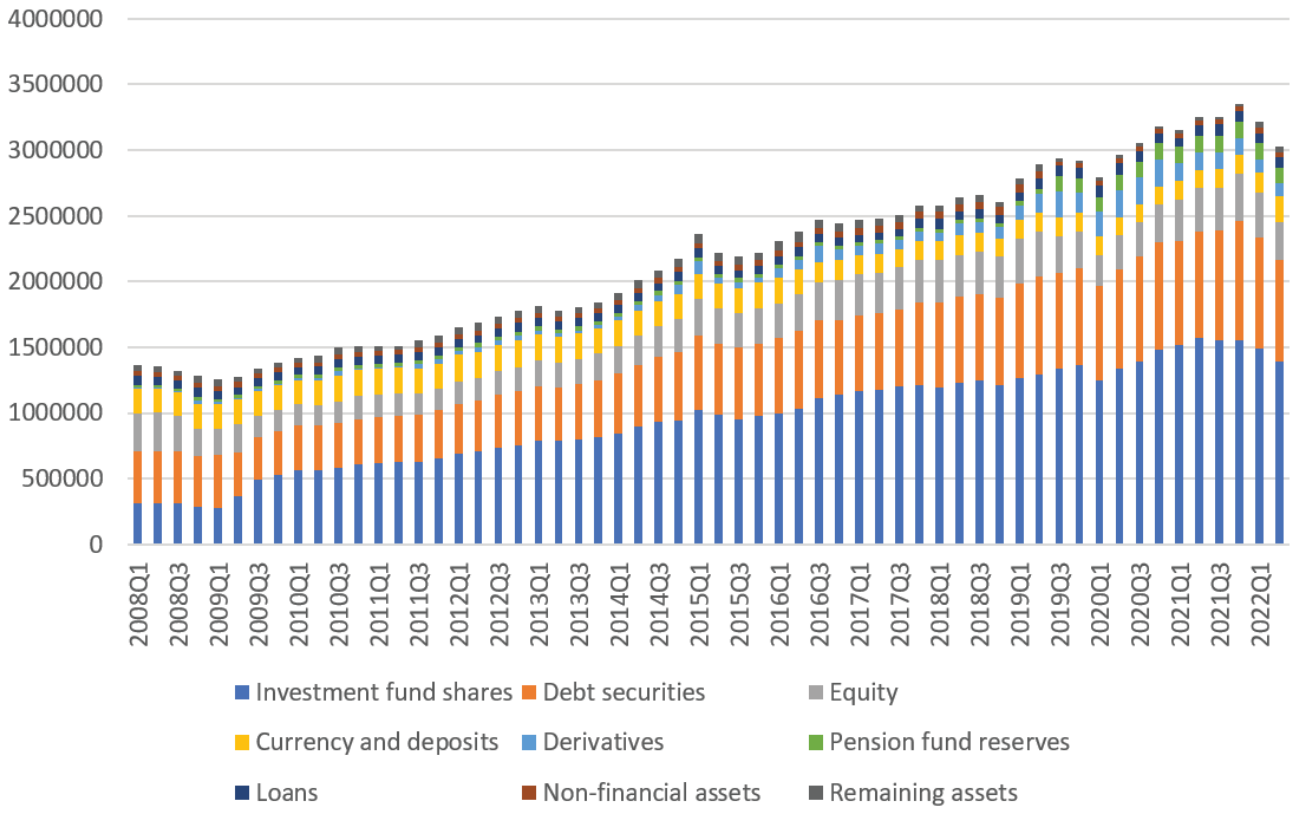
As part of their long-term investing strategy, many pension funds are using passive investing, in which they buy and hold a diversified mix of assets in an effort to match, but not to beat, the index. The popularity of passive investment funds has been a growing trend over the last decade also amongst pension funds, and it has attracted investors particularly with the promise of lower costs than actively managed alternatives.

3. We have members from non-euro EU and EEA countries and from the UK and Switzerland.

During 2008Q1-2022Q2, the holdings of investment fund shares by pension funds have increased from 23% of their all assets to 45.9%.

At the same time, pension funds have relatively decreased their direct investments in equities from 21% to 9% of all assets (Figure 3).

***Figure 3:** Assets of euro area pension funds (million euro), 2008Q1-2022Q2*




*Data by the ECB and Chart by PensionsEurope*

Pension funds' holdings of debt securities has varied from 23% to 32% of all assets, being 29% in 2008Q1 and 26% in 2022Q2. While defined benefit pension plans have been obliged to invest a certain amount of their assets in 'safe assets', such as sovereign bonds with low( /negative) yields, many pension funds have also successfully searched for yield from corporate bonds.

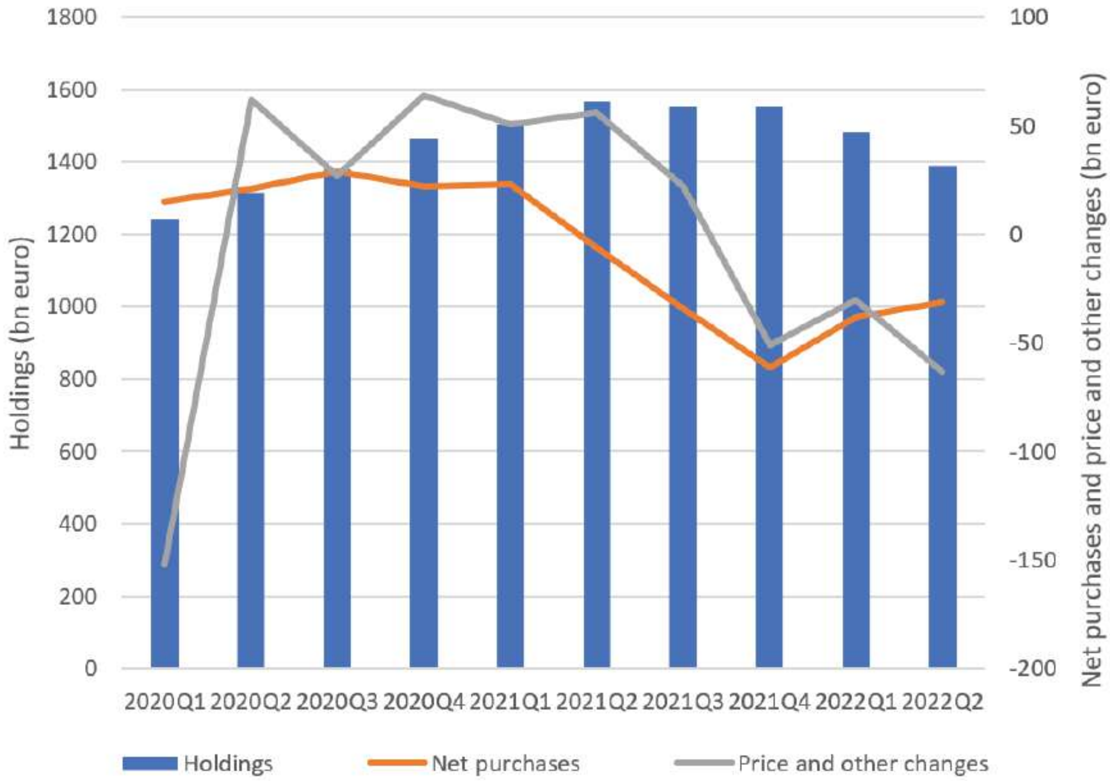
Pension funds' holdings in derivatives has varied from 1% to 7% of all assets, being 1-2% for a long time between 2009-2014, after which their share of pension funds' holdings started increasing, reaching 6-7% of all assets from the second half of 2019 until the end of 2020.

Please find below a deeper analysis of the developments of pension funds' investments in derivatives, investment funds, debt securities, equities, and other asset classes.

# 2.1 Investment funds

During 2008Q1-2021Q2, the holdings of investment fund shares increased by 410% from €308 bn to €1,573 bn. The holdings stayed stable during the following six months, while they decreased by 11% during the first half of 2022, due to net sales, negative prices, and other changes.

***Figure 4:** Assets of euro area pension funds, investment fund shares 2020Q1-2022Q2*

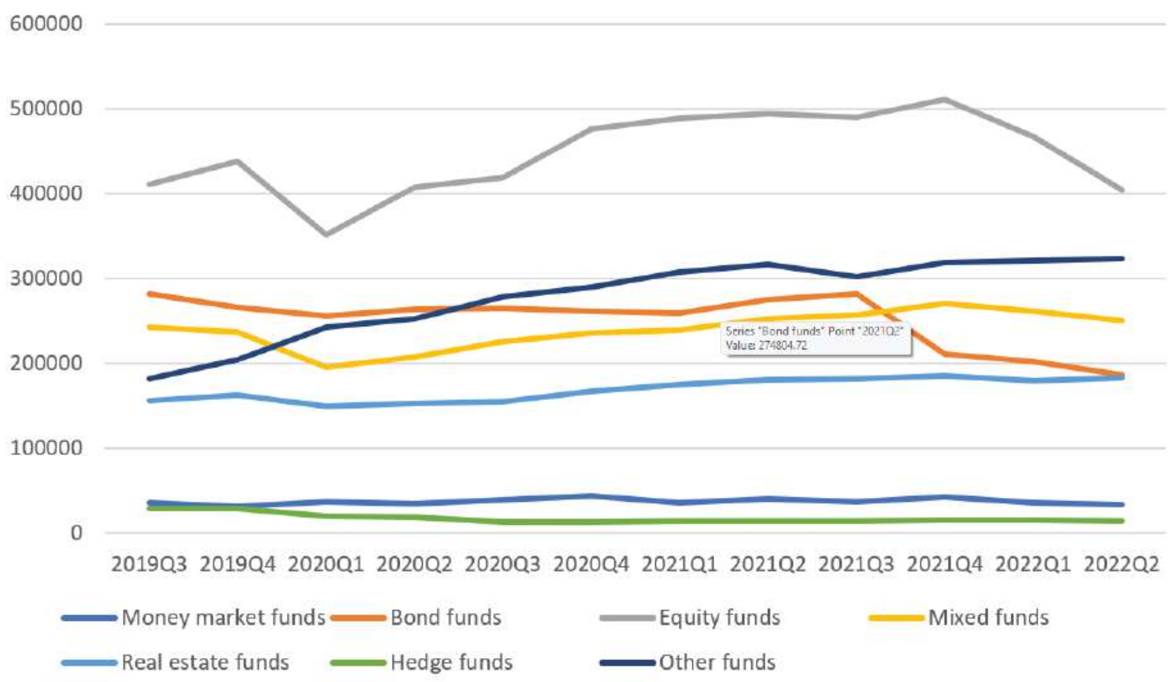



*Data by the ECB and Chart by PensionsEurope*

Particularly smaller pension funds invest in investment funds which can provide them a good geographical diversification with low fees. Investment funds also provide a lot of different kinds of options for ESG investments (see the section on 'Investment strategy' for more detailed information about geographical diversification and ESG investment).

