OECD Pensions Outlook 2026

Are We Saving Enough for Retirement?



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Preface

Pension assets across OECD countries reached USD 78 trillion at the end of 2025, equivalent to 106% of GDP. At that scale, asset-backed pensions don't just matter for retirement incomes – they are also a major source of long-term investment across our economies. Pension funds are among the world's largest institutional investors, providing long-term capital that supports investment, innovation and productivity and contributes to deeper and more resilient capital markets.

By allowing people to save and invest throughout their working lives, asset-backed pensions complement public pension systems, diversify sources of retirement income and strengthen retirement security. Their role will become even more important as populations age, putting growing pressure on pension systems and public finances.

Yet the scale of pension assets does not in itself guarantee adequate retirement incomes. In many countries, mandatory arrangements alone are unlikely to be enough for significant segments of the population.

Better outcomes require policies to support people in making sound, well-informed financial decisions throughout their lives. That includes decisions about how much to save, how to invest those savings and how to use them to provide income in retirement. The right incentives are also needed to ensure that retirement savings are effectively converted into retirement incomes. For those who do not actively engage in retirement planning, well-designed defaults and automatic mechanisms can also support retirement saving.

How savings are managed matters too. Investment returns account for a substantial share of the resources available at retirement. Sound governance, effective risk management and strong investment practices, including appropriate default strategies, are essential to long-term performance and financial security in retirement.

This edition of the OECD Pensions Outlook examines these different dimensions of asset-backed pension systems, with analysis spanning retirement saving and financial decision-making, the investment and management of pension assets, and their effective use to provide income in retirement. In so doing, it provides policymakers, regulators and stakeholders with evidence, analysis and international experience to help strengthen pension systems and improve retirement outcomes for current and future generations.



Mathias Cormann,

OECD Secretary-General

Foreword

The *OECD Pensions Outlook* analyses pension markets and pension policy issues in OECD Member countries and partner economies. It addresses all pension arrangements, private and public, in which assets back retirement income. It covers their design, regulation and supervision, as well as their role in complementing other components of the pension system.

For the first time, the Outlook incorporates *Pension Markets in Focus* as its opening chapter, examining the evolution of pension assets and the role of contributions, investment income and benefit payments in driving their growth.

The objective is to provide policy guidance to policymakers, regulators and stakeholders to support them in strengthening pension systems and improving retirement outcomes. Improving the design and governance of asset-backed pensions can foster more resilient pension systems that cover more individuals, secure better retirement outcomes, and contribute to economic growth and innovation.

This eighth edition of the *OECD Pensions Outlook* discusses the evolution of pension assets and its main drivers. It examines whether individuals need to save more voluntarily for their retirement; how pension and insurance investors incorporate risks to the sustainability of their investment portfolios; how to improve financial advice for individuals to better prepare for retirement while minimising the impact to access; and how to tax inherited pensions upon death of plan members to ensure they use their retirement savings to finance their retirement.

This report has been developed by the Capital Markets and Financial Institutions Division of the OECD Directorate for Financial and Enterprise Affairs. Chapter 1 was prepared by Pablo Antolin, Romain Despalins and Stéphanie Payet, Chapters 2 and 5 by Stéphanie Payet, Chapter 3 by Jessica Mosher and Ana Dueñas Huerta, and Chapter 4 by Jessica Mosher. Sally Day-Hanotiaux provided statistical support. The report was prepared under the supervision of Pablo Antolin, Head of the Insurance and Pensions Unit, and Serdar Çelik, Head of Division. Delegates to the OECD Working Party on Insurance and Pensions and members of the International Organisation of Pension Supervisors (IOPS) provided inputs. Chapter 3 also benefited from insights shared by pension and insurance stakeholders through interviews. The views expressed do not necessarily correspond to those of the national authorities concerned.

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Executive summary

Despite continued growth in pension assets, individuals may not be saving enough to secure adequate retirement income. Pension assets increased in most OECD countries in 2025, driven by higher contributions and positive investment returns, but significant differences remain across countries. Contribution gaps persist in nearly all OECD countries, with additional contribution needs varying across population groups. Yet only 19 of the 38 OECD countries have mandatory or quasi-mandatory pension plans, while participation in voluntary plans remains limited. In almost half of the 19 OECD countries where only voluntary plans are available, fewer than half of working-age individuals participate. Policy measures addressing barriers to saving, including financial advice and taxation, and improving pension fund investment and risk management, can help boost contributions to asset-backed pension plans and improve retirement income adequacy.

Pension assets continued to grow in OECD countries in 2025, driven by higher contributions and positive investment returns.

Pension assets grew in 36 out of 38 OECD countries in 2025. On aggregate, they grew by 11.3%, sustaining the long-term trend of the last two decades, and reached USD 78 trillion at end-2025 (including USD 7.3 trillion in reserves of public pay-as-you-go schemes), equivalent to 106% of GDP.

The aggregate growth in assets hides large differences across countries. On the one hand, eight OECD countries (Australia, Canada, Denmark, Iceland, the Netherlands, Sweden, Switzerland and the United States) have assets relative to GDP above 100%. On the other hand, 17 OECD countries have pension assets below 20% of GDP, and 9 between 20 and 50%.

Pension assets grow when contributions and investment income exceed pension payments. Since the early 2000s, contributions to asset-backed pensions increased in all reporting OECD countries but one and in all reporting non-OECD jurisdictions. Policies that expand access to and participation in asset-backed pensions help sustain this growth. Positive investment returns, supported by policies to improve portfolio allocations, together with the compounding of returns, have also contributed to the growth in pension assets. Over the past 10 years, long term real investment returns were positive in 24 of 31 reporting OECD countries.

Despite the significant growth of pension assets, nearly all OECD countries face a contribution gap.

In all but one OECD country, certain categories of workers need to complement their mandatory pensions with voluntary contributions to achieve adequate retirement income. The contribution gap is at least 10% of earnings for male employees earning the average wage in 17 of the 41 countries covered. Women face a larger gap than men in 17 countries, and the self-employed face a larger gap than employees in 31 countries. In half of the countries, contribution gaps are largest for high earners, while in 12 countries low earners face the greatest additional contribution needs.

Behavioural biases, affordability concerns and other barriers prevent individuals from contributing enough to reach their targets. Policies that could help address these barriers and steer individuals towards higher contribution levels include increasing mandatory contributions, encouraging voluntary employer contributions, nudging individuals towards higher contributions, providing financial incentives, providing

information about contribution processes and expected retirement income outcomes, and offering design features that address certain needs of individuals.

When identifying contribution gaps in the population, policymakers need to assess the trade-offs between the different policies, ensure that other design features of asset-backed pension plans support or reduce the contribution effort, and monitor outcomes to adjust policies when necessary.

Improving financial advice for retirement could help individuals to save more for retirement.

Financial advice can help individuals prepare for retirement by encouraging them to save more, take appropriate investment risk and navigate the complicated decision of how to spend their retirement savings.

Registration and qualification requirements, duty of care standards, disclosure requirements and restrictions around remuneration structures have all improved outcomes for those receiving financial advice. However, these measures require careful design to ensure their effectiveness. Harmonising requirements across distribution channels and markets can limit consumer confusion and promote a level playing field, though it is also necessary to consider the specific context and need for which advice is given. Clear definitions are needed to delineate the boundary between guidance and advice and to provide assurance as to which regulatory requirements will apply. Measures to improve financial advice also require considering their potential impact on access to advice, as they can make it less accessible by increasing costs.

There are alternatives to advice when measures to ensure quality may impact access. Well-selected default investment strategies can improve returns over the long term. Personalised guidance can be useful for questions of limited scope or complexity. Distribution requirements can make providers responsible for ensuring that their products are appropriate for their target markets.

Pension funds are increasingly integrating risks affecting the long-term sustainability of their portfolios into their investment and risk management processes.

The growth of pension assets and the extent to which retirement savings can help individuals reach retirement income objectives also depend on investment returns. Risks to the sustainability of portfolios can therefore have significant implications for the long-term returns of pension funds. As a result, pension funds are increasingly integrating these risks into their investment decisions and processes.

Regulation remains the most influential factor shaping how pension funds as well as insurance companies as asset owners and investors, integrate risks to the sustainability of their portfolios into their investment strategies. In 41 out of 53 jurisdictions assessed, pension or insurance investors are required to integrate sustainability risks into their investment and risk management processes. Financial materiality remains the primary lens through which pension and insurance investors evaluate risks to sustainability. For pension funds in particular, interpretations of fiduciary duty play an important role in guiding this approach. Member and client expectations can also influence priorities, as can competitive pressures and market leadership by large asset owners, with major investors shaping market norms and cascading expectations to external managers and smaller institutions.

Integration approaches generally combine top-down objectives with bottom-up implementation, with institutional and governance frameworks adapting to support the decision-making processes. Materiality assessments are not standardised across institutions and often reflect differences in investor size, data access and internal analytical capabilities. Integration practices are largely shaped by the specific characteristics of each portfolio, by asset class mandates, and by the tools and information available to investment teams. Data quality, comparability and coverage remain significant barriers, particularly for smaller markets and private assets.

The taxation of death-related payments should not undermine the primary objective of asset-backed pension plans, which is to finance income in retirement.

Asset-backed pension plans generally benefit from more favourable tax treatment than other savings vehicles to encourage individuals to save for retirement. However, appropriate incentives are needed to encourage individuals to use their pension savings to finance their retirement rather than to transfer wealth to their heirs in a fiscally advantageous way. There should be tax consistency before and after death to avoid situations where retirement savings receive more favourable treatment when used for bequests or survivor protection than when used for retirement income provision. The tax treatment of death-related payments should align with policy objectives, such as protecting dependants, preserving equity among taxpayers and beneficiaries, limiting tax planning opportunities or optimising tax revenues. It should also be coherent with the inheritance tax system, where one exists, and consider efficiency and equity implications for savers, beneficiaries and tax revenues.

1 Pension markets in focus

This chapter examines the growth of pension assets and how contributions, investment income, and pension benefit payments have contributed. It discusses how pension assets evolve over time by examining the interaction between contributions, investment income and benefit payments at the individual and national levels. The chapter ends with a discussion on situations under which pension assets may grow, stabilise or decline.

Pension assets, assets that back future pension payments, have grown in most OECD countries and non-OECD jurisdictions since 2000.[1] The OECD Pension Markets in Focus series has reported on this evolution over time.

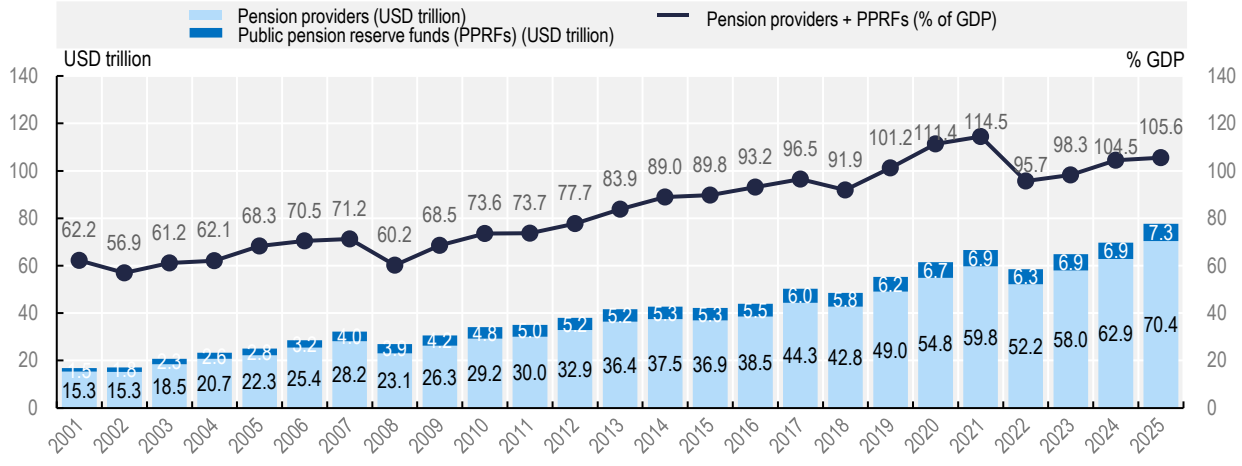
This chapter examines the factors behind the growth of pension assets over time to understand whether this growth may continue. The chapter looks first at the evolution of pension assets in 2025 and in the last two decades. It then provides a framework for understanding how pension assets evolve over time by examining the interaction between contributions, investment income and benefit payments at the individual and national levels. The following sections then describe the evolution of those factors across different jurisdictions to assess at what stage of asset accumulation they may be. The chapter ends by discussing the potential evolution of pension assets based on possible trends in inflows and outflows.

1.1. A global growth in pension assets

Pension assets continued to grow in 2025, sustaining the upward trend observed since 2000. Pension assets totalled USD 78 trillion at end-2025 in the OECD area, 11.3% more than at end-2024 and between 4 and 5 times more than in the early 2000s (Figure 1.1). In the OECD, pension assets have grown faster than the economy over the last decades and exceeded the size of GDP at the end of 2024 (104.5% of GDP) and 2025 (105.6%). While pension assets have experienced short-term declines, such as in 2008 and 2022, the growth of assets always resumed afterwards. The increase in pension assets primarily comes from pension plans managed by pension providers. These assets grew from USD 15.3 trillion (or 56.7% of OECD GDP) at end-2001 to USD 70.4 trillion (or 95.7% of GDP) at end-2025. The assets of public pension reserve funds are smaller and have grown more moderately.

Figure 1.1. Pension assets in the OECD, 2001-2025

In USD trillion and as percentage of GDP



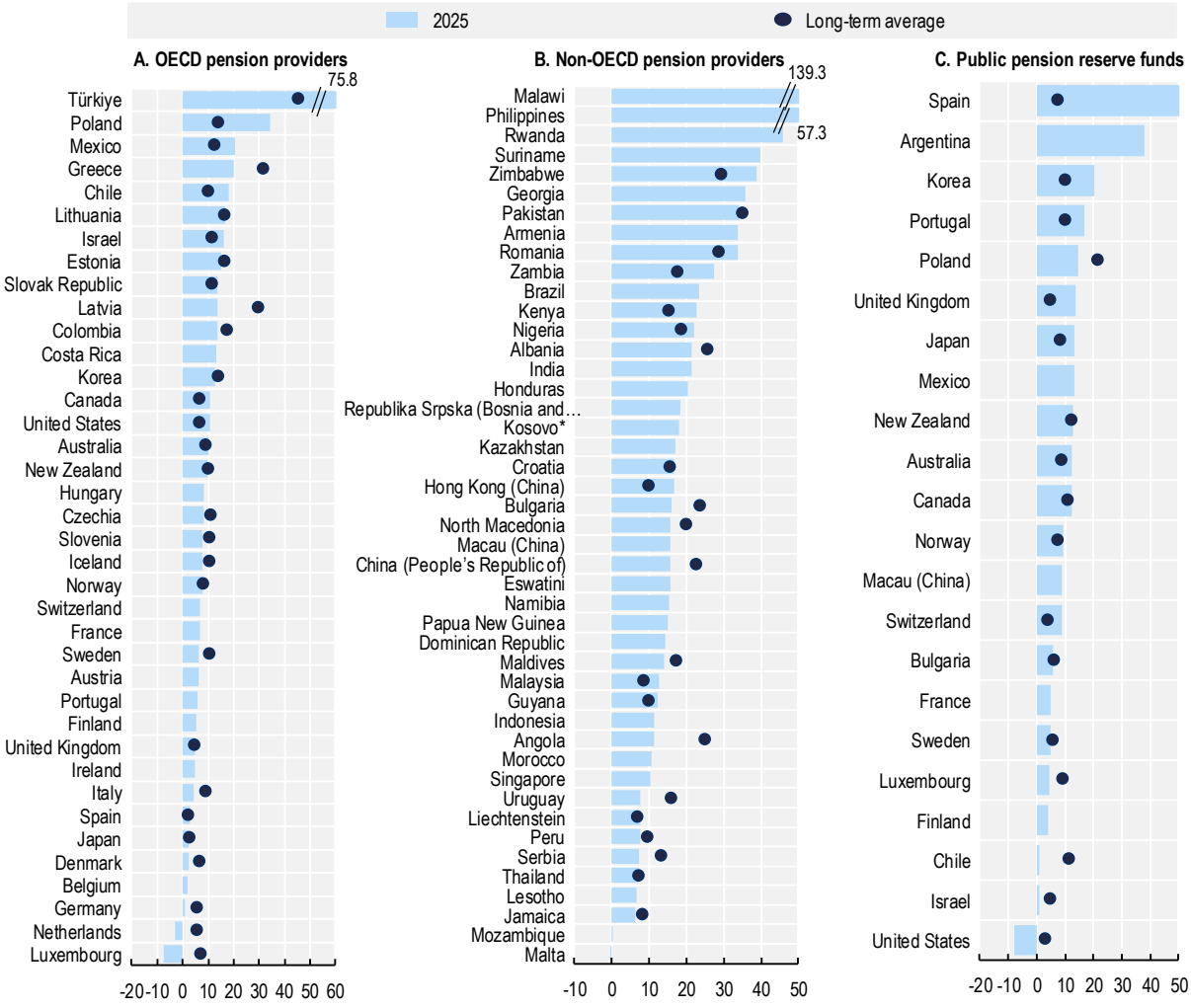
Note: The chart shows assets at the end of each year, from end-2001 to end-2025, based on annual data. The total amount of assets at the end of a given year is calculated based on all OECD countries and public pension reserve funds (PPRFs) for which data is available. The number of countries and PPRFs that the totals include may therefore vary over the years. Totals in USD trillion are expressed in current prices. Totals as percentage of GDP are calculated as pension assets in the OECD (expressed in USD) over the sum of the GDPs of all OECD countries, in USD.
Source: OECD Global Pension Statistics and other sources.