Over the past years, the largest shares of the pension funds´ holdings within investment funds have been equity funds, which accounted for 29% (€404 bn) at the end of 2022Q2 - a substantially higher sum than the pension funds´ direct investment in equities, which totalled €286 bn.

***Figure 5:* Assets of euro area pension funds, investment fund shares (million euro), 2019Q3-2022Q2**




*Data by the ECB and Chart by PensionsEurope*

'Other' funds represent the second largest share, 23% (€324 bn), which has been significantly growing (relatively and absolutely) during the last years. At the end of 2022Q2, pension funds hold €324 bn in 'other' funds, and according to estimations they consist of:

- **Private equity: 35%**
- **Mortgage funds: 30%**
- **Infra: 15%**
- **Commodity funds: 10%**
- **Loan funds: 10%**

Most private equity funds, including venture capital funds, are classified as equity funds, if they primarily invest in equity, or as other funds, if they largely invest in unlisted companies, e.g., via loans or participations. Private equity represents around 3.7%, €113.4 bn, of the total assets of euro area pension funds, €3,031 bn. Recently, some pension funds have sold (some of) their private equity investments (with a very significant profit), as in some cases their valuations climbed very high.

Pension funds' third largest share within investment funds is mixed funds (18% / €251 bn), followed by bond funds 13% (€187 bn). Since mid-2021, the holdings of bond funds have dropped by 34% from €282 bn to €187 bn (see the reasons in the following section on debt securities) and also their relative share in investment fund shares has significantly dropped (from 18% to 13%).

The holdings in real estate funds, €183 bn (13% of all investment fund shares), have been stable and have slightly increased over the past years. In many countries, pension funds are big investors in real estate, which has been a natural inflation protection to them. Especially DB schemes have considered the role of real estate in helping them with de-risking by delivering high and steady income while also matching liability cashflows and providing growth to help close deficits.

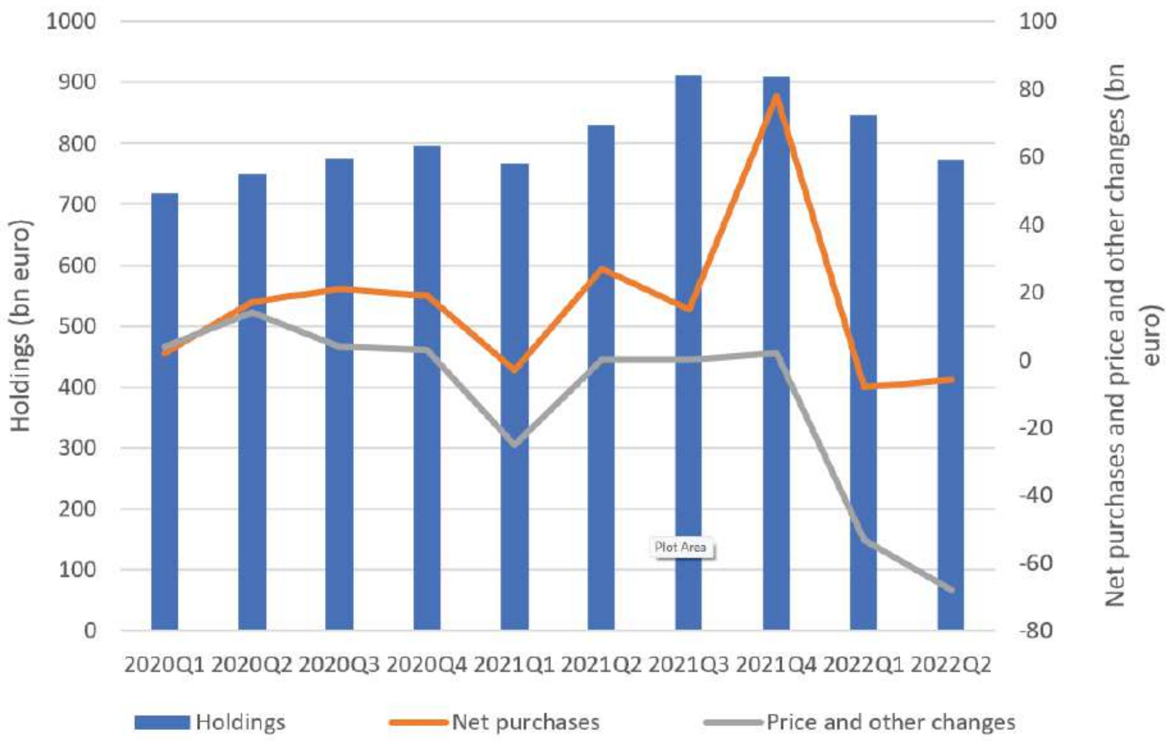
Pension funds' second smallest share within investment funds is in money market funds (2% / €34 bn). They are fixed income mutual funds that invest in highly liquid securities like cash, cash equivalents, and high-rated debt-based securities characterized by short maturities and minimal credit risk. In the times of rising inflation, the benefit of money market funds is that they enable pension funds to benefit more quickly from higher yields when rates rise.

Hedge funds represent the smallest share of pension funds' shares in investment funds, 1% (€14 bn). In general, over the past decades, pension funds have not been satisfied with the performance of hedge funds, while they have paid relatively high fees to them. That is also the reason why their share in pension funds' portfolios has been continuously decreasing. According to the data from Hedge Fund Research (HFR, 2022), hedge funds were down 5.6% on average during the first half of 2022.

## 2.2 Debt securities

In the times of (high) inflation, during 2021Q1-2022Q2, pension funds have net purchased debt securities by €103 bn. However, at the same time the price (and other) changes of debt securities have been -€144 bn, which can be mostly explained by increasing interest rates. By net purchasing debt securities (and possibly selling some stocks after the rally of 2021), pension funds have rebalanced their asset allocations to be aligned with their strategic objectives.

***Figure 6:* Assets of euro area pension funds, debt securities 2020Q1-2022Q2**



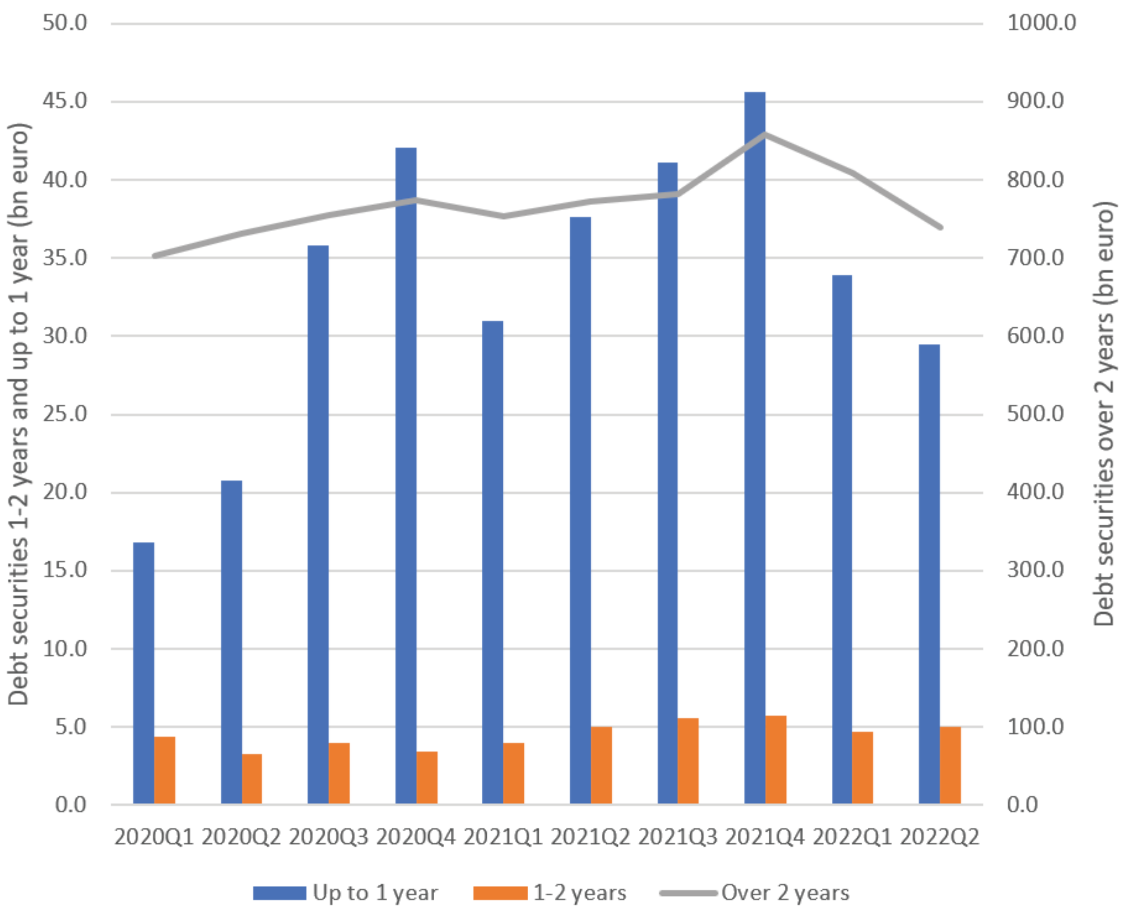

*Data by the ECB and Chart by PensionsEurope*

Some pension funds are hedging inflation risks through investing in inflation-linked bonds. Such strategies are designed to work when real yields move in line with real risk-free rates, but a sudden rise in the credit spreads on inflation-linked bonds would reduce their effectiveness. Most notably, pension funds in Iceland have in the past allocated most of their fixed-income portfolio to index-linked bonds. One reason for having done that is that DC schemes in Iceland provide inflation-linked annuities and are required to meet a minimum replacement rate, which by itself is sensitive to inflation risk.

Implementing inflation protection contains various challenges. The market for inflation-linked bonds and swaps is limited in size and lacks liquidity, and therefore, it is difficult to build a large position fast. Inflation protection also decreases long-term return prospects because of the inflation risk premium. Furthermore, the duration of fixed income assets may not be sufficient to match the duration of the index-linked annuities. Considering the challenges to invest in traditional inflation hedges, pension funds have also considered investing more in 'indirect' hedges, while considering the recent turmoil and other effects for instance in the equity market.

The vast majority of the holdings of debt securities by pension funds, 96% (€739 bn from a total of €773.5 bn), are in the debt securities with a maturity of over 2 years. It reflects on the basic characteristics of pension funds with their long-term assets and liabilities and very long-term investment horizons.

***Figure 7:** Assets of euro area pension funds, debt securities by maturity 2020Q1-2022Q2*




*Data by the ECB and Chart by PensionsEurope*

On the other hand, the requirement of DB pension schemes to heavily invest in low or negative yield (long-term) sovereign bonds has significantly lowered returns. Having been obliged to invest them for long-term, now also limits pension funds' possibilities to invest in bonds with higher yields.

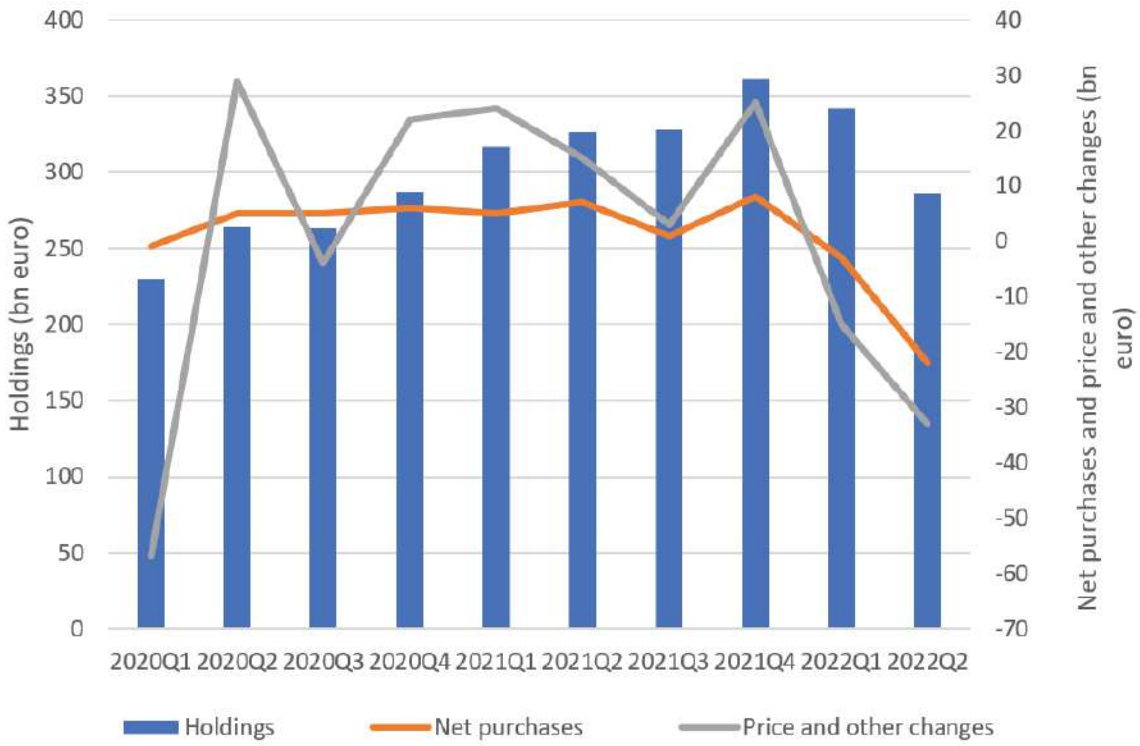
## 2.3 Equities

Until the end of 2021, stocks continued providing good returns to pension funds. Between 2020Q1 and 2021Q4, the holdings of equity increased by 57% (€131 bn) from €230 bn to €361 bn, and also the net purchases (€37 bn) and particularly price and other changes (€114 bn) of equity were positive.

In spite of numerous global challenges, including historically high inflation, supply chain disruptions, and global Covid-19 pandemic (and its Delta and Omicron variants), stocks notched all-time highs still in 2021 (for instance, the S&P 500 index reached 70 all-time highs). The pan-European Euro Stoxx index increased by over 22% and especially bank and tech stocks outperformed, both with rallies of 34%.

In 2022, most major stock markets have been in bear market territory, and there has been rising concerns that the economy is barrelling towards stagflation where slow growth or even recession combines with high or even accelerating inflation. During the first half of 2022, the holdings of equity decreased by -21% (€75 bn) from €361 bn to €286 bn, with the net sales of €25 bn and negative price (and other) changes of €48 bn.

*Figure 8: Assets of euro area pension funds, equities 2020Q1-2022Q2*




*Data by the ECB and Chart by PensionsEurope*

During the Covid crisis, unconventional monetary policy with large-scale asset purchases strongly supported the stock market. Due to rocketing inflation, the Central Banks were obliged to start increasing interest rates, which negatively impacted the stock market. Pension funds are aware that soon, the ECB will also start considering shrinking its balance sheet, and pension funds have already considered its possible impact on markets.

So far, there is limited evidence that strong ESG stocks perform better or worse than other stocks, neither during crises nor in crisis-free periods – with the exception for the US, where socially responsible stocks appear to be more resilient during crises (Gianfrate et al., 2021).

The stock market tends to look 6-12 months ahead in terms of valuation, which means that it acts as a forward indicator. The impact of inflation and increasing interest rates on the stock market has already been significantly priced in by investors. Possible recession would not come anymore as a surprise (in some countries it is already taking place), as it has been one of the major concerns to pension funds and other investors. On a side note, by the time a recession is declared, which is typically in the middle rather than the beginning of it, the recession is already well along its way.

## 2.4 Derivatives

For many European pension funds, an integral part of their investment approach is to use over-the-counter (OTC) derivatives to manage their financial solvency risk, as their liabilities are often long-dated, one-directional and linked to interest rates and/or inflation. Pension funds use these derivatives to reduce the risk of retirees not receiving pension income. Prudent risk management is encouraged by regulators and reduces the burden on pension funds' corporate (or other) sponsors.

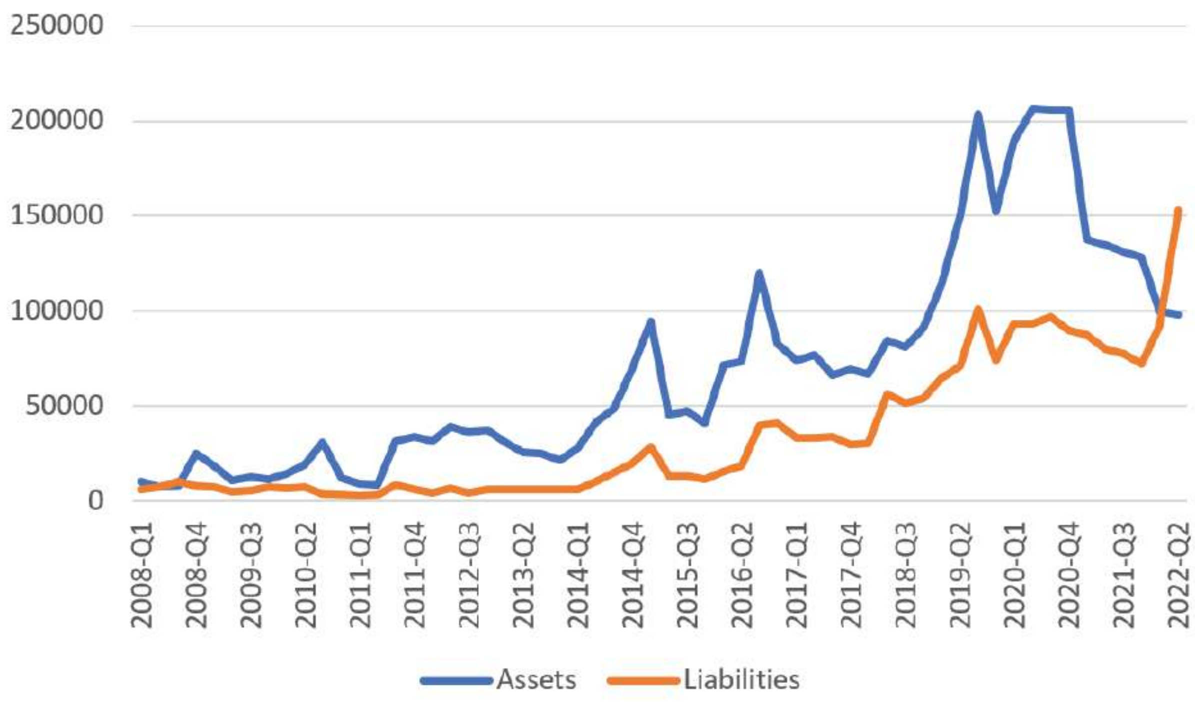
Pension funds also invest in high-quality European government bonds to hedge their (euro) liability risks, but their ability to hedge such risks completely with these bonds is limited as the amount of bonds that can be used to match long-dated liabilities is unavailable in the capital markets. Derivatives have the advantage of being available, and for longer maturities. Moreover, they can also be tailored to match the dates of pension funds' liabilities more accurately, which is not generally possible with government bonds. Pension funds also manage their currency risk through derivatives.

In the euro area, pension funds in Austria, Belgium, Germany, Ireland, Italy, Latvia, Luxembourg, the Netherlands, Portugal, Slovakia, and Spain are using financial derivatives as hedging instruments or in general for risk management purposes. In 2022Q2, the assets holdings of financial derivatives were €97.9bn of which over 96% (€94.2bn) were held by the Dutch pension funds, followed by pension funds in Ireland (€2.8bn), Slovakia (€300mn), Spain (€258mn), Italy (€240mn), Belgium (€50mn), Portugal (€31mn), Germany (€23mn), Luxembourg (€9mn), and Latvia (€4mn). It is important to note that in some cases not all derivatives are held on the balance sheet of a pension fund. For instance, in Germany, especially FX hedging instruments, and in most cases derivatives in general, are used within the so called Spezial-AIF and executed by the appointed asset manager of the AIF.