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Pension assets grew in nearly all jurisdictions in 2025, declining in two OECD countries: Luxembourg (-7.4%) due to the liquidation of an occupational pension fund, and the Netherlands (-3.1%) due to the negative investment performance of pension funds in 2025. This trend is consistent with the long-term growth of assets in all jurisdictions that has underpinned the global growth of pension assets over the last two decades (Figure 1.2). Assets in public pension reserve funds also grew in most OECD countries in 2025 and over the long term, except in the United States. Reserves in the United States have been declining since 2021, partially offsetting the rise of assets of reserve funds elsewhere, as the United States holds the biggest public pension reserve fund.

Figure 1.2. Nominal growth rate of pension assets, in 2025 and long-term average

In per cent



Note: This figure shows the nominal growth rate of assets in 2025 and the geometric average annual growth rate (expressed in local current prices) over the longest period possible (since 2001, 2005 or 2010 depending on data availability). Panel C: Data for Israel refer to the National Insurance Institute (NII) Fund, which supports the broader social security system and is used for a wide range of benefits (including old-age pensions).
Source: OECD Global Pension Statistics and other sources.

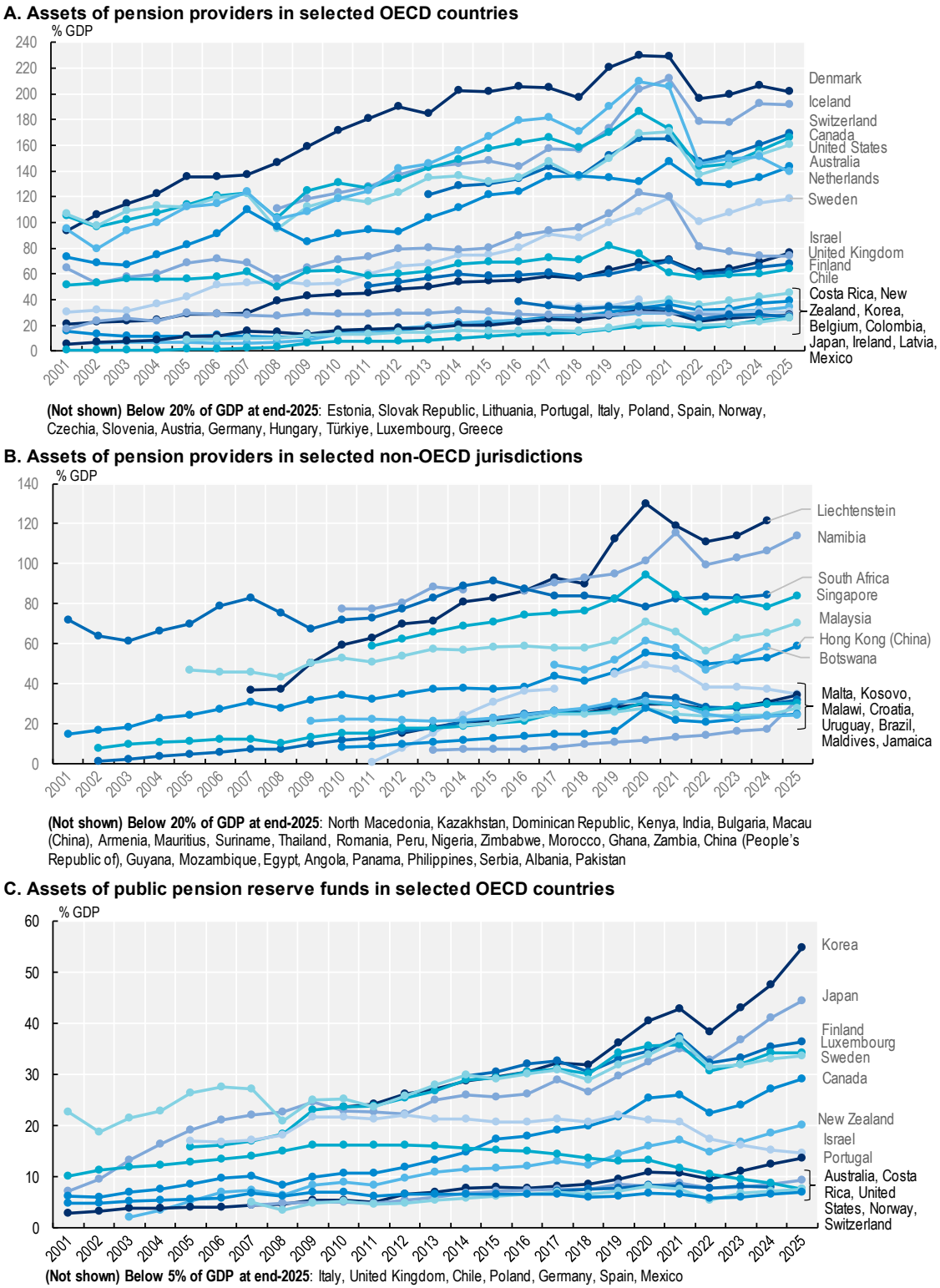
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Growth of pension assets has been uneven across countries. Among OECD countries, Greece and the Republic of Türkiye (hereafter “Türkiye”) have had some of the largest growth rates in 2025 and over the longer term. Both countries have relatively recent asset-backed pension systems and had low amounts of pension assets in the 2000s, resulting in higher annual growth rates than jurisdictions where asset-backed pensions were introduced earlier (e.g. Canada, Denmark, Japan, the United Kingdom and the United States). High inflation has also likely played a role in some of the jurisdictions with the largest growth rates (e.g. Türkiye and Zimbabwe).

Pension assets have grown at a different pace relative to the size of the economy. Looking at assets relative to the size of the economy, measured by the GDP, enables to control for the effect of inflation. For example, pension assets have grown moderately relative to GDP and remained at low levels at end-2025 in Türkiye (3.4% of GDP), despite high growth rates in local prices. By contrast, the growth of assets was particularly strong in Denmark and Iceland among OECD countries, and in Liechtenstein and Namibia among non-OECD jurisdictions, for example (Figure 1.3). Assets in public pension reserve funds have also grown faster than GDP in most countries, especially Japan’s Government Pension Investment Fund and Korea’s National Pension Fund. By contrast, reserves in the United States declined from 10.1% of GDP at end-2001 to 7.6% of GDP at end-2025.

Figure 1.3. Evolution of assets of pension providers and public pension reserve funds

As a percentage of GDP

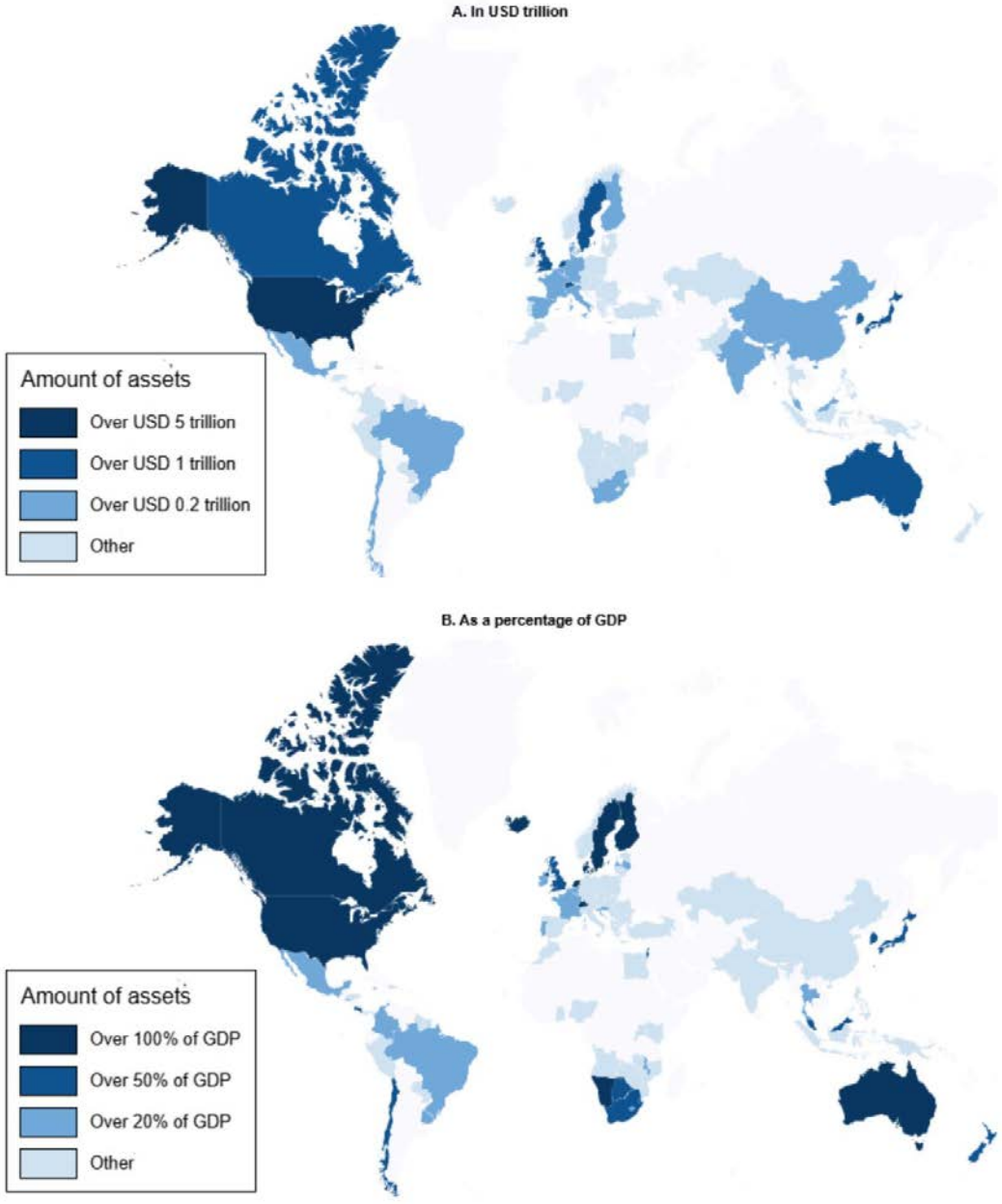


Source: OECD Global Pension Statistics and other sources.

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Pension assets were unevenly distributed geographically at end-2025. Most assets were held in North America (Canada and the United States), Western Europe (the Netherlands, Switzerland and the United Kingdom), Australia and Japan. For example, the United States had assets worth USD 51.8 trillion (including USD 2.3 trillion in reserves for the public pension scheme), representing close to two-thirds of all pension assets worldwide. Canada, Denmark, Iceland, Switzerland and the United States have the largest pools of assets relative to GDP. The amount of pension assets also differs within regions, with large differences across jurisdictions in Latin America, Africa and Europe (Figure 1.4).

Figure 1.4. Assets earmarked for retirement at end-2025 or latest year available



Note: Data refer to the sum of the assets of pension providers and public pension reserve funds.
Source: OECD Global Pension Statistics.

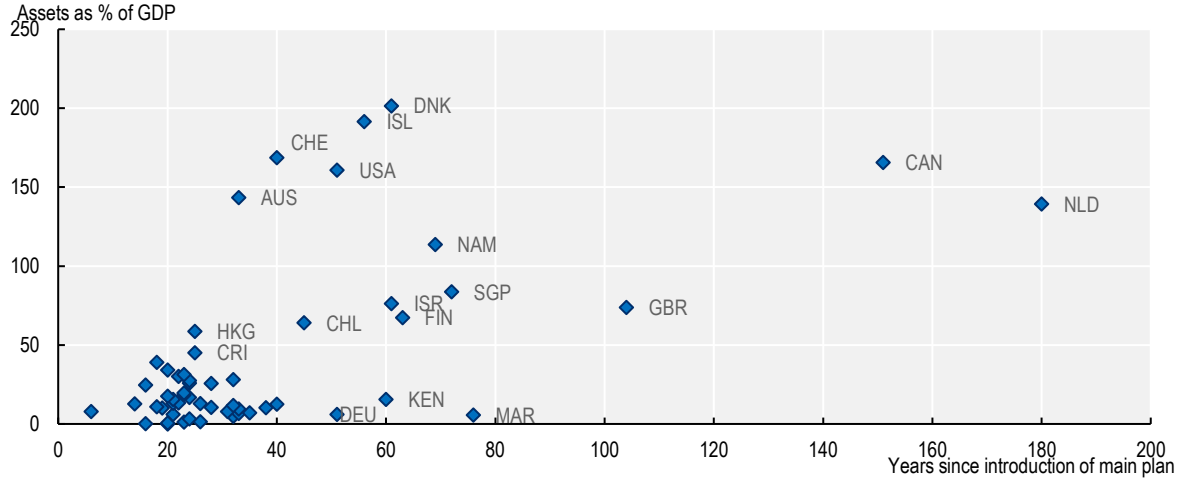
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The differences across jurisdictions are widening. Some jurisdictions still had low amounts of pension assets relative to GDP at the end of 2025 while others with already large amounts in the early 2000s continue to record strong asset growth (Figure 1.3). Some jurisdictions also have relatively significant public pension scheme reserves, exceeding the size of assets managed by pension providers, such as in Japan and Korea.

The time at which countries introduced asset-backed pension plans also explains the difference in the amount of pension assets at the end of 2025. Jurisdictions that introduced asset-backed pensions recently still have a relatively low amount of pension assets compared to jurisdictions that introduced asset-backed pensions earlier (Figure 1.5), in which pension assets have had more time to accrue. Yet, some jurisdictions that introduced asset-backed pensions around the same time had different amounts of assets at end-2025 (e.g. Germany and the United States), showing that other factors like access to a pension plan, participation, contribution rates and investment returns, are also at play in the accumulation of assets.

Figure 1.5. Amount of assets reached since introduction of the main plan, at end-2025

As a percentage of GDP



Source: OECD Global Pension Statistics.

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1.2. How pension assets grow

Understanding the growth of pension assets requires looking at the interaction between inflows and outflows at both the individual and national levels. Understanding the mechanisms behind these flows would allow assessing whether the growth in pension assets observed over the past two decades is likely to continue and under which circumstances. The analysis first explains how individuals accumulate and decumulate pension assets over their lifetime and then examines how the aggregation of pension assets across all individuals shapes the evolution at the national level. The analysis ends by analysing the inflows and outflows in public pension reserve funds.