Beyond the euro area (and within PensionsEurope Membership), pension funds in Norway (IORPs by €75mn in 2022Q1), Sweden (IORPs by €1.2bn in 2022Q1), Croatia, Denmark, Iceland, Switzerland,

and the UK also use derivatives. In the UK, most DB schemes use derivatives to hedge against moves in interest rates and inflation. Besides hedging interest rate risk, some pension funds, for instance in Norway, also use currency hedging to reduce the effects of currency fluctuations on their investment performance. Since the end of 2020, during the time of increasing interest rates and inflation, pension funds' holdings in derivatives have significantly decreased by 52% from €205.9bn to €97.9 bn (Figure 9). This drop has been driven by the developments in interest rates, as most of the derivatives are interest rate swaps and forward rate agreements. When interest rates rise, the value of interest rate derivatives falls (and when the rates go down, the value of interest rate derivatives increases and partly compensates for the higher present value of future pension liabilities).

***Figure 9:* Assets and liabilities of euro area pension funds, financial derivatives (million euro) 2008Q1-2022Q2**




*Data by the ECB and Chart by PensionsEurope*

When pension funds use derivatives, such as interest rate swaps, to match the interest rate sensitivity of their assets more closely with that of their liabilities, counterparties with which these contracts are concluded require a margin in the form of a ringfenced bank account. When interest rates go up and these contracts increase in value, also the margin in requirements increases accordingly. During the first half of 2022, the Dutch pension funds contributed €82 bn to margin accounts, partly from the proceeds of assets they sold (DNB, 2022a). In the ECB statistics, the €82 bn increase in margin accounts consists of the increase in other deposits on the asset side and a decrease in loans on the liability side.

Transactions regarding derivatives are almost always negative in the ECB pension funds statistics. On the one hand, when a derivative has a positive value, it is reported on the asset side. On the other hand, when a contract has a negative value, it is reported on the liability side. Furthermore, when a contract is terminated or sold, there is a negative transaction. And when a derivatives contact is acquired, it usually has zero, or very low value.

Currently, the average interest rate hedge of a Dutch pension fund is around 58%. Most of the pension funds which have increased their interest rate hedge have done it automatically, as a result of their dynamic interest rate hedging policy. So, in practice, the interest rate hedge rises, if market interest rates hit a certain trigger, such as 1% or 1.5% (Hoekstra, 2022).

In September 2022, the sharp fall in the price of 30-year UK government bonds led to unprecedented margin calls or demands for more cash. To raise the funds, pension funds were obliged to sell assets, including government bonds or gilts. To stabilize the market, the Bank of England stepped in to buy gilts. (Cumbo et al., 2022).

On 9 June 2022, the European Commission published a delegated regulation on the final one-year extension of pension funds' exemption from clearing obligation to start applying the clearing obligation on 19 June 2023. The key challenge for pension funds is the need to post variation margin in cash in case of market stress when they may be required by CCPs to post significant amounts of variation margin.

PensionsEurope has found that the best way forward would be a structural solution, involving central bank liquidity, as central clearing houses in Europe would suffice to provide (indirect) central bank liquidity utilizing their cleared repo platform. Therefore, we have proposed to the Commission that the solution would be that the European central clearing houses could provide central bank liquidity to pension funds in times of stress to convert high quality government bonds into cash.

# 3. Funding ratio

# 3. Funding ratio

The funding ratio, i.e. the ratio between available assets and liabilities, reflects a pension fund's financial position. It is expressed as a percentage, and its aim is to show whether a pension fund has enough assets to pay out pension benefits to its current and future members.

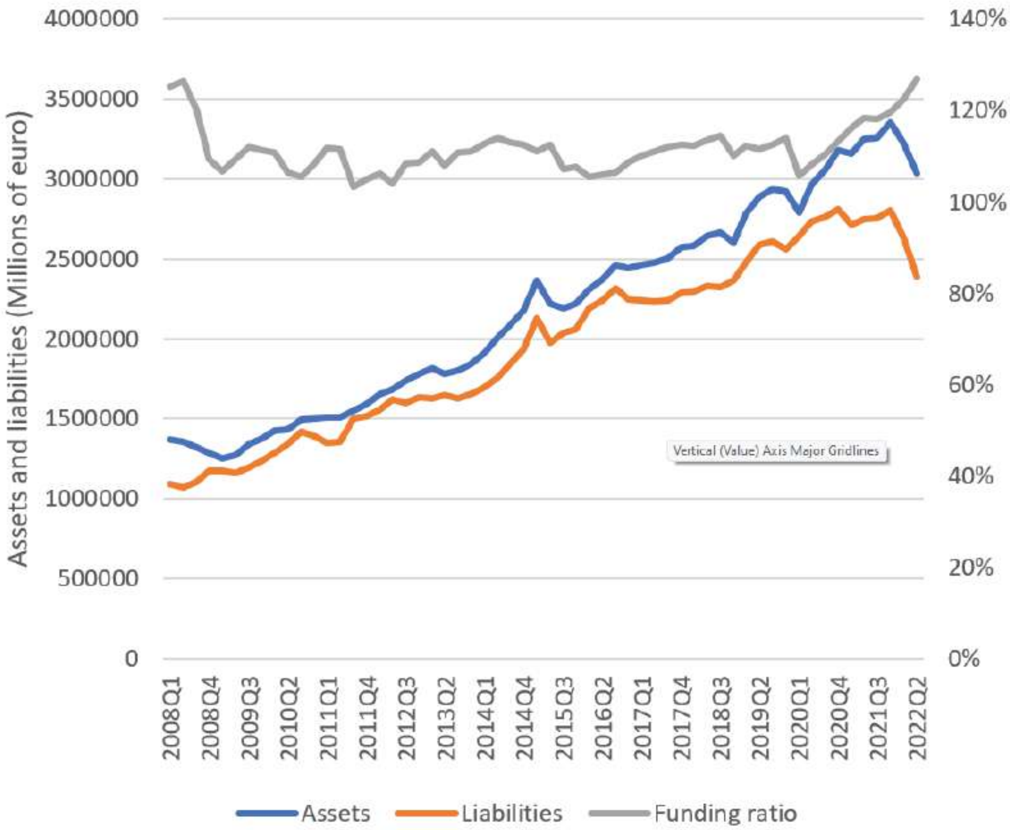
While in most countries, pension funds use the market (or marked-to-market) values of assets on their national balance sheets (other national valuation standards allow for instance the usage of measurement approaches), national prudential regulations in funding and liability valuation standards, especially differences in discount rates, vary across Europe. Pension funds' liabilities are also shaped, and partly determined, by national social and labour law, the role of the sponsor giving the pension promise, and in particular by the available sponsor support. In addition, there are also some other issues, such as pension protection mechanisms and longevity and mortality tables, which affect the valuation of the pension liabilities (see in more detail the ECB pension fund statistics compilation guide, October 2020).

To value their liabilities, pension funds must use risk-free interest rates in Denmark, the Netherlands, and Sweden. In those countries, the use of risk-free interest rates increased the value of pension funds' liabilities in the low/negative interest rate environment, while now with the rise of rates it has significantly decreased them. For instance, the value of pension entitlements of the Dutch pension funds decreased by 22% only in half a year time from 2021Q4 to 2022Q2. In 2022Q3, their funding ratios improved by 2.1% to 124.6% (which is well above the figure of 110.3% for a year ago), as the value of their liabilities showed a steeper decline than their assets (DNB, 2022b).

By investing in fixed-income securities, such as long-term debt securities and mortgage loans, pension funds can hedge the interest rate in whole or in part in order to stabilise their funding ratio. Furthermore, they can use derivatives, such as interest rate swaps, to match the interest rate sensitivity of their assets more closely with that of their liabilities (DNB, 2022a).

Until the end of 2021, the assets of euro area pension funds continued growing more than their liabilities, increasing their aggregate funding ratio. A global increase in inflation kicked off in early 2021 and it has stayed very high until today. With rapidly increasing interest rates, the liabilities of pension funds have decreased more than their assets, thereby again improving the funding ratio, which was at an all-time high of 127% at the end of 2022Q2 (see Figure 10).

***Figure 10:** Assets, liabilities, and funding ratio of euro area pension funds 2008-2022*




*Data by the ECB and Chart by PensionsEurope*

During 2008Q1 and 2022Q2, the assets of euro area pension funds increased by 122% from €1,367 bn to €3,031 bn, while their liabilities increased slightly less by 118% from €1,091 bn to €2,390 bn. Until the end of 2021, most of the asset classes generated good returns to pensions funds over the last decade despite the low interest rate environment. Pension funds have successfully searched for yield from various asset classes, not only from various alternative investments, such as private equity, but also for instance from corporate bonds with higher yields.

# 4. Trends in investments

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## 4.1 Investment strategy

Pension funds' investment strategies must balance risk, return and costs. And today, of course, increasingly the Environmental, Social, and Governance (ESG) criteria as well (see below for more detail). The main drivers of pension funds' asset allocation include asset and liability management, risk management, hedging against inflation, return on investments, hedging liability risks, and diversification. Several drivers can spur a market shift in pension asset allocations, and they should not be considered independently, but rather as an ecosystem in which each driver influences the others.

Pension funds invest in accordance with the 'prudent person' and/or in accordance with national regulatory investment requirements. Pension funds' investment portfolios differ from many other institutional investors due to longer duration of liabilities, often an absence of early termination risks, and different legal frameworks.

In general, pension funds invest more in private markets and international markets, whereas some other institutional investors more in fixed income. However, their possibilities to invest in equities are affected by short-term/one-year oriented accounting/funding rules (respectively buffering rules against equity volatility).

Not only asset class diversification is crucial to pension funds, but geographical diversification is also key to mitigate country or regional risks. Geographical diversification can lead to increased expected returns and a better Sharpe ratio (risk-return).

Traditionally pension funds have focused strongly on their domestic markets. While domestic loans, €50 bn, still represent the majority, 64%, of all the loans invested by the euro area pension funds (€77.7 bn at the end of 2022Q2), nowadays pension funds are investing more and more in international markets and in alternatives. In some countries (such as the Netherlands) this change has taken place already some decades ago.

For instance, the holdings of domestic equity by euro area pension funds were €21.8 bn at the end of 2022Q2, which represents only less than 8% of all equity holdings (€285.9 bn). At the same time domestic debt securities were €133.6 bn, which accounts only for 17% of pension funds' total debt holdings (€773.4 bn).

The reasons for foreign exposure in investment strategies vary depending on risk tolerance and appetite, currency fluctuations, inflation, local market conditions, and diversification. In general, pension funds invest in international markets to reduce overall portfolio risks and to harvest different risk premiums. Furthermore, many countries have specific biases in their national stock market (e.g., financials or chemicals), thus broadening the countries invested in also decreases sector and specific (company) risks. Other motivations for investing in international markets contain e.g., availability/access to attractive (price, quality, liquidity, transparency) foreign equity products and solutions. Not only the demand side matters, but also the supply side.

In countries with higher currency fluctuations, investments in the local market – including the exchange rate converted into the national currency/euro - are volatile. Hence, overseas investments are hedged against currency rate changes. While the euro has been much less volatile than many smaller currencies, recently its decreasing value against the dollar has caused challenges to investors in Europe. The various impacts of the Russian invasion of Ukraine, and growing fears of stagflation in Europe have caused the euro to drop below parity against the dollar for the first time in almost two decades.

Pension funds play an important role in the long-term financing of the EU's real economy and contribute to jobs and growth in Europe. They increase the amount of market-based financing available to the economy and improve the efficiency of financial intermediation. The countries with a substantial funded pension funds sector tend to have better developed capital markets. Many non-euro area investments can also have a positive impact on Europe indirectly, as many companies or part of their European business is financed via capital markets around the world.

The EU has made it easier to invest in Europe and to invest across borders within the EU (e.g. thanks to UCITS, AIFMD, and reporting standardization). A growing, developing, and stable economy attracts investments. If investment opportunities in Europe will improve, the stake of the European investments by pension funds will increase accordingly. The deepening of the Capital Markets Union (CMU) is helpful in this respect.

# 4.2 Responsible owner

## 4.2.1 Sustainable investments

Sustainable finance has been the big megatrend in pension funds' investment policies over the past years, and in general ESG (Environmental, Social and Governance) investments have increasingly become mainstream. Pension funds are increasingly reducing their carbon footprints. For instance, in the Netherlands, where almost all pension funds specifically include climate change in their investment policy (VBDO, 2022), 14 pension funds have signed a 'Climate Commitment' to measure carbon footprint, implement carbon reduction plans and bring the portfolio in line with the objectives of the Paris Agreement. Several larger pension funds already measure the carbon reduction achieved over the past years, including:

- ABP: 40% reduction in footprint in equity since 2015, as of October 2021. Commitment to divest entirely from fossil fuels by Q1 2023.
- PME: 33% reduction in footprint in equity since 2015, as of January 2020. Reduction target: 50% by 2025.
- PMT: 30% reduction in footprint in equity since 2015, as of December 2020.
- PFZW: 50% reduction in footprint in equity from 2014 to 2020 and a reduction target of another 30% from 2020 to 2025.

Pension funds have also implemented various decarbonisation goals, for instance with an ambition to reach net zero emissions by 2050 or sooner across all assets under management (see, for instance, the Net Zero Asset Managers Commitment [4]). Availability of data, insights and track records are quickly increasing.

4. See in more detail on the website of the Net Zero Asset Managers initiative

There are several reasons why pension funds take longer-term sustainability interests into account in their investments. When investing with a long-term horizon, it is important to take account long-term risks and value drivers, including climate change and other environmental issues. Moreover, pension funds' members increasingly become engaged with how their savings are invested on their behalf, and pension funds' sustainable investment policies can also reflect on their sponsors' policies. In some countries pension funds proactively reach out to their members to ask them about their values and responsible investment believes. This leads some pension funds to incorporate non-financial objectives in their investment policy, such as specific carbon reduction targets, within the scope of the risk-return objectives set out by the prudent person principle.

The EU taxonomy offers an assessment of whether activities are environmentally sustainable, which does not capture all responsible investment approaches. There are many best practices and approaches of how pension funds consider sustainability factors (see the following chapter for more detail). Therefore, it is important to note that having a high share of ESG assets under the taxonomy does not become synonymous with responsible investment.

### 4.2.2 Sustainable investment strategies

Various techniques that are used in sustainable investing have been developed and improved over the past years and decades. While early ethics-based approaches and negative or exclusionary screening remain relevant today, also many other strategies, which are for instance focusing on maximizing risk-adjusted returns, are widely used. Sustainable investment strategies have been classified into the following seven groups (Gutterman, 2021):

Negative or exclusionary screening consists of avoiding specific assets due to consideration of specific ESG criteria including moral values (e.g., tobacco or gambling), standards and norms (e.g., human rights), ethical convictions (e.g., animal testing), or legal requirements (e.g., controversial armaments such as cluster bombs or land mines, excluded to comply with international conventions). Pension funds have different kinds of considerations on which companies/sectors they want to exclude from their investment universe (see in more detail for instance Swinkels, 2020).

Best-in-class (positive) screening contrasts significantly with negative screening and calls for investment and lending decisions to be made based on demonstrated high ESG performance of sectors, companies, or projects. Norm-based screening involves screening potential investments against minimum standards of business practice based on international norms relating to climate protection, human rights, working conditions, and action plans against corruption.

ESG integration involves new and emerging methodologies intended to systematically and explicitly include ESG risks and opportunities into traditional financial-based investment analysis. Thematic investments include investment activities focused on specific high-profile sustainability-related themes such as cleantech, infrastructure, energy-efficient real estate, or sustainable forestry.

Impact investing is aimed directly at creating a positive environmental or social impact by identifying and solving a particular environmental or social problem and has been described as "investments made in companies, organizations, and funds with the intention of generating social and environmental impact (pursuit of positive externalities) alongside a financial return." Pension funds are predicted to increasingly apply impact investing and they are also co-operating to improve their methods (Impact Investing Institute, 2022). For instance, APG, PGGM, AustralianSuper, and BCI and have jointly established the Sustainable Development Investments (SDI) Asset Owner Platform[5] to develop a standard for the classification of investments as SDI, using artificial intelligence (the EU taxonomy serves as input for this).

Active ownership, also referred to as "corporate engagement and shareholder action", takes a different approach to sustainable finance by focusing on engagement and dialogue with portfolio companies after an initial investment is made to influence ESG strategies and actions through the exercise of ownership rights and being a visible activist for change.

While the most common sustainable investment strategy is ESG integration according to the Global Sustainable Investment Alliance (GSIA, 2020), OECD (2021b) has found that active ownership and exclusionary screening are the most widely used ESG strategies amongst large pension funds and public pension reserve funds.

In the Netherlands, large pension funds (/their asset managers) have actively engaged with investee companies already for a long time. They systematically identify any negative impact the activities of the investee companies may have on society and the environment, and they exert influence on companies to reduce this negative impact.

For instance, APG, an asset manager of a total capital stock of over €600 bn for pension funds and their members and beneficiaries, sees engagement and good stewardship as a condition for investing. APG evaluates all companies that they can invest in through publicly traded shares or bonds (the investment universe) based on return, risk, cost and the degree to which they operate sustainably and responsibly. APG uses a proprietary method to categorize companies as 'ESG leaders' and 'ESG laggards' on the basis of ESG-criteria. Where companies lag behind in terms of ESG performance, APG can only invest if they engage with them to improve (APG, 2021).

While still somewhat limited in all the assets under management, active ownership is also quickly becoming a relevant practice of Italian supplementary pensions. A survey carried out by our Italian member Mefop in 2022 pointed out that 34% of pension funds actively engaged with investee companies, either directly or through their asset managers.

5. Read in more detail on the website of the Sustainable Development Investments Asset Owner Platform

# 5. Pensions landscape and inflation

# 5. Pensions landscape and inflation

Pension systems in Europe are as diverse as the countries themselves. They contain and reflect numerous cultural, historical, and political developments, specificities, and sensitivities. Particularly, they are built on a foundation of national social, labour and tax law. In many European countries, retirement income is a combination of different pillars, often a state pension complemented by occupational pensions and some individual pension savings.

The size and nature of occupational pensions are highly diverse across Europe. There are a few countries with very low levels of first-pillar pensions, but significant private pension savings, particularly in the occupational pension sector, with high asset values relative to the countries' GDP. Occupational pension plans are often negotiated by employers and social partners and are often subject to national social and labour law, which has an impact on the pension funds' governance structure (ECB, 2020b).

Occupational pensions became a fundamental pillar of many European countries during the second half of the 20th century, while the first pension funds were established already earlier. The key objective of a pension fund is delivering good pension outcomes to members and beneficiaries. Collective workplace pensions usually offer:

- Economies of scale in governance, administration and asset management;
- Risk pooling and often intergenerational risk-sharing;
- Often operation on a "not-for-profit"-base and low administrative costs;
- Sponsoring companies often contribute financing workplace pensions;
- Long-term horizon of investments;
- Wide-scale coverage due to mandatory participation, sector-wide participation based on collective agreements or soft-compulsion elements such as auto-enrolment;
- Good governance and alignment of interest due to participation of the main stakeholders

In Europe, the total assets in retirement savings plans as a percentage of GDP are particularly high in Denmark (229.4%), the Netherlands (212.7%), Iceland (206.9%), Switzerland (167%), the UK (126.8%), and Sweden (108.9%) (OECD, 2021a). Some see risks in pension funds having such large assets in relation to their country's GDP, but we believe that this is a much smaller concern compared to the pension assets being rather low in many other countries. In the latter, e.g., due to changing and challenging demographics (see the Annex 2), the concerns will be even larger in the future. Furthermore, the current high inflation is not helping in solving the European pension challenges.