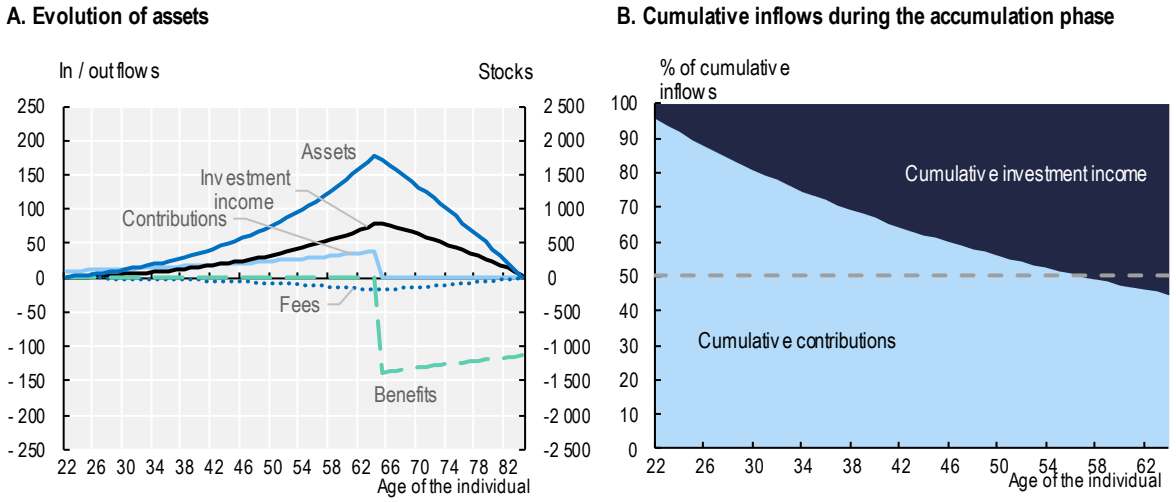
The growth of pension assets reflects the balance between contributions, income from investments and the payment of pension benefits. At the individual level, pension assets initially grow because individuals save for retirement and earn returns on their investments. The amount accumulated is therefore influenced by factors such as contribution rates and the composition of the investment portfolio. Pension assets then decrease because individuals withdraw their savings to finance their retirement.

At the national level, pension assets evolve according to the number of people saving for retirement and the number of people withdrawing funds to finance retirement. The number of people saving for retirement depends on the coverage and uptake of asset-backed pension plans, i.e. the number of people who have access to them, participate and contribute. The number of people withdrawing funds depends on the number of retirees and on how many of them built up assets during their careers. The structure of the population, the number of years since the asset-backed pension system was introduced and reforms affecting participation, contributions, investment and benefit payments also influence the evolution of aggregate pension assets.

1.2.1. How individuals accumulate and decumulate pension assets

Individuals accumulate assets over time by contributing from their income into asset-backed pension plans. Providers of those plans invest these contributions which over time earn a return net of fees. Naturally, there are periods in which the assets earn a negative return (e.g. during the 2008 financial crisis). Contributions and net returns accumulate during the individual's career. At retirement, pension benefit payments begin, which eventually lead to decumulation of previously accumulated assets (Figure 1.6 Panel A).[2]

Figure 1.6. Illustration of the evolution of assets of an individual in a defined contribution pension plan



Note: This figure illustrates how pension assets may evolve in a defined contribution plan over the working life and retirement of an individual, and the role that contributions, investment income, fees and benefit payments play in the evolution of assets. Panel A shows the annual contributions, investment income, fees and benefit payments on the left-hand side (inflows and outflows), and the total amount of assets (stock) on the right-hand side. Inflows are shown as positive values while outflows are shown as negative values. Panel B shows the split of cumulative inflows to the pension plan during the accumulation phase between contributions and investment income. The results depend on the assumptions.

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The growth of assets may not be linear. Individuals may pause and resume contributions, face investment losses due to downturns in financial markets, or access their savings if the legislation or plan rules allow for this. Assets could also fall abruptly at retirement in the case of a single lump-sum payment.

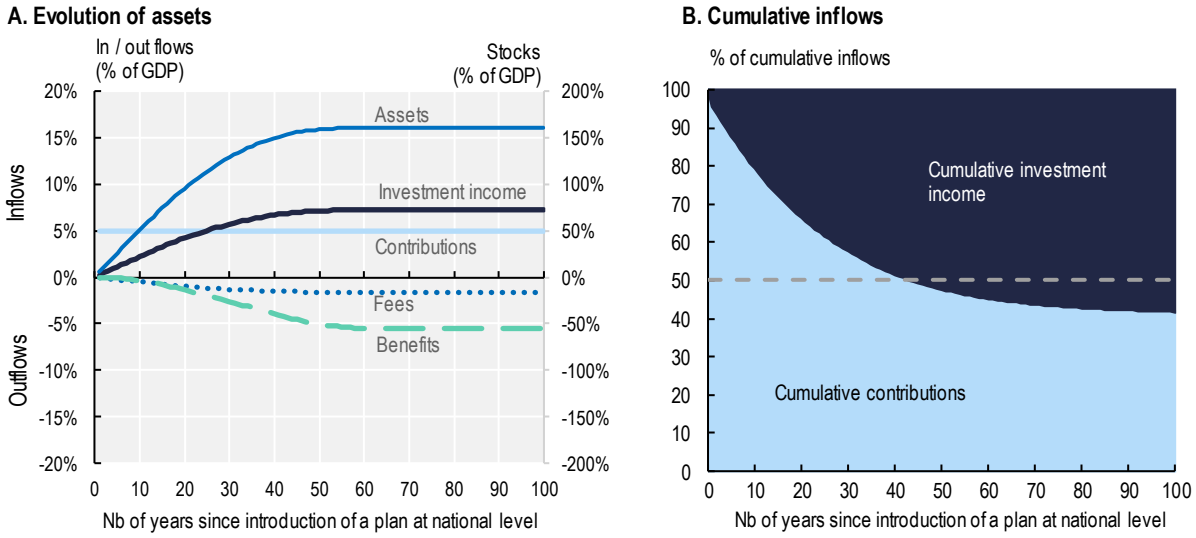
Investment income plays a greater role over time as the amount of assets earning a return grows. At one point, depending on the assumptions, investment income could play a greater role than contributions in the composition of pension assets (Figure 1.6 Panel B). The growing role of investment income in pension

assets comes from the effect of compound interest. Compound interest is the result of earning an interest on both contributions and past interests earned (Batsman, 2026[1]; Hartmann, n.d.[2]). The effect of compound interest continues even when contributions stop, as earlier contributions continue to get an investment income if assets stay in the plan.[3] During the decumulation phase, pension assets decline to the extent that pension benefit payments exceed the investment income earned on the remaining assets.

1.2.2. Evolution of pension assets at the national level

The accumulation of pension assets at the national level depends on multiple parameters, including the maturity of the asset-backed pension system and the population structure. When asset-backed pensions have been in place for a long time and are fully mature (i.e. all individuals have accumulated assets during their entire career under the same plan rules), the flows in and out of the plans may remain constant under a constant population structure, leading to a stable level of pension assets (Figure 1.7, Panel A).[4, 5]

Figure 1.7. Illustration of the evolution of DC pension assets at the national level



Note: This figure illustrates how pension assets may evolve at the national level following the introduction of a DC plan, and the role that contributions, investment income, benefits and fees play in the evolution of assets. This illustration is based on several assumptions. Panel A shows the aggregate annual inflows (contributions and investment income), outflows (benefits and fees) (on the left-hand side) and accumulated assets as a percentage of GDP (on the right-hand side) at the national level from the introduction of the DC plan. Panel B shows the split of total cumulative inflows from the introduction of the DC plan between contributions and investment income.

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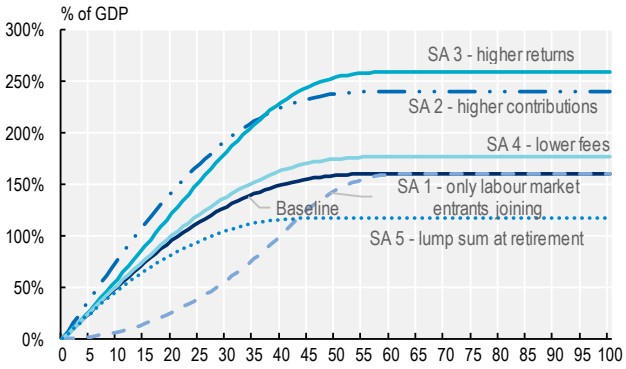
Over time, investment income plays a growing role in the financing of asset-backed pensions at the national and individual level. Contributions are the main source of inflows in the first years following the introduction of a pension plan. Investing contributions in capital markets generates investment income, which grows over time as it benefits from the effect of compound interest (Figure 1.7, Panel B).

The volume of flows in and out of the plans determines both the pace at which pension assets accumulate and the level of pension assets. For example, a new pension plan covering only part of the population would generate lower contribution levels and slower growth in pension assets than a plan available to all. Higher contribution levels, higher investment income resulting from higher returns, or lower fees lead to larger inflows, resulting in faster growth in pension assets and higher levels of pension assets (Figure 1.8, Panel A). Individuals may pay voluntary contributions above mandatory or minimum contribution levels,

which can accelerate asset accumulation and increase future retirement benefits, as Chapter 2 analyses further. Investment income contributes more to the growth of pension assets when investment returns are higher, fees are lower or the investment horizon is longer (Figure 1.8, Panel B). The growth of pension assets flattens as a growing number of retirees receive benefit payments based on a full contribution period (Figure 1.8, Panel A). The type of benefit payments also influences total pension assets, with lump sum payments reducing total pension assets more than other payout options where assets remain invested during the decumulation phase such as programmed withdrawals.

Figure 1.8. Sensitivity analyses of the accumulation of assets at the national level

A. Accumulation of pension assets at the national level under the baseline and different sensitivity analyses (SA)



B. Share of cumulative investment income in all inflows at different times and under different assumptions

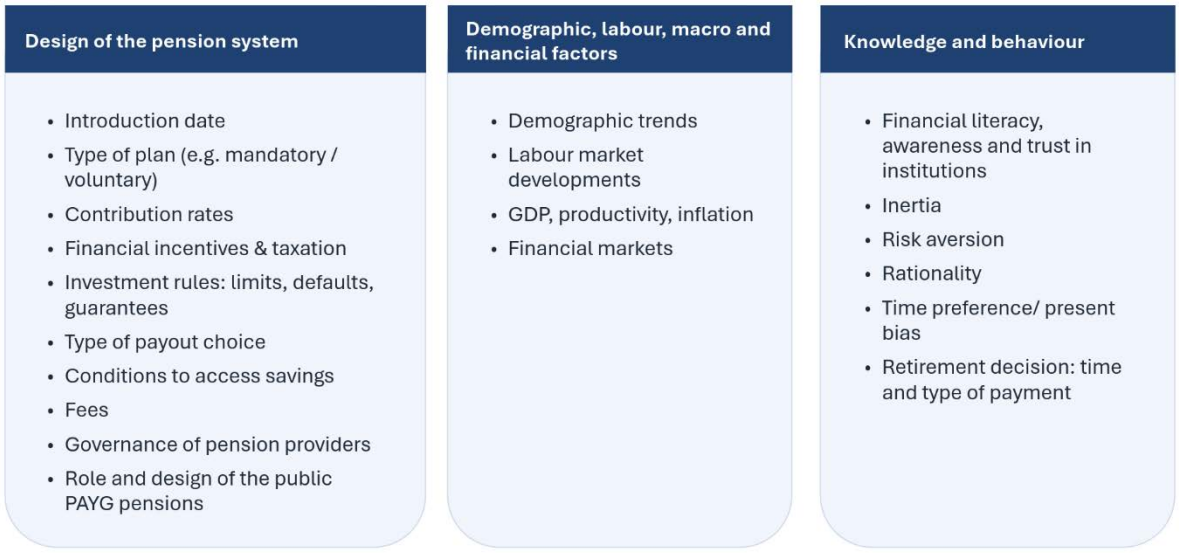
	Time after the introduction of a plan			
	10 years	20 years	30 years	40 years
Baseline	20.5%	33.4%	42.3%	48.3%
SA 1 - only labour market entrants	15.6%	25.9%	34.3%	41.3%
SA 2 - higher contributions	20.5%	33.4%	42.3%	48.3%
SA 3 - higher returns	30.5%	48.2%	59.5%	66.8%
SA 4 - lower fees	20.8%	34.2%	43.5%	49.9%
SA 5 - lump sum at retirement	19.5%	30.8%	38.2%	43.0%

Note: Numbers are illustrative and do not represent the case of any specific country. The baseline is the same as in Figure 1.7. The figure shows the results of different sensitivity analyses (SA), changing one assumption at a time compared to the baseline: a gradual enrolment of the working-age population (with only new labour market entrants at age 22 joining the plan when it is phased in) instead of all workers (SA 1), contribution levels 50% higher (because of a contribution rate 50% higher) than in the baseline (SA 2), a higher nominal investment rate of return (assuming a real return of 5% instead of 2.5%, implying a nominal return of 7.1% instead of 4.5% for a 2% inflation rate) (SA 3), lower fees on assets (halved) (SA 4), a lump sum at age 65 (instead of a programmed withdrawal) (SA 5). Panel A shows the evolution of assets in the different cases. Panel B shows the cumulative share of investment income over all inflows at different times after the introduction of the pension plan.

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Multiple factors can influence the volume of inflows and outflows of pension plans. These factors are those relating to the design of the pension system; demographic, labour, macro and financial factors; and cognitive and behavioural factors (Figure 1.9). The first two groups of factors have an impact on the flows and on the accumulation of assets at the national level and affect all individuals collectively. For example, policymakers can choose to set a mandatory contribution rate when they design the pension system. This contribution rate will determine how much individuals or employers contribute. Financial factors, such as developments in financial markets, affect the amount of investment income that members can earn. Cognitive and behavioural factors affect how individuals save, which in turn affects assets at the national level.

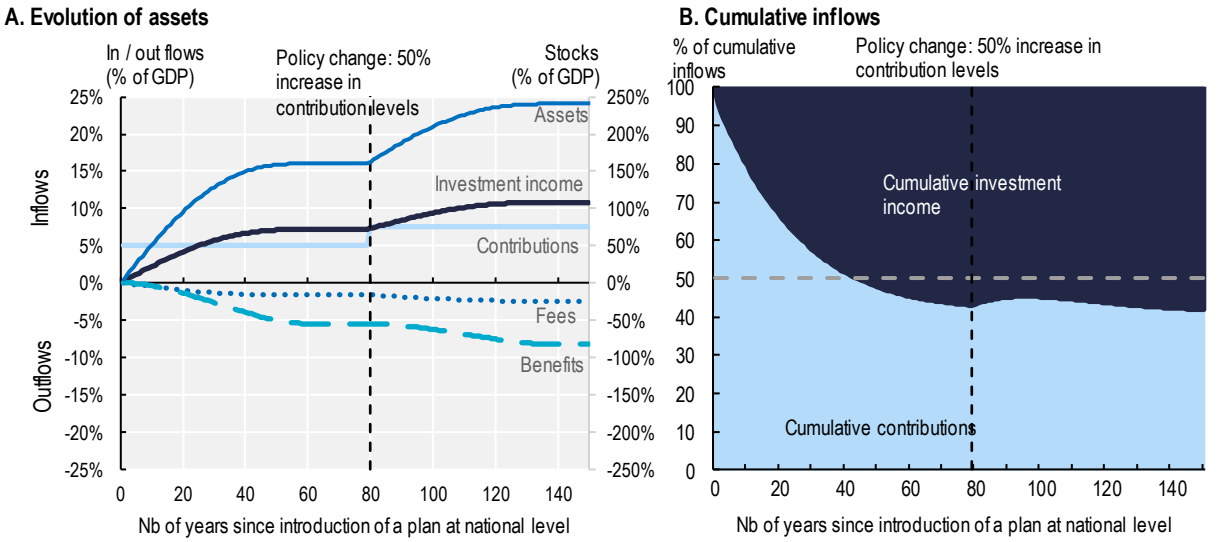
Figure 1.9. Factors affecting the speed and level of assets accumulated at the individual and national levels



While policymakers decide on a number of parameters (e.g. contribution rates, fees) when they design the pension system, they can make policy changes and adjust some of these parameters later on. For example, they may decide to increase contribution rates. Policy changes can impact the flows of pension plans and the growth of assets, evolving in line with the new parameters (Figure 1.10, Panel A). Policy changes can also affect the share that investment income plays in financing asset-backed pensions, at least temporarily until a whole generation of retirees has a full accumulation period under the new rules (Figure 1.10, Panel B). The effect of a policy change on the role of investment income over the longer term depends on whether the policy change led to different investment returns, fee levels or investment horizon.

The structure of the population also affects inflows to and outflows from asset-backed pensions, and thereby the amount of pension assets. Inflows depend on the number of people contributing, while outflows depend on the number of beneficiaries. A shift in the balance between savers and retirees would change the relative size of the flows. For example, a reduction in the number of people entering the labour market would lead to lower levels of contributions flowing into asset-backed pensions, all else being equal. Investment income would also be lower assuming constant returns, and so would total pension assets. Equally, as the number of people in retirement grows relative to those saving for retirement, outflows relative to inflows will grow, affecting negatively the growth of pension assets.