In many countries, the 1st pillar pension protects against the loss of purchase power, as all EU Member States index pension benefits to some extent to reflect changes in the cost of living. In most countries, the indexation is based on legislation with the exceptions for Ireland, Spain, Romania and Sweden, where indexation of pension benefits is based on ad hoc decisions (SPC & DG EMPL, 2021).

In general, the indexation rules for pensions can be divided into four main groups in Europe (Figure 11): indexing to prices; indexing to wages; mixed indexation rules (taking into account both prices and wages) for pension benefits; and (d) indexation of pension benefits based on ad hoc decisions. It is important to note that even within one country, the indexation rules can vary, e.g. depending on the benefit level (SPC & DG EMPL, 2021).

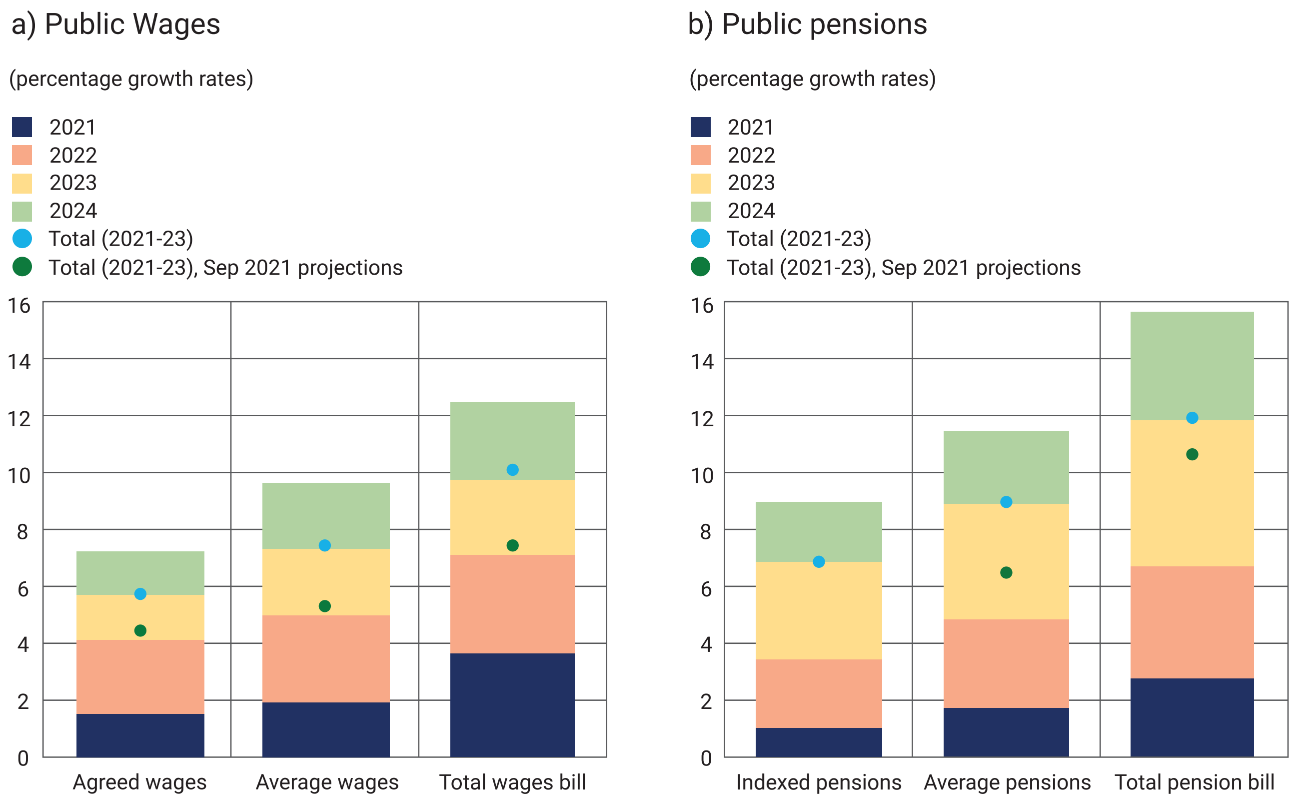
***Figure 11:* Overview of indexation rules applicable to pension benefits in EU Member States**

| INDEXATION TO PRICES (%) AND WAGES (%) | COUNTRIES |
|---|---|
| Pension benefits indexed to prices | |
| 100/0 | AT, FR, HU, IT, SK, FI (basic) |
| Pension benefits indexed to wages | |
| 0/100 | DK, DE, LT, LU, NL |
| Mixed indexation rule with grater weight given to prices then wages | |
| 80/20 | FI (earning-related), PL |
| 70/30 | HR |
| Mixed indexation rule with grater weight given to wages then prices | |
| 40/60 | SI |
| 30/70 | MT |
| Mixed indexation rule with equal weight given to prices and wages | |
| 50/50 | BG, CZ, CY, LV |
| Other | |
| 50 prices/50 GDP growth (frozen until end 2022) | EL |
| 20 CPI/80 pension contribution revenues | EE |
| CPI, GDP and pension level | PT |
| 100% prices + ad hoc indexation to general living standards | BE |
| Ad hoc | IE, RO, ES, SE |

*Source: Pension adequacy report 2021*

The ECB has forecasted that cumulatively, the negotiated public wages for the euro area will grow by less than inflation from 2021 to 2024, while average pensions are projected to grow at higher rates than inflation (Figure 12). The largest increase has been projected for 2023, broadly corresponding to a higher lagged (2022) projected inflation. Furthermore, the total public pension expenditure growth is expected to be higher than the growth of the individual pensions, which reflects the increase in the number of pensioners (Checherita-Westphal & ECB, 2022).

### *Figure 12: Public wage and pension growth projections: euro area aggregate*




*Source: ECB Public wage and pension indexation in the euro area: an overview (August 2022)*

The direct impact of inflation on pension funds varies across countries and different kinds of pension schemes (who bears the risk varies) and their various investment strategies. High inflation makes it, in general, more challenging to provide high pension benefits in real terms, both for DB and DC schemes. The precise effect of inflation on a pension fund is determined by the extent of the inflation hedging each individual fund has undertaken, as well as the way in which benefits are linked to inflation.

When assessing the impact of rising inflation on the retirement income of the members and beneficiaries of occupational pension funds, it is important to also take the state pensions into account. Otherwise, if only examining the impact on the retirement income from one single pillar, the assessment would give a wrong picture.

Furthermore, an individual's occupational pension can contain pensions from different pension schemes organised by different groups of pension providers (book reserves, IORPs, group life insurances etc.), with different pension schemes linked to employment at companies with a different pension promise (defined benefit, defined contribution, hybrid, with or without indexation mechanisms).

Also due to differences in inflation levels and replacement rates (both first and second pillar) across Europe, pensioners across Europe can be in very different financial situations under the ongoing high inflation environment. Inflation in the euro area was even negative in the second half of 2020 before starting to increase in 2021, and particularly sharply since mid-2021. While in 2022 inflation has been high in all European countries, its magnitude has significantly varied across Europe. For instance, in October 2022, inflation ranged from 7.1% in France to 22.5% in Estonia (ECB, 2022).

In summary, changing and challenging demographic, economic, and state budgetary circumstances together with high inflation will pose big challenges to state pensions in the medium-term. That challenge needs to be tackled in various ways, and fortunately there are also some alternatives to only increasing retirement age and contributions and lowering benefits. Supplementary and funded pensions, and particularly occupational pensions, have an increasingly important role in that toolbox of pension policy.

To be able to best benefit from occupational pensions, they must be supported and strengthened across Europe. The regulatory and supervisory framework must be fit for the purpose to allow pension funds, the vehicles of the social partners and sponsoring companies giving the pension promises, to tackle the current and new challenges, and they should not pose any unnecessary costs and burden to pension funds.

# 6. Upcoming statistics and statistical developments

# 6. Upcoming statistics and statistical developments

The ECB will publish its next quarterly pension funds statistics (2022Q3) on 14 December 2022 and on 16 March 2023 (2022Q4). The ECB is planning to have a review of the reporting requirements for pension funds in 2024.

Currently EIOPA is reviewing its reporting requirements for IORPs. The review is expected to be finalised soon and the new requirements in place at the end of 2024 or beginning of 2025.

In November 2022, OECD will publish the next version of its annual statistical report 'About Pension Markets in Focus'. OECD/WPPP (Working Party on Private Pensions) Task Force on Pension Statistics is also working on revising the OECD classification and glossary of private pensions, and they aim to finalise the work by the end of 2024. While the purpose of the WPPP is to undertake a comprehensive review of the 2005 classification and glossary of private pensions with a view to updating and revising it, they aim to keep the classification stable in that sense that what is currently DB and what is DC will be unchanged. However, they aim to clarify the spectrum of different kinds of DB/hybrid and DC pension schemes, as currently the terms are not always used consistently easily causing misunderstanding.

PensionsEurope will publish its next annual statistical report at the end of 2023. Meanwhile, we will use the pension data (provided by various sources mentioned in this report) particularly in our internal analysis.

# ANNEXES

# Annex 1: Occupational pensions statistics

Data on European pensions is available in an increasing number of forms and formats. When comparing and analyzing the pension statistics from various sources, one needs to be careful, as they are as diverse as pension systems and countries themselves across Europe. It is particularly important to recognise that they use different definitions and currencies, and that they also cover different countries.

While there is a lot of pensions (and pensions-related) data available at the national level, the short overview below focuses on the main European pension statistics (Figure 13). Besides them, there are also many other sources of pensions related data (for instance SHARE) and pension systems are benchmarked (with various indicators) for instance by Mercer CFA Institute Global Pension Index, the World Economic Forum, Allianz, and Willis Towers Watson.

*Figure 13: Overview of the European pension statistics*

| Statistics provider | Countries covered | Pensions covered | Currency |
|---|---|---|---|
| ECB | Euro area | ESA 2010 pension funds | € |
| Eurostat | EU Member States | Pensions in national accounts | € |
| OECD | OECD countries | Retirement savings vehicles | US$ |
| IPE | Europe | Various pension arrangements | € |
| EIOPA | EEA | IORPs | € |

OECD (the Organisation for Economic Co-operation and Development) pension statistics provide thorough and valuable information for measuring and monitoring the pension industry. They permit inter-country comparisons of statistics and indicators on key aspects of retirement systems across the OECD. They include all type of pension plans (occupational/personal, mandatory/voluntary) and include information on investments, liabilities, contributions, benefits paid, expenses and member data. Data from all OECD countries (and a number of additional non-OECD countries) are included, but OECD statistics do not include all EU Member States.

Eurostat (the Statistical Office of the European Communities) covers data from all EU Members States, and it collects pensions-related information in three of its databases: ESSPROS, Pensions in National Accounts, and EU-SILC. They also contain statistics on public pensions, and various reports of the European Commission have benefited from the Eurostat pensions data, including:

- Ageing Report 2021, which explores the long-run economic and fiscal implications of Europe's ageing population.
- Pension Adequacy Report 2021, which analyses how current and future pensions help prevent old-age poverty and maintain the income of men and women for the duration of their retirement.
- The Fiscal Sustainability Report 2018, which provides an overview of the challenges to public finance sustainability faced by Member States in the short, medium and long term.

IPE publishes annual survey reports on the top 1,000 European pension funds. The objective is to give as broad an overview as possible of pension assets in Europe. Traditional workplace second-pillar pensions make up the largest portion of assets measured, but the report also includes funded first-pillar occupational pensions in Finland, monoline pension insurance entities (such as Rothesay Life in the UK), and several sovereign funds whose mandate is particularly to finance pensions, but which may not have a specified liability horizon. Among these are for instance the Norwegian sovereign wealth fund, France's "Fonds de reserve pour les retraites" (FRR), and the Swedish AP funds (IPE, 2022).

EIOPA statistics cover only Institutions for Occupational Retirement Provision (IORPs) in the European Economic Area (EEA). At the end of 2021, IORPs had 26 million active members, 19,5 million deferred members, and 8,5 million beneficiaries. IORPs' assets of €2,630 bn (2022Q1) far exceed their liabilities of €2,179 bn (EIOPA, 2022), meaning that they are very well funded (see in more detail the following section on funding ratio). So far, EIOPA has not published any proper analysis of the very comprehensive data that it has received from IORPs.

ECB statistics cover autonomous pension funds, as defined by the European System of National and Regional Accounts (ESA, 2010). Thus, the ECB receives data from all pension funds, whether or not they fall under the scope of the IORP II Directive. For example, some pension funds regulated by national regulation only, are reporting to the ECB but not to EIOPA.

On the other hand, the ECB pension fund statistics consist only of those pension funds that are institutional units separate from the units that create them; non-autonomous pension funds set up, for example, by credit institutions or non-financial corporations are therefore not covered. All pension funds which fit the definition of social insurance are included unless they are included in other statistics, such as those on insurance corporations or investment funds. Social security schemes, pension schemes that are provided through governments, and individual pension plans offered by insurance corporations or other institutions are also excluded (ECB, 2020a).

When assessing the development of assets and liabilities of pension funds, particularly the ECB statistics provide a lot of useful and interesting information. PensionsEurope members have analysed the ECB data, and they have confirmed that the ECB statistics give a good picture of the developments across Europe. Therefore, the analysis in this report mainly uses the ECB quarterly data on the developments of assets and liabilities of euro area pension funds.

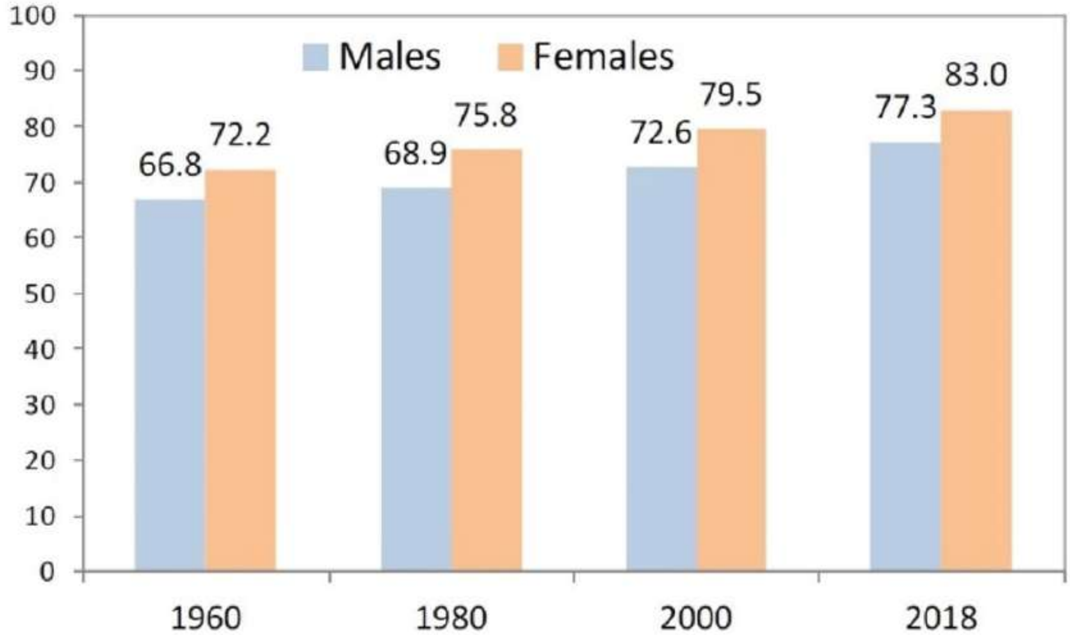
## Annex 2: Demographic challenges

We, the Europeans, are living longer than ever. Over the last century, the average life expectancy has almost doubled. While in 2022, life expectancy at birth for women was 83.2 years (Eurostat, 2022), in 1900 it was only 45.84 (Mackenbach & Looman, 2013).

The reasons for this increase in average life expectancy are manyfold: improved health care, sanitation, immunizations, access to clean running water, better nutrition, healthier lifestyles, and better education. Over the last decade, the progress has been slowing, and the Covid pandemic led to the EU average life expectancy falling from 81.3 to 80.4 years (Eurostat, 2022). The same drop applies also for OECD countries, the excess mortality being 12% on average among OECD countries between January 2020 and August 2021 (OECD, 2021a).

The trend of people living longer is expected to continue, even though it is predicted that the pace of average life expectancy increasing will be slower than in the past. (UNSD, 2021).

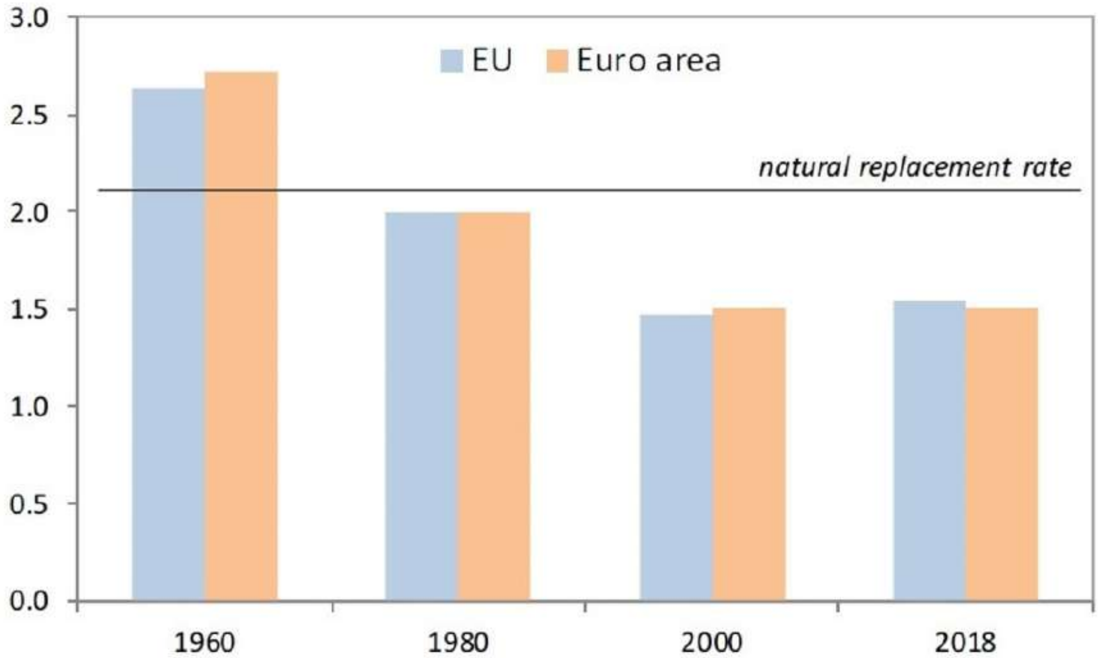
***Figure 14:* EU – Life expectancy at birth in the EU, 1960-2018 (in years)**




*Source: The 2021 Ageing Report / European Commission based on Eurostat data*

At the same time, fertility rates are dropping. In Europe, fertility rates peaked during the post-war baby boom, after which they decreased to below the natural replacement level of 2.1 in 1980 and kept declining until 2000. Since then, fertility rates have remained close to 1.5, increasing slightly in the 2000s before decreasing again in the 2010s (OECD, 2021a).