Figure 1.10. Illustration of the growth of DC pension assets at the national level after a policy change



Note: This figure illustrates how pension assets may evolve at the national level following the introduction of a DC plan with the same assumptions as in the baseline during the first 79 years. A policy change in year 80 increases contribution levels by 50% (through an increase in contribution rates by 50%) (as in the sensitivity analysis 2 before). Panel A shows the annual inflows (contributions and investment income), outflows (benefits and fees) (on the left-hand side) and accumulated assets as a percentage of GDP (on the right-hand side) at the national level from the introduction of the DC plan and following the pension reform. Panel B shows the split of total cumulative inflows of the DC plan between contributions and investment income, from the introduction of the DC plan and following the policy change.

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1.2.3. Evolution of assets in public pension reserve funds

Some public pension systems also build up assets in public pension reserve funds. Inflows into these funds often result from an excess of contributions over benefit payments from a pay-as-you-go pension plan, or from other sources, such as revenues from privatisation or general taxation (OECD, 2021[3]). These inflows can generate an investment income when they are invested in financial markets, and benefit from the effect of compound interest. The payout depends on the trigger that jurisdictions have set up, such as reaching a certain deficit in the pay-as-you-go pension system.

Factors affecting the evolution of assets in public pension reserve funds are also linked to the design of the pension system (e.g. introduction date, source of financing, type of payouts) and socio-economic, demographic and financial factors (e.g. demographic trends, GDP growth, financial market developments).

To complete the understanding of how pension assets grow, the following sections focus on the evolution over time of contributions, investment income and pension benefit payments. This provides a sense of the respective sizes of these inflows and outflows and may help to assess the potential future evolution of pension assets and the different flows.

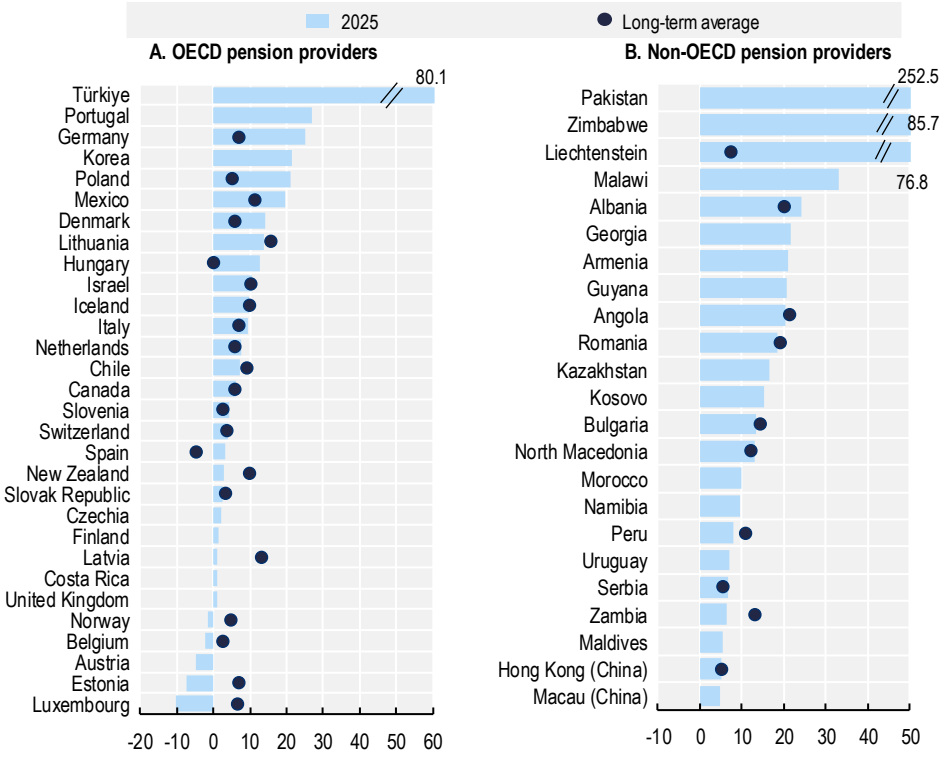
1.3. Contributions have grown in most jurisdictions

Contributions to pension plans have grown in 2025 and over the last decades in most of the 53 jurisdictions examined, including 25 OECD countries. Their growth partly explains the increase in pension assets that most jurisdictions recorded. Some jurisdictions experienced a fall in contributions in 2025 despite positive growth on average over the long term (Figure 1.11). Spain, on the contrary, experienced a decline in

contributions over the long term, but this long-term trend may be reversing as contributions to pension funds increased in 2023 (by 9%), 2024 (10.9%) and 2025 (3.3%).

Figure 1.11. Nominal growth rate of contributions, in 2025 and long-term average

In per cent



Note: This figure shows the growth rate of contributions in 2025 and the geometric average annual growth rate (expressed in local current prices) over the longest period possible (since 2001, 2005 or 2010 depending on data availability).
Source: OECD Global Pension Statistics.

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Contributions to asset-backed pension plans may grow when more individuals have access to, participate in, and make contributions to these plans, or when individuals pay higher contributions.

1.3.1. Access

More individuals have access to pension plans when the working-age and employed populations increase, when new asset-backed pension plans are introduced, or when the rules to enrol individuals into existing plans become more flexible and allow more people to participate.

The number of working-age individuals who may be able to access an asset-backed pension plan has increased in the last decades. The working-age population (i.e. the number of people aged 15 to 64) has increased from 816 million in 2005 to 884 million in 2024 in the OECD (OECD, 2026[4]). Around two-thirds of OECD countries experienced an increase in the number of people aged 15 to 64 since early 2000s, expanding the base of people who may be able to join and contribute to a pension plan. Some of the strongest increases since the early 2000s occurred in Australia (by 39%), Iceland (42%), Israel (47%) and Luxembourg (55%). By contrast, other jurisdictions where the number of people aged 15 to 64 has shrunk have seen their base of potential plan members erode, which can slow the growth in contributions. These

jurisdictions have low fertility rates (e.g. Japan) or negative net migration rates, with more people moving out than in the country (e.g. in the Baltics and several Central and Eastern European countries) (World Bank, 2026[5]).

Increasing employment and reducing unemployment can allow a larger proportion of the working-age population to access a pension plan through work. Unemployment rates have been fluctuating since the early 2000s, rising during the 2008 financial crisis and the COVID-19 pandemic, but returning to lower levels after these shocks and remaining relatively stable overall since 2022 (OECD, 2026[6]). Trends in 2025 varied across countries, and in around half of OECD countries unemployment increased between December 2024 and December 2025 while in the other half it was stable or declined. The increase in unemployment rates in 2025 may have hampered the growth of contributions in these countries, while the decline in others may have enabled more people to have access to a plan through work, supporting the growth in contributions.

Many jurisdictions have also facilitated access to pension plans. Some have enhanced access by introducing new plans, relaxing eligibility criteria to access existing plans, or reducing barriers for employers to offer a plan (Table 1.1). Some jurisdictions have designed plans tailored to specific subgroups (e.g. Kenya). The broadening of the base of people able to access a pension plan can thereby support the growth in contributions if individuals join the plan and contribute.

Table 1.1. Policies facilitating access to a pension plan

Policies	Jurisdictions
Introduction of new plans	Greece (2002), Israel (2008), Malawi (2011), Norway (2006), the Philippines (2021)
Relaxation of eligibility criteria to access plans	Australia (2022), India (2025), Japan (2017), Korea (2017), Norway (2022)
Simplification of the plan offer	France (2019), Spain (2022), United States (2022)
Plans tailored to subgroups	Kenya, Nigeria, Rwanda, Uganda

Note: The list is not exhaustive of all the policies implemented nor of all the jurisdictions that have implemented the listed policies.

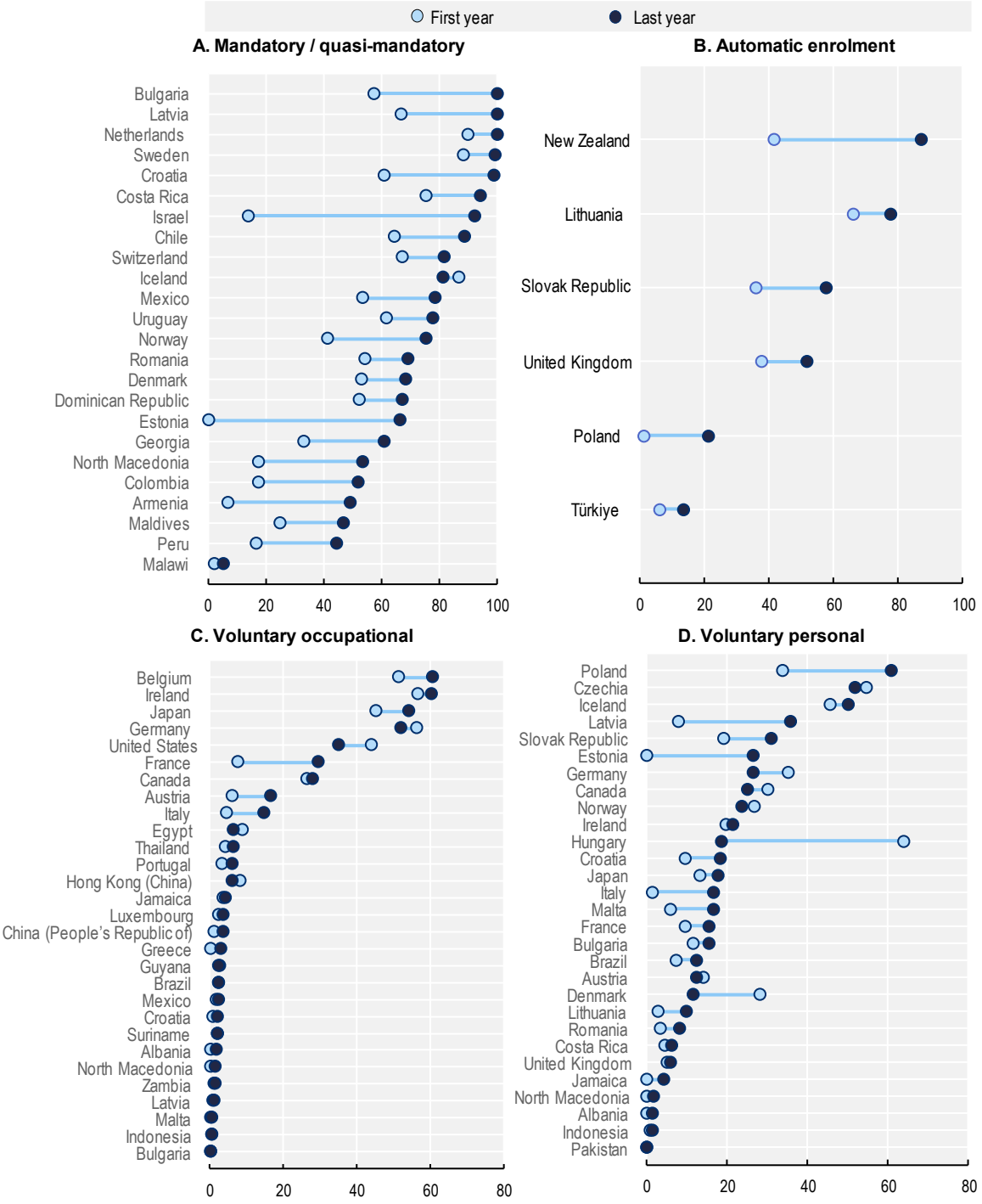
1.3.2. Participation

Contributions would increase when more individuals participate in an asset-backed pension plan. Policymakers can either mandate employers or individuals to participate in a plan, require employers or a public institution to enrol individuals automatically in a plan, or let individuals choose to opt into plans they have access to.

Participation in a plan has increased in many jurisdictions, especially where participation has become mandatory or individuals have been automatically enrolled. For example, the participation rate of the working-age population increased by more than 40 percentage points (p.p.) in Armenia, Bulgaria, Estonia, Israel and New Zealand, which have all mandated participation in a pension plan or introduced automatic enrolment since the early 2000s (Figure 1.12).[6] In Iceland, the Netherlands and Sweden, participation rates have remained relatively constant over the past 10 to 20 years as participation in a plan was already widespread at the beginning of the period. While automatic enrolment programmes have led to a surge in participation in New Zealand and in the United Kingdom for employees, the success of the programmes has been more moderate so far in Italy, Poland and Türkiye for country-specific reasons. The participation rate in voluntary plans has generally remained relatively stable (e.g. Canada), with some exceptions (e.g. Hungary). In Hungary, the participation rate in pension funds dropped following a pension reform in 2010/11, which suspended payments to mandatory individual schemes and gave the option to members to redirect their assets to the pay-as-you-go public pension system. In Hong Kong (China), the fall in participation in ORSO schemes could be due to more employers choosing to switch to offer Mandatory Provident Fund (MPF) schemes introduced in 2000.

Figure 1.12. Proportion of the working-age population participating in a pension arrangement, by type of arrangement, at two different times

As a percentage of the working-age population



Note: Jurisdictions that have several types of pension plans (e.g. mandatory workplace pension plans and voluntary personal plans) are shown in several charts when data are available. The first (respectively last) year varies across jurisdictions. The time series of participation rates is available by jurisdiction and type of plan in the statistical annex.
Source: OECD Global Pension Statistics.

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Apart from automatic enrolment and compulsion, policymakers have implemented other measures to foster participation in pension plans. These include offering financial incentives or engaging in communication campaigns and financial education programmes (Table 1.2). France has raised participation in pension plans with a pension reform (part of the *Loi Pacte*), which simplified the offer of pension plans with three main types of products (called PER) (DREES, 2022[7]), supported with financial incentives. The Slovak Republic has also seen an increase in the participation of voluntary personal pension plans, which the Central Bank has supported through financial education initiatives (5 peňazí) (NBS, n.d.[8]). Communication campaigns and financial education can contribute to getting people to engage with planning for their retirement and seek financial advice if needed (Chapter 4).

Table 1.2. Policies to encourage participation in a pension plan

Policies	Jurisdictions
Mandating participation in a plan	Chile (2019), Greece (2022), Israel (2008), Malawi (2011), Norway (2006)
Automatic enrolment	Canada (2012), Italy (2007), Lithuania (2019 to 2025), New Zealand (2007), Poland (2019), Slovak Republic (2023), Türkiye (2017), United Kingdom (2012), United States (2025)
Financial incentives	Many countries
Communication campaigns and financial education programmes	Ghana (2022), Slovak Republic (2020)

Note: The list is not exhaustive of all the policies implemented nor of all the jurisdictions that have implemented the listed policies. Chile introduced a law in 2019 requiring self-employed individuals issuing invoices for services to pay pension contributions. Automatic enrolment in Canada is specific to a type of pension plans (pooled registered pension plans). The SECURE Act 2.0 in the United States requires employers opening new 401(k) plans to automatically enrol eligible employees (since 2025). The SECURE Act 2.0 also allows smaller employers to join existing plans.

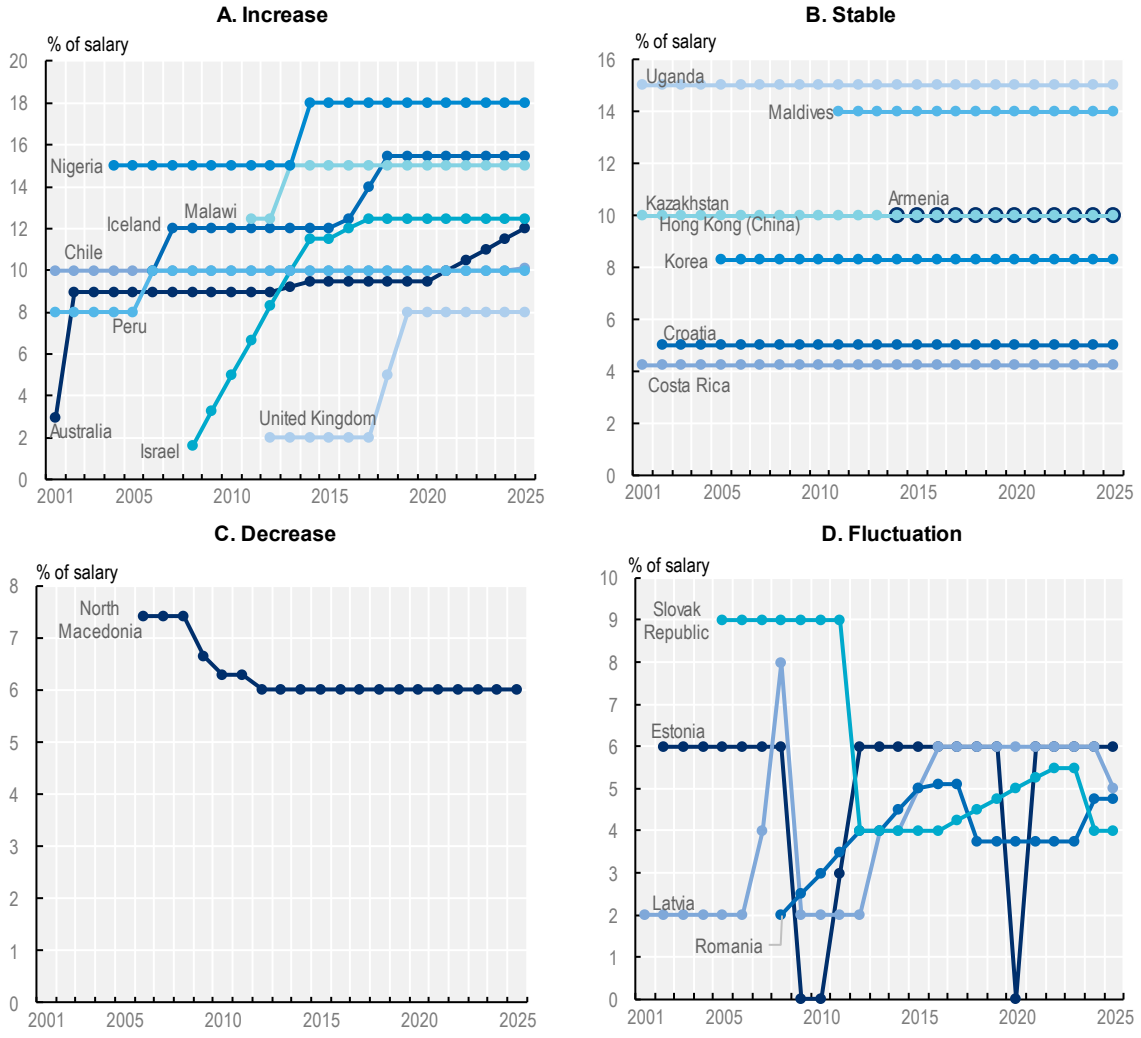
1.3.3. Contributions

Contributions that people make to their asset-backed pension plans can increase when wages increase, when mandatory contribution rates increase or when people make additional voluntary contributions.

The increase in nominal wages has probably been a supporting factor behind the growth of contributions. Nominal wages have grown in all OECD countries since the early 2000s (OECD, 2026[9]). Growth has been relatively moderate in Japan, while it has been among the strongest in the Baltics (8% on average per year in Estonia and Lithuania, and 9% in Latvia since 2001). The increase in wages leads to an increase in nominal contributions levied on salary, all else being equal.

The evolution of mandatory and minimum contribution rates has also played a role in the growth of contributions. Contribution rates have increased in several countries, such as Australia, Iceland and the United Kingdom (Figure 1.13). Australia and Iceland increased employers' mandatory contributions. Iceland also increased employees' mandatory contributions. Iceland recorded one of strongest increases in contribution rates over the last two decades, from 10% in 2006 to 15.5% in 2025, which probably explains why it has had a relatively strong growth rate of contributions over the period (9.9% per year on average, Figure 1.11). By contrast, mandatory and minimum contribution rates have remained stable in other jurisdictions (e.g. Armenia, Croatia, Hong Kong (China), Kazakhstan)[7] or have fluctuated (e.g. Latvia, Lithuania and the Slovak Republic).[8] Some of these fluctuations were in times of crises (e.g. financial crisis, COVID-19). The recent decline in the contribution rate in the Slovak Republic (from 5.5% in 2023 to 4% in 2024 and 2025) may partly explain the relative lower increase in contributions in 2025 (2.5%) compared to the annual average growth rate of contributions over the long term (Figure 1.11).

Figure 1.13. Evolution of mandatory / minimum contribution rates to pension plans



Note: In Chile, a pension reform introduced a new employer pension contribution from August 2025, starting at 1% of salary and scheduled to increase. A portion went to the individual accounts (0.1% of salary) in the second half of 2025. The contribution rates for Costa Rica refer to the mandatory complementary pension scheme (ROP). The contribution rates for Hong Kong (China) refer to the MPF system. The contribution rates for Korea refer to occupational DC plans. In Romania, the contribution rate to the second pillar was recalculated in 2018 in a way to keep the contribution level constant in nominal terms, resulting in a contribution rate of 3.75%. The contribution rates for Uganda refer to the NSSF.

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Voluntary contributions to pension plans can also influence the overall level of contributions. For example, the overall 27% increase in contributions to pension plans in Portugal in 2025 (Figure 1.11) reflects growing contributions to personal pension plans used as long-term investment vehicles with a comparatively favourable tax treatment. While policymakers can use financial incentives to nudge people to save for retirement, they can also encourage people to save by making it easier for people to make voluntary contributions (Table 1.3). Policymakers can harness digital tools, for instance by enabling people to make contributions directly from their smartphone. For example, the pension supervisor in Mexico developed an app (*AforeMóvil*) launched in 2017 for individuals to open a plan, check their savings and make voluntary contributions (IOPS, 2018[10]).

Table 1.3. Policies to boost contributions

Policies	Jurisdictions
Increase in mandatory, minimum or default contribution rates	Australia, Iceland, New Zealand, United Kingdom
Financial incentives to individuals and employers	Many countries
Informing and nudging	Mexico, Switzerland

Note: The list is not exhaustive of all the policies implemented nor of all the jurisdictions that have implemented the listed policies. Chapter 2 provides and discusses a broader range of policies.

1.3.4. Inflows into public pension reserve funds

Different rules may trigger inflows into public pension reserve funds. Public pension reserve funds are financed in many cases from the surpluses of contributions over benefits paid from public pension schemes (e.g. Japan's GPIF, Korea's NPF, the United States OASI Trust Fund). Public pension reserve funds may also receive revenues from privatisation (e.g. Australia's Future Fund), money from general taxation (e.g. New Zealand Superannuation Fund) or fiscal transfers (e.g. Chile's Pension Reserve Fund) (OECD, 2021[3]).

These different rules to finance public pension reserve funds may explain some of the differences in the inflows they receive across countries. For example, inflows to France's FRR (apart from investment income) have stopped since 2010. In Chile, the reserve fund received no inflows in 2025. In many countries where reserves are financed by the surpluses of contributions over benefit payments, this excess will depend on many parameters, such as the contribution rate to the public pension scheme, the formula behind benefit payments and the demographic structure of the population. The inflows to the United States' OASI Trust Fund have declined over the years relative to the size of the economy, from 4.9% of GDP in 2001 to 4.1% in 2025. In Spain, the reserve fund reached its lowest level in 2020 and 2021, but Spain has recently replenished it, accounting for the recent growth in inflows.

1.4. Investment income to asset-backed pension plans has grown

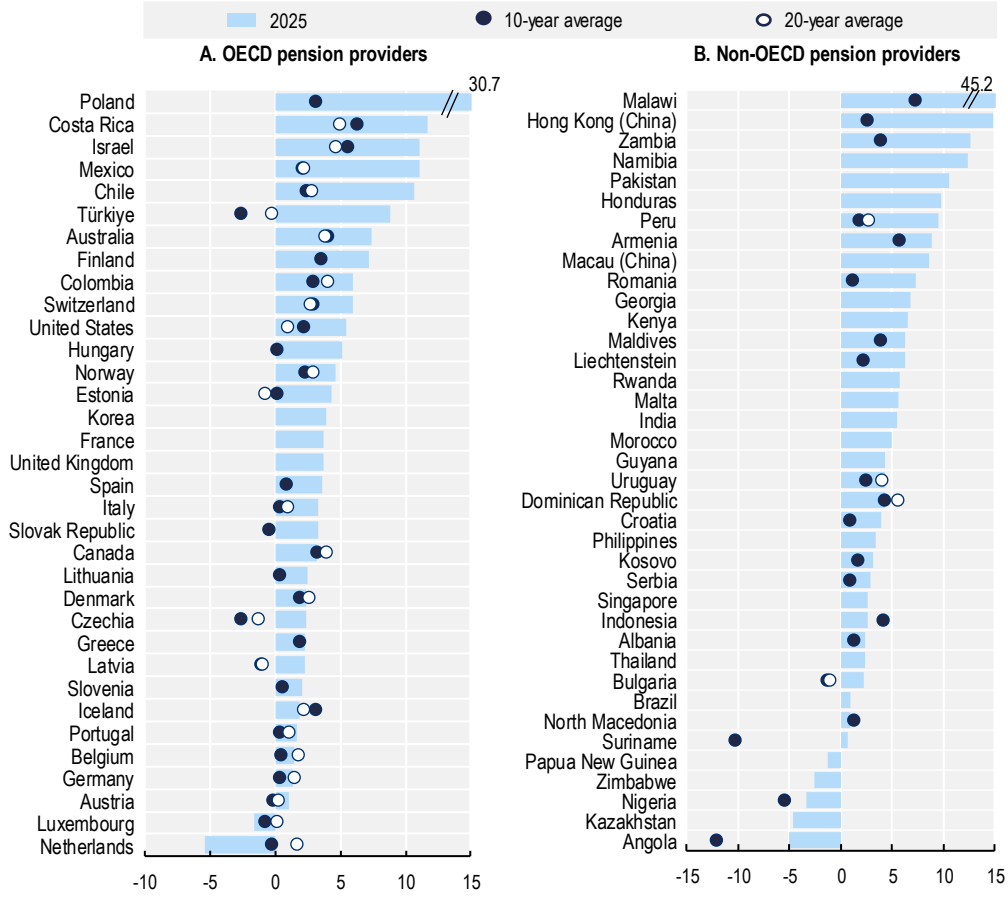
The income that the investment of pension contributions generates also influences the evolution of pension assets. Pension plans invest the contributions they receive and earn a return. Investment income grows with positive rates of return and provides an additional source of financing of asset-backed pensions. Investment performance depends on the asset allocation of the portfolio and the evolution of financial markets.

1.4.1. Pension providers recorded positive investment rates of return in 2025

Pension providers exhibited positive rate of returns in most jurisdictions in 2025, contributing to the growth of assets in 2025. For the third year in a row, pension providers recorded widespread investment gains, spurred by the robust performance of global equities in 2025. The MSCI World index gained around 20% in 2025, a performance close to 2023 and 2024 (MSCI, 2026[11]). As a result, in 2025 pension providers in most jurisdictions exhibited an investment rate of return, net of investment expenses, above the long-term average (Figure 1.14). Few jurisdictions in the OECD recorded negative real investment returns, net of investment expenses, in 2025, such as the Netherlands at -5.4%. Weaker performance could be due to losses on bond holdings following the rise in yields of some long-term government bonds and to foreign exchange losses on USD denominated holdings, given the depreciation of the US dollar against major other currencies in 2025. Investment returns were positive in nominal terms in all jurisdictions but the Netherlands (-2.8%).

Figure 1.14. Average real annual investment rates of return of pension providers, net of investment expenses

In per cent



Note: The average real annual rate of return of pension providers over the last 10 years is not shown for Zimbabwe (-49.2%) for readability purposes. The annual investment rates of return and more country-specific notes are available in the statistical annex of this chapter.
Source: OECD Global Pension Statistics.

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Over the long term, pension providers in most jurisdictions have achieved positive average investment returns, net of investment expenses. The investment rate of return, net of investment expenses, was positive in nominal terms in all jurisdictions over the last 20 years. In real terms, it was positive in most reporting jurisdictions except in Bulgaria, the Czech Republic (hereafter “Czechia”), Estonia, Latvia and Türkiye. Returns were positive despite volatility and years of weaker investment performance (e.g. 2008 and 2022, periods of headwinds in stock and bond markets (OECD, 2023[12])).

Investment expenses reduce the overall income that pension plans earn. Investment expenses include the costs arising from investment management, such as investment management fees paid to external asset managers and custodian fees. Members of DC pension plans may be charged other fees that further reduce flows into pension plans (Box 1.1), slowing down asset accumulation.

Box 1.1. Fees charged to members of DC pension plans

Running DC pension plans generates operating costs for pension providers, which they can cover by charging fees to plan members. Fees may be charged on contributions, assets or investment income. Many jurisdictions allow pension providers to charge fees only on assets, but other fee structures exist such as fees charged on contributions only or fees charged on assets and performance. Fees reduce the amount of pension assets, and thereby future investment income as well, as lower assets provide lower investment income for a given investment return all else being equal.

Table 1.4. Fees charged to members of DC plans

As a percentage of total assets

Jurisdiction	2018	2019	2020	2021	2022	2023	2024	2025	Difference between first and last year available
A. Jurisdictions with fees levied on assets only									
Slovenia	..	..	0.8	0.8	0.8	0.7	0.7	0.8	0.0
Maldives	..	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.0
Spain	1.3	1.2	1.2	..	1.3	1.2	1.2	1.2	-0.1
Costa Rica	0.5	0.4	0.3	0.3	0.4	0.3	0.3	0.3	-0.1
Mexico	1.0	0.9	0.8	0.7	0.5	0.5	0.5	0.5	-0.5
Lithuania	1.0	0.5	0.6	0.4	0.5	0.5	0.4	0.4	-0.5
Albania	2.6	2.5	2.4	2.2	2.0	2.1	1.9	1.7	-0.9
B. Jurisdictions with fees levied on contributions only									
Colombia	0.9	0.8	0.6	0.6	0.5	0.5	0.3	0.3	-0.6
C. Jurisdictions with mixed fee structures									
Dominican Republic	0.4	..	1.2	1.2	..	1.0	1.7	1.5	1.1
Czechia	0.8	0.9	0.9	0.9	0.9	1.0	1.4	1.2	0.4
Peru	0.8	0.7	0.6	0.8	1.1	0.9	1.1	1.0	0.2
Slovak Republic	0.6	0.9	0.7	1.2	0.5	0.5	0.7	..	0.1
Hungary	0.6	0.7	0.5	0.7	0.7	0.7	0.7	0.7	0.1
Serbia	1.3	1.3	1.4	1.4	..	1.4	1.3	1.4	0.0
Chile	0.8	0.7	0.8	0.9	0.9	0.9	0.9	0.8	0.0
Liechtenstein	0.6	0.5	0.5	0.5	0.6	0.2	0.6	0.5	-0.1
Bulgaria	1.2	1.1	1.0	1.1	1.1	1.1	1.1	1.1	-0.1
Australia	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	-0.1
North Macedonia	0.7	0.6	0.6	0.5	0.6	0.5	0.5	0.5	-0.2
Poland	0.6	0.6	0.5	0.5	0.6	0.4	0.5	0.4	-0.2
Kazakhstan	..	0.5	0.3	0.3	0.2	0.2	0.3	0.2	-0.3
Estonia	1.0	0.8	0.7	0.7	0.6	0.5	0.5	0.5	-0.5
Türkiye	2.0	1.8	..	..	2.0	2.4	1.6	1.4	-0.6
Romania	1.0	0.5	0.6	0.7	0.4	0.3	0.3	0.3	-0.7

Note: Data for Australia refer to fees charged by entities with more than four/six members. For Colombia, severance fund management fees are not included. Data for Costa Rica refer to the mandatory complementary pension scheme (ROP). Data for the Dominican Republic and Mexico refer to personal pension plans. Data for Hungary refer to voluntary private pension funds. Data for Poland refer to open pension funds only. Data for Spain refer to personal pension funds.
Source: OECD Global Pension Statistics.

StatLink https://stat.link/4n82fi

Most jurisdictions cap fees that pension providers can charge. While the cap varies across jurisdictions, some have reduced the cap, sometimes changing the methodology used to calculate it (e.g. Mexico, Romania). Some countries have used other tools to try to reduce fees charged. For example, the Australian pension supervisor has developed a "Comprehensive Product Performance Package" (CPPP), bringing together its superannuation performance test and its heatmaps looking at fees and performance, to encourage trustees to enhance members' outcomes and to increase transparency. Chile and New Zealand have auction mechanisms to assign eligible people to the winning provider. These auctions are based on fees (along other factors in New Zealand), with a view to keeping fees in check or improve value for money.

Fees that members pay tend to have declined in recent years. Fees expressed as a percentage of assets were lower in 2025 than in 2018 in most jurisdictions (Table 1.4). This decline may allow pension plans to reach higher levels of accumulated assets over the long term.