*Figure 15:* ***EU – Total average fertility rates in the EU and the euro area, 1960-2018***

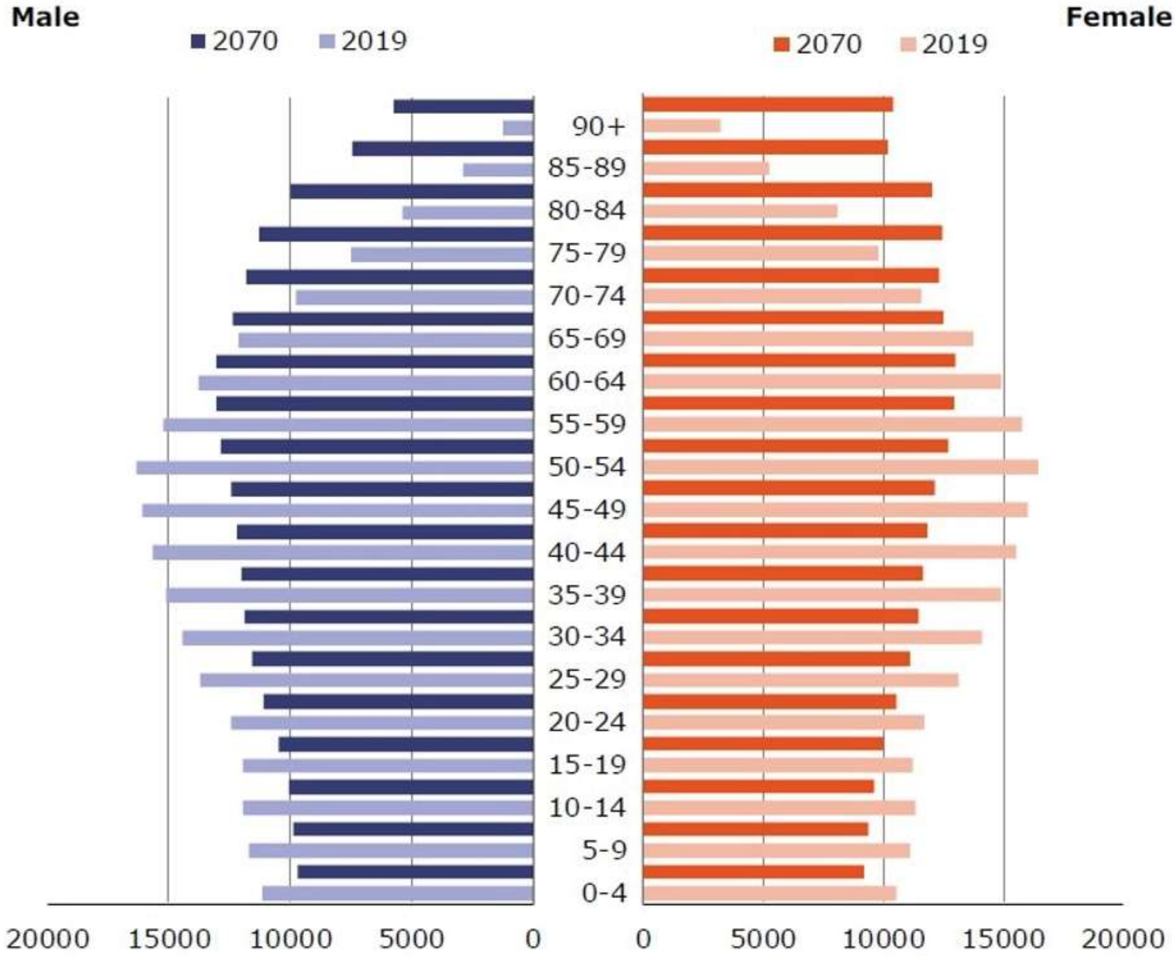



*Source: The 2021 Ageing Report / European Commission based on Eurostat data*

Increasing longevity and declining fertility and have led to an increasing number of people aged 65+ and a continuously growing share of elderly people in our population. Together with the shrinking overall population, they are causing significant changes in the age structure of the European population.

According to Eurostat, the overall European population is set to shrink by 5% between 2019 (447 million) and 2070 (424 million), while the working-age population (20-64) will decrease even more markedly from 265 million in 2019 to 217 million in 2070 (-18%), reflecting fertility, life expectancy and migration flow dynamics (Figure 16).

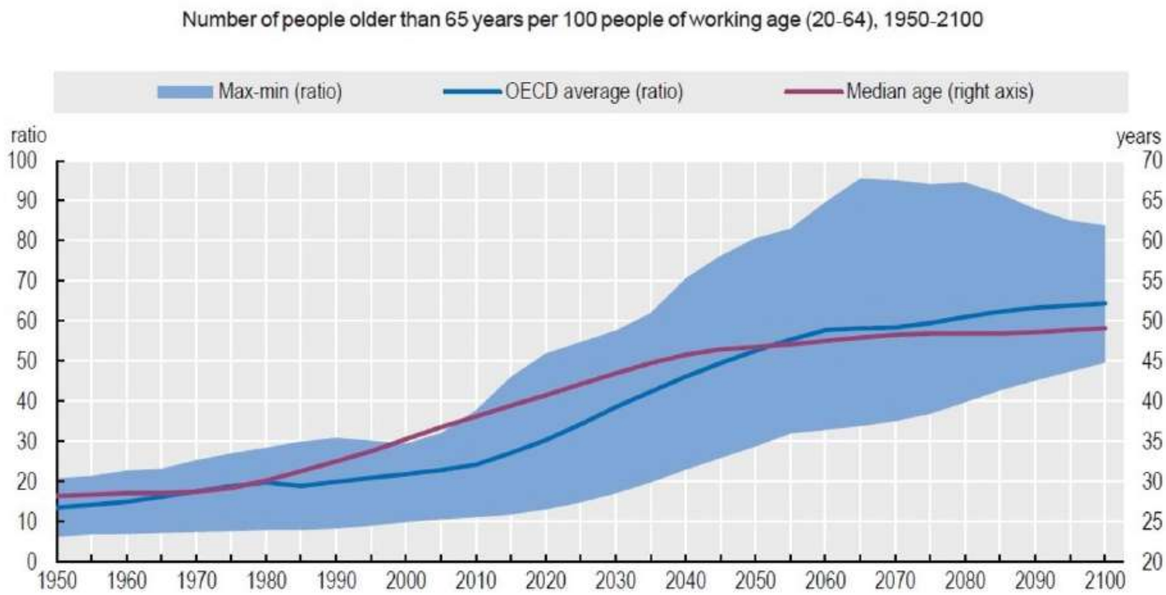
*Figure 16: EU – Population by age groups and gender, 2019 and 2070 (thousands)*




*Source: The 2021 Ageing Report / European Commission, EPC*

During the past 30 years, the number of people older than 65 years per 100 people of working age (20 to 64 years) increased from 21 in 1990 to 31 in 2020, and the old-age to working-age ratio is expected to almost double by 2060 (Figure 17). That causes a heavy burden on the working-age population to finance pay-as-you-go pensions and health care and long-term care insurance for older people. Even funded pension systems can be negatively affected by rapidly decreasing working-age populations through its effect on labour supply, in turn potentially lowering output growth and equilibrium interest rates (OECD, 2021a).

*Figure 17: The old-age to working-age ratio is accelerating*




*Source: Pensions at a Glance 2021 / United Nations World Population Prospects*

The increasing old-age to working-age ratio poses big challenges to our pension systems, including all the pillars. Pay-as-you-go systems are increasingly under pressure facing the dual challenge of remaining financially sustainable and being able to provide an adequate income during retirement. While complicated economic and state budgetary circumstances are not helping to solve the dilemma, high inflation has posed further challenges.

# References


APG. 2021. Summary of inclusion approach. March 2021.

Checherita-Westphal, C. 2022. Public wage and pension indexation in the euro area: an overview. ECB Occasional Paper Series. No 299 / August 2022.

Cumbo, J., Klasa, A., Thomas, D., and Pfeifer, S. 2022. UK pension funds sell assets and tap employers in rush for cash. Financial Times. 30 September 2022.

DNB. 2022a. Dutch pension funds sell record amount in assets. 8 September 2022.

DNB. 2022b. Dutch pension sector's funding ratio improves. 25 October 2022.

ECB. 2020a. New pension fund statistics. ECB Economic Bulletin, Issue 7/2020.

ECB. 2020b. Pension fund statistics compilation guide. October 2020.

ECB. 2022. Inflation dashboard. November 2022.

ECB euro area pension fund statistics.

European Commission. 2019. Fiscal Sustainability Report 2018. Institutional paper 94 | January 2019. Directorate-General for Economic and Financial Affairs.

European Commission. 2021. The 2021 Ageing Report. Institutional paper 148 | May 2021. Directorate-General for Economic and Financial Affairs.

Eurostat. 2022. Mortality and life expectancy statistics. 25 April 2022.

EIOPA occupational pensions statistics.

Gianfrate G., Kievid, T. and Mathijs van Dijk. 2021. On the Resilience of ESG Stocks during COVID-19: Global Evidence. Netspar Design Paper 175, July 2021.

GSIA (Global Sustainable Investment Alliance). 2020. Global Sustainable Investment Review 2020.

Gutterman, A.S. 2021. Sustainable Finance and Impact Investing. Business Expert Press.

HFR. 2022. HFR Global Hedge Fund Industry Report. August 2022.

Hoekstra, T. 2022. Dutch pension funds increase interest rate hedges. IPE. 22 September 2022.

Impact Investing Institute. 2022. Estimating and describing the UK impact investing market. March 2022.

IPE. 2022. IPE Top 1000: Pension assets increase of well over €600bn reflects 2021's markets. 5 September 2022.

Mackenbach, J.P. and Caspar WN Looman. 2013. Life expectancy and national income in Europe, 1900-2008: an update of Preston's analysis. International Journal of Epidemiology, Volume 42, Issue 4, August 2013, Pages 1100–1110.

OECD. 2021a. Pensions at a Glance 2021. December 2021.

OECD. 2021b. Annual survey of large pension funds and public pension reserve funds – Report on pension funds' long-term investments. November 2021.

Pensioenpro. 2022. Duurzaam beleid blijft overeind in turbulente tijden. 20 September 2022.

Social Protection Committee (SPC) and the European Commission (DG EMPL). 2021. Pension adequacy report 2021 – Current and future income adequacy in old age in the EU.

Swinkels, L. 2020. Diversity in sustainable investing - Comparing ESG policies of pension funds in the Nordics and Netherlands. November 2020. Robeco.

Thinking Ahead Institute. 2021. Global Pension Assets Study – 2022.

UNSD. 2021. Life expectancy at birth United Nations Statistics.

VBDO. 2022. Dutch Institutional Investors and Climate Change – Institutional investors are taking action, but are they doing enough to win the race towards net zero?. January 2022.

## *About PensionsEurope:*

PensionsEurope represents national associations of pension funds and similar institutions for workplace and other funded pensions. Some members operate purely individual pension schemes.

PensionsEurope has ***25 member associations*** in 18 EU Member States and 4 other European countries.

PensionsEurope member organisations cover different types of workplace pensions for over ***110 million people.*** Through its Member Associations PensionsEurope represents more than ***€ 7 trillion of assets*** managed for future pension payments. In addition, many members of PensionsEurope also cover personal pensions, which are connected with an employment relation.

PensionsEurope also has ***20 Corporate and Supporter Members,*** which are various service providers and stakeholders that work with IORPs.

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