1.4.2. The asset allocation of pension providers partially explains differences in investment performance

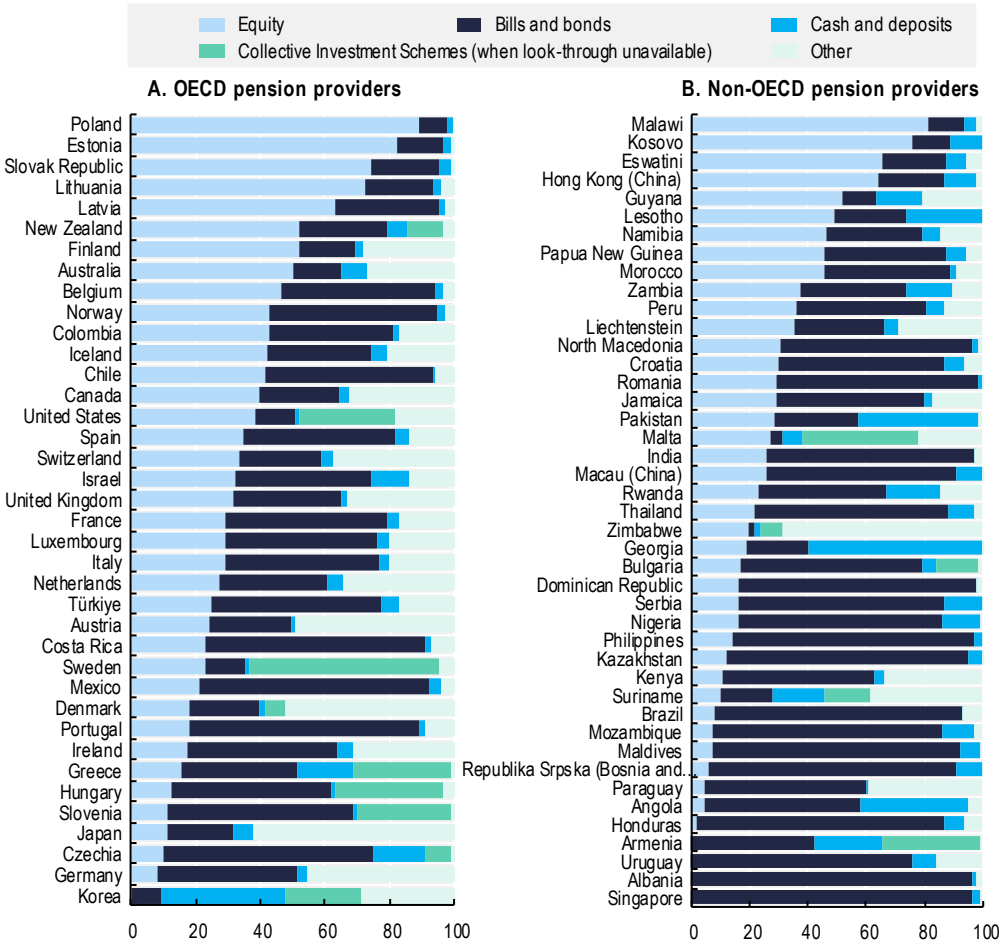
The investment performance of pension providers depends on how pension assets are invested. Jurisdictions that held the largest amount of pension assets in equities in 2025 benefitted the most from the positive developments in equity markets in 2025. This includes Estonia, Lithuania, Poland and the Slovak Republic, where pension providers held more than 70% of assets in equities at end-2025 (Figure 1.15). Poland achieved a stronger investment rate of return (30.7%) than others, as open pension funds in the country invest primarily domestically, while pension providers in other countries may have recorded lower gains in local currency from their USD-denominated equities given the depreciation of the dollar.

Bonds and equities generally represent the largest holdings of pension providers, but the mix varies across jurisdictions. Bonds and equities account for more than 50% of the investment of pension providers in 71 out of 81 reporting jurisdictions at end-2025. While pension providers invest mostly in equities in some jurisdictions (e.g. Poland, the Slovak Republic, the Baltics), bonds represent the largest holding of pension providers in several others (e.g. Albania, Czechia). The high proportion of bond holdings may be due to a lack of domestic opportunities, the preference or need for a fixed guaranteed income, or investment rules.

For instance, the lack or underdevelopment of local capital markets may contribute to the large proportion of assets in public debt in some Latin American countries (e.g. Costa Rica, Dominican Republic and Uruguay) (Mesa-Lago, 2020[13]). In some other countries, pension providers may seek a guaranteed stream of income, such as in Czechia where transformed pension funds invest in bills and bonds to fulfil the promise of an annual non-negative nominal guarantee to their members. Investment rules may also require pension providers to hold a minimum proportion of their assets in bonds, such as in Morocco for the pension fund for private sector employees (at least 35%) and in Indonesia for voluntary and mandatory pension funds (30% or 50% depending on the fund).

Figure 1.15. Allocation of pension assets in selected investment categories at end-2025

As a percentage of total investment



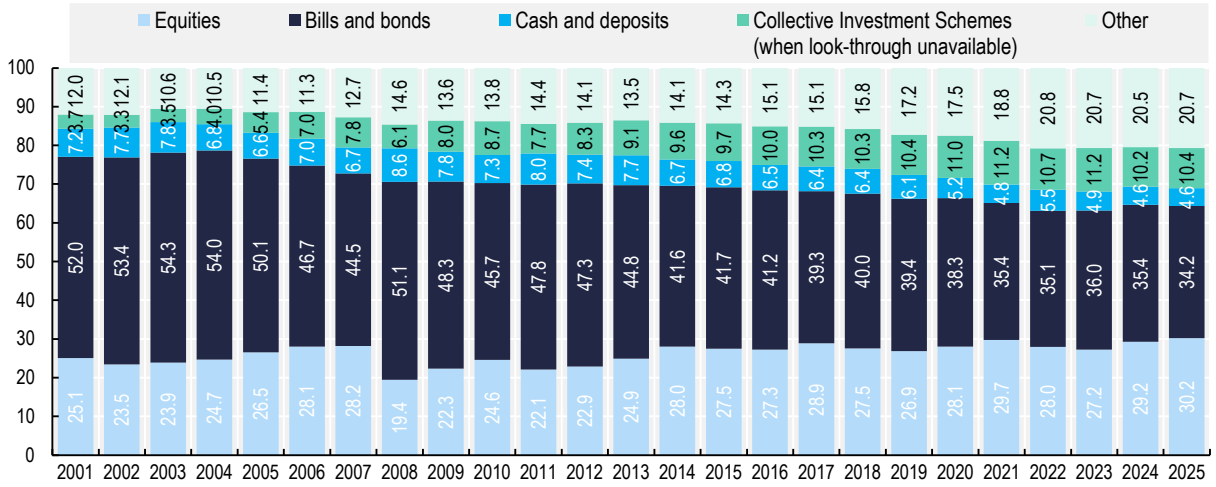
Note: Data on asset allocation include both direct investment in equities, bills and bonds, cash and deposits, and indirect investment through Collective Investment Schemes (CIS) when the look-through of CIS investments is available. Otherwise, investments in CIS are shown in a separate category. Negative values have been excluded from the calculations of the asset allocation.
Source: OECD Global Pension Statistics.

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Given their traditional exposure to bonds and equities, developments in bond and equity markets have generally driven the investment performance of pension providers over the years. Pension providers have held over 60% of assets in bonds and equities on average among the reporting jurisdictions since the early 2000s although the proportion varies across jurisdictions and years (Figure 1.16). Given their exposure to bonds and equities, pension providers in many jurisdictions recorded investment losses in 2008, as a result of falling stock markets, and in 2022, when both equity valuations and bond prices fell simultaneously. By contrast, global equity markets have recorded strong performances since 2023, with global indices growing around 20% or more three years in a row (MSCI, 2026[14]), positively impacting pension providers investing in equities.

Figure 1.16. Average asset allocation of pension providers in selected asset classes and investment vehicles in 14 jurisdictions, 2001-2025

As a percentage of total investment



Note: The average allocations of pension plan assets have been calculated over 14 jurisdictions: Austria, Czechia, Denmark, Germany, Japan, the Netherlands, Norway, Poland, Slovenia (from 2003 onwards), Sweden and the United States among OECD countries; and Bulgaria, Hong Kong (China) (from 2002 onwards) and Peru among other jurisdictions. The whole time series of the asset allocation in all 14 jurisdictions is available in the statistical annex.
Source: OECD Global Pension Statistics.

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The asset mix of pension providers has evolved over time, with an increased exposure to equities in several jurisdictions, especially since 2008. For example, the proportion of assets invested in equities increased in Colombia, Estonia, Lithuania, New Zealand, Poland and the Slovak Republic.[9] Policymakers have encouraged further diversification of assets through different policies, such as by loosening investment regulations, introducing life-cycle strategies – where younger workers invest in riskier assets – and making default investment strategies less conservative (Table 1.5). For example, in the Slovak Republic, the proportion of assets invested in equities soared in 2024 with the introduction of a default life-cycle investment strategy that has high equity exposure until late ages. Well-designed default investment strategies can make individuals take on more investment risk and address the problem of limited access to financial advice (Chapter 4).

Table 1.5. Policies to bolster long-term investment rates of return

Policies	Jurisdictions
Less conservative default investment strategies	Croatia (2019), New Zealand (2021)
Loosening of investment regulations	Estonia (2019), India (2025), Latvia (2021), Mexico (over several years), Peru (over several years), Türkiye (2007)
Introduction of life-cycle strategies	Lithuania (2019), Slovak Republic (2023), Slovenia (2016)

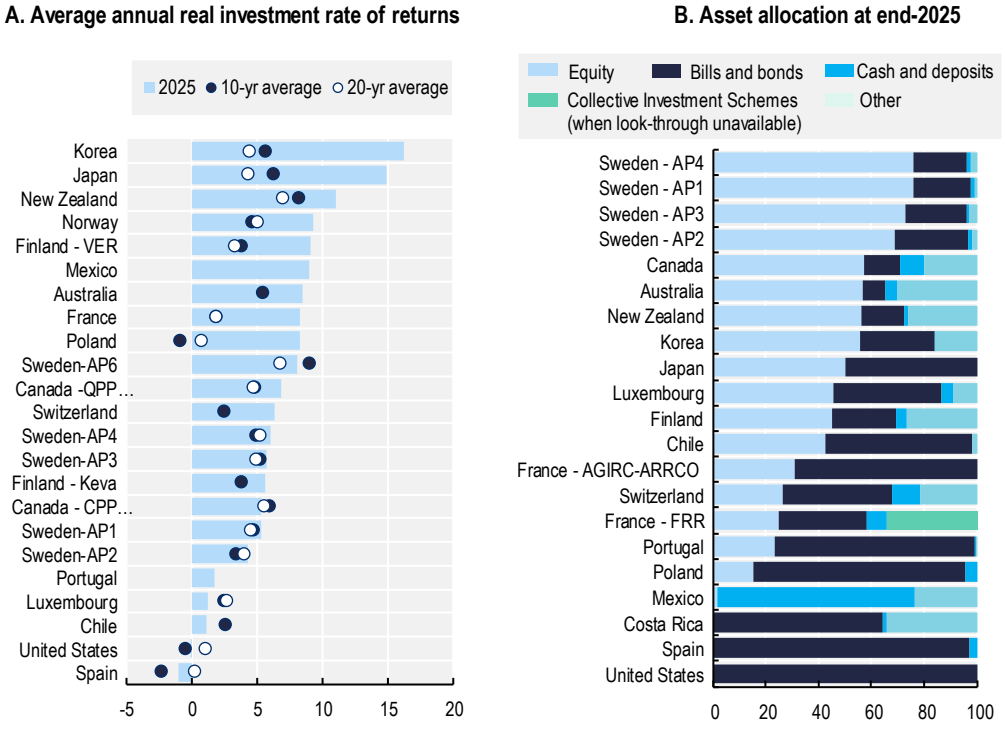
Note: This table gives examples of policies to bolster long-term investment rates of return and examples of jurisdictions that have implemented these policies. The lists of policies and jurisdictions are not exhaustive.

1.4.3. Investment performance and asset allocation of public pension reserve funds

Public pension reserve funds achieved a positive investment performance in 2025 and over the longer term. Most of them posted positive real investment rates of return in 2025, with the strongest returns in Korea (16.1%), Japan (14.8%) and New Zealand (11%) (Figure 1.17, Panel A). The investment performance of public pension reserve funds was strong in 2025 and positive in most jurisdictions over the last 10 years and in all of them over the last 20 years.

Figure 1.17. Investment performance and asset allocation of public pension reserve funds

In per cent



Note: Data refer to the following reserve funds as follows: Australia – Future Fund; Canada (in Panel B) – CPP Reserve Fund; Chile – Pension Reserve Fund; Costa Rica – Costa Rican Social Security Fund; Finland – Keva, VER and other funds combined (in Panel B); France – FRR (Fonds de Réserves pour les Retraites) (in Panel A); Japan – Government Pension Investment Fund (GPIF); Korea – National Pension Fund; Luxembourg – FDC (Fonds de Compensation); Mexico – Labour Fund; New Zealand – New Zealand Superannuation Fund; Norway – Government Pension Fund – Norway (GPFN); Poland – Demographic Reserve Fund; Portugal – Social Security Financial Stabilisation Fund (FEFSS); Spain – Social Security Reserve Fund; Switzerland – AHV Central Compensation Fund; United States – Old-Age and Survivors Insurance (OASI) Trust Fund.
Source: OECD Global Pension Statistics and websites of public pension reserve funds.

StatLink https://stat.link/zmso8p

Public pension reserve funds with significant equity exposure benefitted from the positive developments in equity markets in 2025. Public pension reserve funds in Korea, Japan and New Zealand, which recorded the strongest returns in 2025, had 50% or more of their assets allocated in equities (Figure 1.17, Panel B). These reserve funds have increased their exposure to equities over time (Guardians of New Zealand Superannuation, 2026[15]; NPS, 2025[16]; GPIF, 2025[17]). By contrast, public pension reserve funds in Portugal, Spain and the United States have a relatively lower or no exposure to equities, and a higher exposure to bonds, which yielded a lower investment income in 2025.

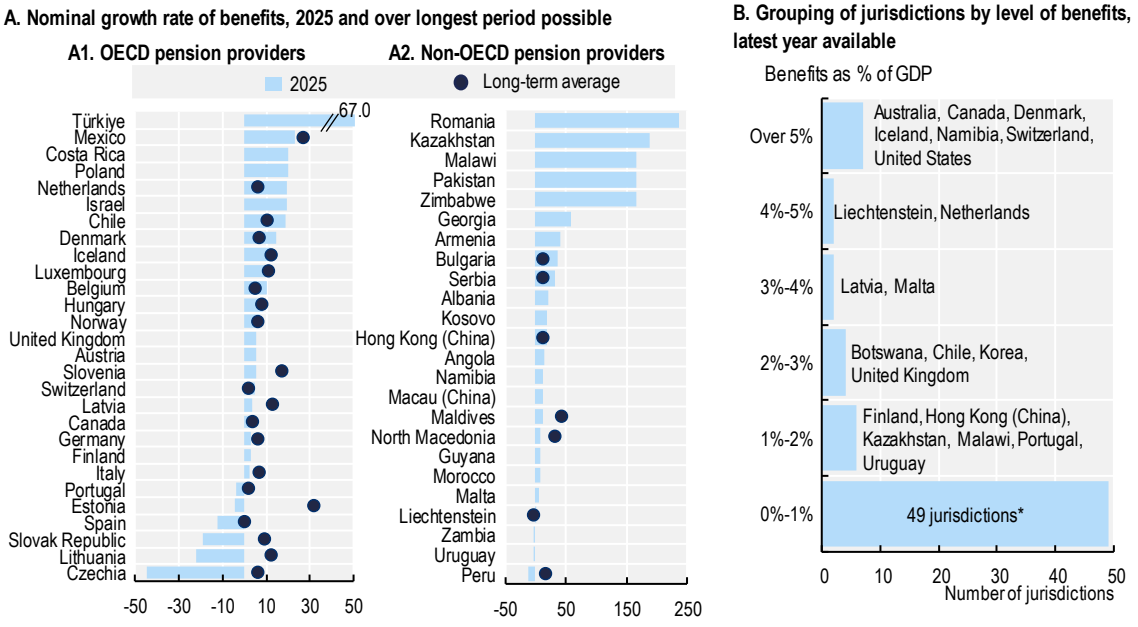
1.5. Pension benefit payments and other outflows have also grown

Pension benefit payments also influence the evolution of pension assets over time. Outflows that reduce the amount of pension assets include pension benefit payments, early access to retirement savings, and payments to support pay-as-you-go pension plans in the case of public pension reserve funds.

1.5.1. Pension benefit payments

As more people reach retirement age, pension benefit payments have grown in all but one reporting jurisdiction since the early 2000s (Figure 1.18, Panel A). Benefit payments are still relatively low in many jurisdictions, and any variation may look large given the low starting point (e.g. Kazakhstan, Romania, Czechia and Lithuania). The decline in Czechia in 2025 was a return to normal after larger lump sum payments to entitled beneficiaries in 2023 and 2024 in anticipation of announced legislative changes. In Lithuania, the decline in payments in 2025 may be due to retirees postponing exit from the plan until the planned increase to the threshold for lump sum payments applies in 2026.

Figure 1.18. Benefit payments, trends and levels



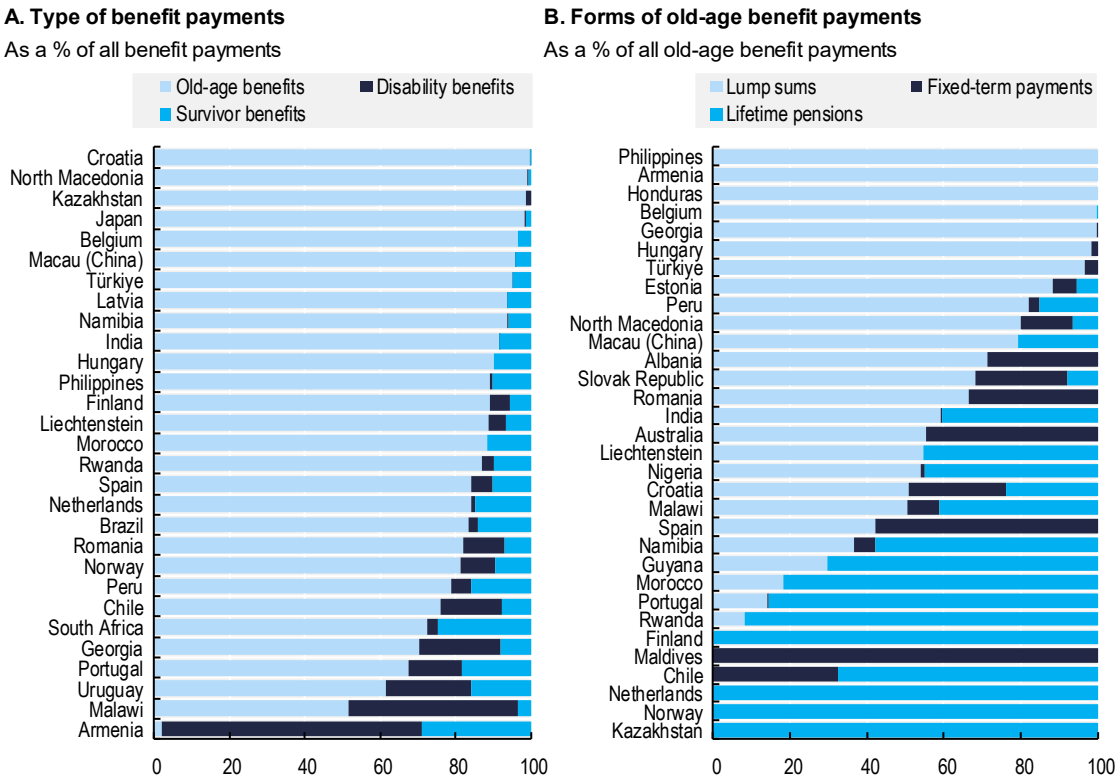
Note: * 49 jurisdictions: Albania, Angola, Armenia, Austria, Brazil, Bulgaria, Costa Rica, Croatia, Czechia, Dominican Republic, Egypt, Estonia, France, Georgia, Germany, Ghana, Guyana, Hungary, Indonesia, Israel, Italy, Kenya, Kosovo, Lesotho, Lithuania, Luxembourg, Macau (China), Maldives, Mauritius, Mexico, Morocco, Mozambique, North Macedonia, Norway, Pakistan, Peru, Poland, Romania, Rwanda, Serbia, Slovak Republic, Slovenia, Spain, Suriname, Thailand, Türkiye, Uganda, Zambia, Zimbabwe.
Source: OECD Global Pension Statistics.

StatLink https://stat.link/tc2s15

The level of benefit payments varies across jurisdictions, depending on the introduction date of pension plans and the participation of the population. Benefits are still relatively low in many countries where asset-backed pension plans were introduced recently (Figure 1.18, Panel B). By contrast, benefit payments are the largest in countries with plans established for a long time. This is the case of Iceland (7%), Canada (5.3%), Australia (5.6%) and the Netherlands (4.9%), where plans have been in place for a long time and where a significant proportion of the population participates in those plans for part of their working life.

Old-age pension benefits are the main type of pension benefits paid in most countries. Pension plans may provide different types of benefits to members, with old-age benefit payments larger than disability pensions and survivor benefits in most jurisdictions (Figure 1.19, Panel A).

Figure 1.19. Benefit payments in 2025



Note: Lump sums are one-off payments. Fixed-term payments include programmed withdrawals and temporary income (fixed or variable) payments over a pre-defined period (e.g. fixed-term annuities). Lifetime pensions are lifelong payments until the death of the members (e.g. annuities paid by insurance companies, lifelong pensions paid by pension funds). Data for Japan cover occupational DB plans (for the fiscal year 2023), occupational DC and personal plans.
Source: OECD Global Pension Statistics.

StatLink https://stat.link/cq8si1

Old-age benefits may be paid as a lump sum, fixed-term payments or lifetime pensions. Lump sum payments are the main form of payments by pension providers in several jurisdictions, such as Australia (55% of benefits paid) and Belgium (close to 100%) (Figure 1.19, Panel B). In other jurisdictions, a significant share of benefits is paid as lifelong payments (e.g. Chile, the Netherlands, Norway, Kazakhstan) or fixed-term payments (e.g. Maldives).

The level of benefits paid in different forms across jurisdictions may reflect differences in the payout options allowed, the eligibility criteria to meet for a certain form of payment, and members' own preferences. For example, lump sum payments are discouraged in Chile, the Netherlands and Norway.[10] Some jurisdictions only allow one form of payout, such as Finland, Latvia and the Netherlands for example, where members can only receive a lifetime income from their assets accumulated in workplace pension plans. When jurisdictions allow several forms of payouts, they may set eligibility criteria for members to receive a particular form of payment. For example, members can take a lump sum payment in Austria only if their pension fund assets are below a certain threshold. Mexico adjusted the eligibility criteria for a pension in

2021, reducing the number of weeks of contributions required, and has since progressively raised the criteria again. When members can choose, they may prefer an option over others. In Australia, retirees choosing a lump sum tend to have low balances (The Australian Government the Treasury, 2020[18]).

The form of payment has an impact on the overall amount of pension assets. Lump sum payments lead to an immediate outflow from the system, unless retirees decide to purchase an annuity product on their own with the lump sum payment. By contrast, assets can stay in the asset-backed pension system for longer, remain invested and earn investment income with other forms of payouts such as programmed withdrawals or lifelong payments. However, the entity in charge of managing assets after retirement and paying regular payments may be different to the one in charge of managing assets in the accumulation phase. For example, assets may be transferred to a life insurance company when members choose an annuity (e.g. in Chile). In Lithuania, a centralised annuity provider is in charge of paying benefits from the second pension pillar. Assets may stay with the same pension providers, but pension providers may have a dedicated fund for programmed withdrawals (e.g. programmed withdrawal fund within AFPs in Colombia). In some jurisdictions, people can choose to transfer their assets to the public pay-as-you-go system that will be in charge of turning these assets into a stream of payments (e.g. in Croatia, Latvia).[11] When assets are transferred to the public pay-as-you-go system, assets move out from the asset-backed pension system (as in the case of a lump sum payment), preventing assets from generating investment income to finance pensions during the retirement phase, thereby reducing the potential of achieving higher levels of assets.

1.5.2. Payments before retirement

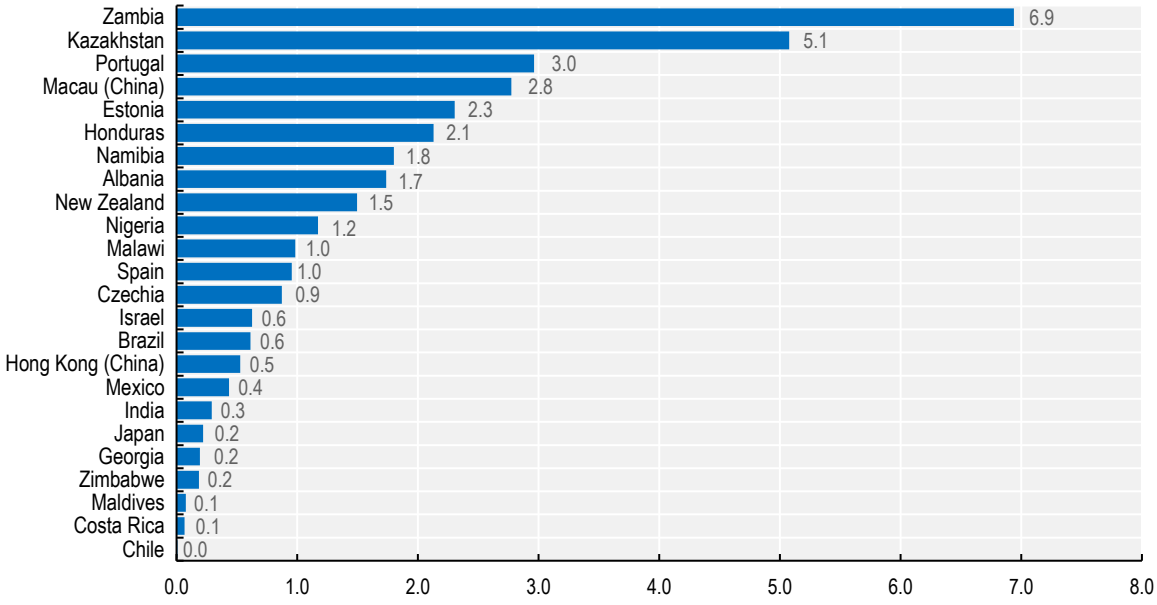
Individuals may receive payments from their pension plans before retirement in the form of early withdrawals. Payments from pension plans before retirement include early withdrawals, transfers of assets to other pension plans when individuals change jobs, and transfers when funds wind up before retirement. Early withdrawal payments are the ones that have a direct impact on flows out of pension assets.

Many jurisdictions allow members to access their savings before retirement, but generally under certain conditions. The *OECD Recommendation of the Council for the Good Design of Defined Contribution Pension Plans* [OECD-LEGAL-0467] calls for early access to retirement savings to be permitted only as a measure of last resort and based on individuals' specific hardship circumstances. Yet, the conditions to access savings vary widely across jurisdictions. Several jurisdictions commonly allow members to access their savings for medical reasons or in the case of serious illness. Other conditions include housing, education, financial hardship or unemployment. There may be more flexibility to access voluntary savings than mandatory savings for which the target may be to provide significant retirement benefits. This is the case in Croatia, where individuals are forbidden to access their mandatory savings, but can access their voluntary savings to some extent. Likewise, early access is possible in Bulgaria only for savings in voluntary pension funds.

The extent to which members access their savings before retirement varies across jurisdictions. While withdrawals in 2025 were minimal relative to the size of pension assets in Chile and Costa Rica (less than 0.1% of assets at end-2025), withdrawals were more substantial in some other countries, such as Portugal (3%), Kazakhstan (5.1%) and Zambia (6.9%) (Figure 1.20). Members withdrew savings mainly for housing purposes in Kazakhstan and New Zealand, and for unemployment or financial hardship in Nigeria, Macau (China) and Malawi. In Hong Kong (China), the largest amounts of assets withdrawn early were done by members leaving the jurisdiction, including cases of non-local employees who have completed their employment in Hong Kong (China) and returned to their original places of residence.

Figure 1.20. Amount of assets withdrawn before retirement in 2025

As a percentage of assets at end-2025



Source: OECD Global Pension Statistics.

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The larger early withdrawals from the plan are, the more they could hamper asset accumulation. For example, in Peru, members have been allowed to access their savings unconditionally multiple times following the COVID-19 outbreak. This has led to a large amount of assets being withdrawn by more than 7 million members, most of the members,[12] accounting for the decline in pension assets at the national level (from 22.5% of GDP at end-2020 to 9.5% at end-2025). Early withdrawals reduce the amount of assets that can be ultimately accumulated by more than the amount of assets withdrawn, because the amounts withdrawn no longer generate an investment income. Early withdrawals also shorten the horizon for assets to earn investment income and limit the effect of compound interest.

Yet, the option of accessing savings – in the context of voluntary systems – may give an incentive for people reluctant to lock their savings until retirement to start saving. The effect of early access to savings on assets is therefore not straightforward, especially in voluntary systems.

1.5.3. Outflows from public pension reserve funds

Outflows from public pension reserve funds depend on the conditions established in their mandate. It may be a date by which payments can start (Australia's Future Fund) or until which they cannot start (New Zealand Superannuation Fund) (OECD, 2021[3]). The trigger may be when payments due to retirees in pay-as-you-go pension plans exceed inflows from current contributors.

Outflows in 2025 continued to grow for some public pension reserve funds. For example, payments from public pension reserve funds grew by 10% in Chile, by more than 5% in Sweden, and by 9% in the United States. In all three countries, outflows exceeded inflows in 2025. In Sweden, payments from the AP Funds exceeded inflows for the seventh consecutive year (AP2, 2026[19]). In the United States, outflows have been exceeding inflows since 2021.

1.6. How pension assets may evolve

Pension assets managed by pension providers have been growing since the early 2000s, with assets totalling USD 70.4 trillion or 95.7% of GDP in the OECD area. Assets have been increasing in nearly all jurisdictions examined. The analysis of the main factors behind the evolution of pension assets can help identify situations that may lead jurisdictions to see pension asset increase, remain stable or decline.

The growth of pension assets is the result of increasing contributions, positive investment returns and lower benefit payments than the combination of contributions and returns. Increased participation in asset-backed pension plans, higher nominal wages and, in some jurisdictions, higher contribution rates drive the growth in contributions. Pension providers have generated positive investment income in nominal terms in all jurisdictions over the long term by investing these retirement savings. Pension benefit payments have grown over time but remain lower than the inflows as asset-backed pensions in most jurisdictions are still maturing (i.e. they were introduced recently, and most people have not had an entire career saving in those plans with the same rules over time). Benefit payments are larger in countries where plans have been established for longer, participation is widespread, contribution rates are large, and most people retiring have been in the system with the same rules for their entire career.

Therefore, the evolution of pension assets in each jurisdiction depends on when the asset-backed pension system was introduced and what policy reforms have been put in place to influence participation, contributions, investment and benefit payments. It also depends on the number of people reaching retirement and getting pension benefit payments, as well as on shifts in the population structure due, for example, to population ageing.

Jurisdictions that have recently introduced asset-backed pensions, as well as those that have introduced measures to increase participation, raise contribution rates and move to less conservative investment strategies, may see their pension assets continue to grow. These measures include the introduction of automatic enrolment in Ireland (that started in 2026), the upgrade of the automatic enrolment programme in Italy, facilitated access to a personal pension plan in the United States (Benefits Canada, 2026[20]), the ongoing increase in default contribution rates in KiwiSaver plans in New Zealand, the ongoing increase of mandatory contributions in Chile and Mexico, new rules to improve returns in Norway and Finland,[13] and the introduction of a new personal pension product in Germany (European Pensions, 2026[21]).

In jurisdictions that have taken measures that can adversely affect the growth of assets, the future evolution of pension assets is more uncertain. For example, policies that allow unconditional early access to retirement savings or that allow individuals to reduce their contribution rates would negatively affect asset growth.

Jurisdictions where participation, contribution rates, and pension asset allocations have been stable for a relatively long time may see pension assets grow moderately or stabilise. These jurisdictions may be close to having mature systems where retirees receive benefits from assets that they have had the opportunity to accumulate during their entire career under relatively stable plan rules. The growth of assets would mainly depend on the investment performance of pension plans.

Shifts in the population structure because of population ageing are likely to affect flows into and out of asset-backed pension plans. A decline in the size of cohorts entering the labour market would reduce the size of the working-age population, reducing the volume of contributions flowing into pension plans, all else being equal. Relatively larger cohorts of individuals retiring and living longer would increase the volume of pension benefit payments and reduce the growth in pension assets. Therefore, countries could see lower growth in pension assets because of population ageing, and those with already mature asset-backed pension systems could even experience negative growth, depending on investment income.

The reserves that public pension schemes have set to meet their obligations are likely to follow different paths. All public pension reserve funds invest the reserves and earn an investment income, which benefits

from the effect of compound interest. This effect is stronger with higher investment rates of return and longer investment horizons. However, the investment horizon depends on the time horizon before depletion, and this differs across public pension reserve funds. Some of the reserves are not intended to be depleted at any time as their mission is to provide a permanent smoothing mechanism between inflows and outflows of the public pension system, and in some cases to provide a share of the finances (e.g. Canada's CPPIB). In other cases, the reserves are expected to be depleted at some point but are still in an expansion phase where assets continue to grow (e.g. Korea's National Pension Fund). These reserve funds have not yet reached the peak of assets they can expect to have. There are also reserve funds where outflows already exceed inflows (including investment income) and will be depleted soon (e.g. US OASI Trust Fund). Spain had its reserve fund reaching its lowest level in 2020 and 2021 but refunded it recently. The evolution of assets in public pension reserve funds therefore depends on policy choices made on their funding and role.

References

AP2 (2026), *Annual Report 2025*, https://ap2.se/wp-content/uploads/2026/04/Annual-Report-2025.pdf. [19]

Asset Management Association (2025), *The 3rd contributor: A question of investment strategy*, https://www.am-switzerland.ch/en/topics/retirement-provision-and-investment/the-3rd-contributor. [22]

Batsman, M. (2026), *What is compound interest?*, https://www.pensionbee.com/uk/blog/what-is-compound-interest. [1]

Benefits Canada (2026), *U.S. executive order aims to help more people get retirement savings plans*, https://www.benefitscanada.com/pensions/cap/u-s-federal-executive-order-aims-to-help-more-people-get-retirement-savings-plans. [20]

DREES (2022), *Les retraités et les retraites – édition 2022*, https://drees.solidarites-sante.gouv.fr/publications-communique-de-presse-documents-de-reference/panoramas-de-la-drees/les-retraites-et-les. [7]

European Pensions (2026), *Finnish pension reforms to come into force from 1 July*, https://www.europeanpensions.net/ep/Finnish-pension-reforms-to-come-into-force-from-1-July.php. [27]

European Pensions (2026), *German Bundestag adopts private pensions bill*, https://www.europeanpensions.net/ep/German-Bundestag-adopts-private-pensions-bill.php. [21]

European Pensions (2026), *Norway approves reforms to boost returns on guaranteed pension products*, https://www.europeanpensions.net/ep/Norway-approves-reforms-to-boost-returns-on-guaranteed-pension-products.php. [26]

Government of the Republic of Croatia (n.d.), *Pension Selection (Pension from the First Pillar or Pension from the First and the Second Pillar)*, https://gov.hr/en/pension-selection-pension-from-the-first-pillar-or-pension-from-the-first-and-the-second-pillar/2330. [25]

GPIF (2025), *Annual Report Fiscal Year 2024*, https://www.gpif.go.jp/en/performance/annual_report_fiscal_year_2024.pdf. [17]

Guardians of New Zealand Superannuation (2026), *Annual Report 2025*, https://nzsuperfund.nz/assets/NZ-Super-Fund-Annual-Report-2025_final-for-web.pdf. [15]

Hartmann, T. (n.d.), *Learn how compound interest can help your money grow*, https://sorted.org.nz/guides/saving-and-investing/learn-about-compound-interest/. [2]

IOPS (2018), *Impact of the digitalisation of financial services on supervisory practices in the private pension sector*, https://www.oecd.org/content/dam/iops/en/working-papers/WP-33-Case-study-Mexico.pdf. [10]

Medaiskis, T. and T. Gudaitis (2013), "Assessing the impact of the second pillar component on old age pension in Lithuania", *Ekonomika*, Vol. 92/4, https://doi.org/10.15388/Ekon.2013.0.2344. [23]

Mesa-Lago, C. (2020), *Evaluation of Four Decades of Pension Privatization in Latin America, 1980-2020: Promises and Reality*. [13]

Mijnpensioenoverzicht.nl (2026), *Withdraw a lump sum*, https://www.mijnpensioenoverzicht.nl/en/mpo/mijn-overzicht/een-bedrag-ineens-opnemen. [24]

MSCI (2026), *MSCI World Index (USD)*. [14]

MSCI (2026), *MSCI World Index (USD) - Index Factsheet*, https://www.msci.com/documents/10199/cad25553-6265-4a1b-9942-cb5be891015d. [11]

NBS (n.d.), *5 PEŇAZÍ*, https://5penazi.sk/. [8]

NPS (2025), *2024 National Pension Fund Report*, https://fund.nps.or.kr/main.do. [16]

OECD (2026), *Average annual wages*, https://data-explorer.oecd.org/s/4te. [9]

OECD (2026), *Statistics News Release - Unemployment*, https://www.oecd.org/content/dam/oecd/en/data/insights/statistical-releases/2026/2/unemployment-rates-oecd-02-2026.pdf. [6]

OECD (2026), *Working-age population*, https://data-explorer.oecd.org/s/50k. [4]

OECD (2025), *Pensions at a Glance 2025: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e40274c1-en. [29]

OECD (2023), *Pension Markets in Focus 2023*, OECD Publishing, Paris, https://doi.org/10.1787/28970baf-en. [12]

OECD (2021), *Pension Markets in Focus 2021*, OECD Publishing, Paris, https://doi.org/10.1787/a70e4160-en. [3]

OECD (2018), *OECD Reviews of Pension Systems: Latvia*, OECD Publishing, Paris, https://doi.org/10.1787/9789264289390-en. [28]

The Australian Government the Treasury (2020), *Retirement Income Review Final Report*, https://treasury.gov.au/publication/p2020-100554. [18]

World Bank (2026), *Net migration - OECD members*, https://data.worldbank.org/indicator/SM.POP.NETM?locations=OE&most_recent_value_desc=false. [5]

Annex 1.A. Statistical annex

Annex Table 1.A.1. Additional statistical tables

Table A.1. Total assets managed by pension providers, in millions of national currency, 2001-2025
Table A.2. Total assets managed by pension providers, in USD million, 2001-2025
Table A.3. Total assets managed by pension providers, as a percentage of GDP, 2001-2025
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Table A.6. Annual nominal investment rates of return of pension providers, 2002-2025
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Table A.11. Asset allocation of pension providers in the “other” category, 2001-2025
Table A.12. Share of assets under management of pension providers invested abroad, 2001-2025
Table A.13. Evolution in the participation rate, by type of plan

StatLink https://stat.link/yuv6eq

Annex Table 1.A.2. Overview of asset-backed pension systems

Table A.14. Coverage of the OECD Global Pension Statistics exercise

StatLink https://stat.link/2xo490

Annex 1.B. Methodological notes

Pension authorities and other bodies provided the primary source material for this chapter, as part of the OECD/IOPS/ World Bank Global Pension Statistics (GPS) exercise. Data come from official administrative sources and are revised on an ongoing basis so as to better reflect the most recent figures for every past year. Some divergences may exist between national reporting standards and the compilation method of certain data for the GPS exercise. For this reason, data providers are regularly requested to provide methodological information relevant for developing a thorough understanding of their submission under the GPS framework. The following general methodological notes provide some explanations in this respect:

- Conventional signs: ".." means not available. "|" means methodological break in series.
- This chapter is mainly based on the answers of pension authorities and other bodies to an annual data request. Some statistics for some jurisdictions come from publicly available reports, databases or websites of other national or international organisations: Japan (Bank of Japan) and Switzerland (Federal Social Insurance Office's publication *Statistique des assurances sociales suisses* for personal plans) among OECD countries; and Argentina (International Association of Pension Fund Supervisors (AIOS)), Bolivia (AIOS), China (Ministry of Human Resources and Social Security (MOHRSS)), Croatia (website of the Croatian Financial Services Supervisory Agency (HANFA) before 2014), the Dominican Republic (AIOS before 2014), El Salvador (AIOS), India (annual reports of the Employees' Provident Fund Organisation for Employees' Provident Fund, Employees' Pension Scheme and Employees' Deposit Linked Insurance Scheme) and Panama (AIOS) among non-OECD jurisdictions.
- Data on stock variables refer to the end of the year while data on flow variables are provided over the whole year in the chapter. The reference period is the calendar year, except for: Australia where the reference period is the financial year ending in June; India where the reference period ends in March of the following year for Employees' Provident Fund, Employees' Pension Scheme and Employees' Deposit Linked Insurance Scheme; and New Zealand (until 2014). Data for New Zealand up to 2013 are based on a 31 March balance date for most of the schemes.
- Slovenia adopted the euro in 2007, the Slovak Republic in 2009, Estonia in 2011, Latvia in 2014, Lithuania in 2015 and Croatia in 2023. The whole time series (in millions of national currency) are expressed in millions of euros for these countries (even before their adoption of the euro).
- This chapter uses four main additional reference series: exchange rates to convert values in US dollars, GDP, the variation of the consumer price index (CPI) and population:
  - This chapter uses end-of-period exchange rates for all variables valued at the end of the year, and period-average rates for variables representing a flow over the year. These rates mainly come from the OECD Annual Purchasing Power Parities and Exchange Rates and the IMF Exchange rates databases.
  - GDP values come from the OECD Annual GDP and components database, the IMF World Economic Outlook released in April 2026 and other sources.
  - Consumer price indices are from the OECD Key short-term economic indicators database, the IMF Consumer Price Index database and other sources.
  - Data on population are from the OECD Working-age Population database and World Bank World Development Indicators.

Notes

[1] The chapter uses data from the OECD Global Pension Statistics exercise that covers around 90 jurisdictions, including 38 OECD countries. It covers both pension providers and public pension reserve funds. Pension providers manage the assets that individuals accumulate by participating in a pension plan. Public pension reserve funds manage the reserves that public pension schemes set aside to support the financing of public pay-as-you-go pension arrangements.

[2] This figure results from several assumptions. The individual starts working at the age of 22, earns an initial wage of 100, and retires at age 65. The wage grows at 3.275%, in line with productivity growth of 1.25% and 2% inflation. The individual contributes 10% of his/her wage during their career, with no spell of unemployment and no pause in contributions. The investments earn a nominal return of 4.5% annually, 2.5% in real terms. Fees of 1% are charged on assets every year during both the accumulation and decumulation phases. The individual takes a programmed withdrawal between age 65 and 84. These assumptions are similar to those in Chapter 4 of the OECD (2025[29]), except for the definition of a full career, the fee structure and the type of payout.

[3] Investment income is sometimes called the “third contributor” to asset-backed pension plans, on top of employer and employee contributions (Asset Management Association, 2025[22]).

[4] The aggregate volume of contributions to a newly introduced pension plan is constant from the beginning if the entire working-age population joins the plan from its introduction.

[5] This figure results from several assumptions. People contribute from age 22 to 64 and receive benefits from age 65 to 84. There is the same number of people of each age. All people aged 22 to 64 contribute the same amount, totalling 5% of GDP across all individuals every year (corresponding to a mandatory 10% contribution rate for a labour share (i.e. wage over GDP) of 50%). They all earn a constant 4.5% nominal investment rate of return (i.e. 2.5% real return). Fees are charged on assets (1%) every year, including during the decumulation phase. Retirees receive fixed programmed withdrawals from age 65 to 84. GDP grows in line with nominal wages. The growth of the nominal wage is assumed to be 3.275%, in line with productivity growth (1.25%) and inflation (2%).

[6] Armenia made it mandatory for workers born in 1974 or later to participate in a plan from 2014. Bulgaria reformed the whole pension system in 2000. Estonia introduced second pension pillar plans in 2002, in which participation was mandatory for those born in 1983 or later until 2021. Israel made it mandatory for all employees to participate in a pension plan in 2008. New Zealand phased in its automatic enrolment programme in the so-called “KiwiSaver” schemes in 2007.

[7] The contribution rate to mandatory pension funds has remained stable in Armenia over the years but the share of employee contributions and the share financed by the state have changed. In Hong Kong (China), employees and employers have each been required to make mandatory contributions calculated at 5% of the employee’s relevant income to an MPF scheme, subject to a minimum and a maximum relevant income level. The minimum and maximum relevant income levels have been subject to adjustment over the years. In Kazakhstan, employers have been required to contribute to a new notional DC scheme since 1 January 2024: 1.5% of salary in 2024, 2.5% in 2025, with a planned increase to 5% by 2028.

[8] In Latvia, the total contribution rate to the first and second pillars has remained the same throughout the period (20%). Only the split of contributions between the first and second pillars has changed. Lithuania is

not included in Figure 1.13 but Medaiskis and Gudaitis (2013[23]) document changes between 2004 and 2013. The source of financing of contributions has also evolved over time in Lithuania.

[9] See time series in Annex 1.A.

[10] Members in the Netherlands will be able to withdraw up to 10% of their pensions as a lump sum from 1 January 2029 (Mijnpensioenoverzicht.nl, 2026[24]).

[11] See Government of the Republic of Croatia (n.d.[25]) (Croatia) and OECD (2018[28]) (Latvia).

[12] In Peru, 10.3 million people were members of the asset-backed pension system in December 2025.

[13] European Pensions (2026[26]) (Norway) and (2026[27]) (Finland).

2 Ensuring sufficiently high contributions to achieve retirement income objectives

This chapter assesses the need for different categories of workers across OECD countries to complement their mandatory pension in order to reach their retirement income objective, and calculates how much more they would need to contribute. It also evaluates the extent to which individuals already contribute voluntarily to complement their mandatory pensions and assesses the effectiveness of different policies to increase contributions. The chapter ends with policy guidance on how to ensure sufficiently high contributions to achieve retirement income objectives.

Many people may lack enough resources to finance their retirement. Studies in a wide range of countries suggest that a large proportion of the population may be unprepared for retirement (European Commission, 2024[1]; Wolf and Lorena, 2021[2]; Yin, Chen and Munnell, 2024[3]; Department for Work and Pensions, 2025[4]). For example, in the United Kingdom, 73% of the working-age population is projected to have a pension income that falls below a moderate retirement living standard, while in the United States, 39% of households may be at risk of being unable to maintain their pre-retirement standard of living in retirement. The reasons vary, with workers failing to contribute to mandatory pension systems fully throughout their career or failing to complement mandatory pensions with voluntary savings. This is a major concern as population ageing increases the number of years that retirement savings need to cover and raises income needs to finance long-term care, on top of the financial constraints that it imposes on pay-as-you-go (PAYG) pension systems. The lack of retirement readiness may therefore affect a growing portion of the population in the future.

This chapter focusses on raising pension contributions to increase retirement income. Several policies are available to increase retirement income and reduce the share of the population unprepared for retirement. Governments may increase public deficits, reallocate budgets or increase general taxes to raise pension benefits from public PAYG pension schemes. Another approach is to delay retirement ages to balance the periods during which people contribute and receive benefits. A third approach is to increase pension contributions so that people can earn additional pension entitlements. This chapter focusses on the latter.

Increasing pension contributions involves trade-offs. It may improve future retirees' well-being and support economic growth if these contributions go into asset-backed pension plans and get invested in the real economy (Oxford Economics, 2026[5]). However, increasing pension contributions from employers may raise labour costs, undermine business competitiveness and reduce wage growth, while increasing pension contributions from workers may reduce disposable income and consumption.

This chapter assesses the need to increase pension contributions in OECD countries and provides policy guidance on how to ensure sufficiently high contributions to achieve retirement income objectives.[1] The analysis focusses on the role of asset-backed pension plans as a complement to PAYG schemes. It assesses the need for additional contributions across countries and different categories of workers, evaluates the extent to which individuals already contribute voluntarily to complement their mandatory pensions, and assesses the effectiveness of different policies to increase contributions.

In all the countries analysed but one, certain categories of workers would need to complement their mandatory pension to reach their retirement income objective. On average across countries, contribution gaps are larger for average and high earners, women and the self-employed. Everything else being equal, the contribution gap is larger for workers with lower retirement ages, higher life expectancies, shorter contribution periods and lower investment performance in their portfolios. However, the saving behaviour of current workers suggests that some of them may fail to reach their retirement income objective, as young workers, low earners, women and self-employed workers tend to participate and contribute less to asset-backed pension plans, and contribution levels frequently align with low default or minimum contribution rates.

Behavioural biases, low levels of financial literacy, affordability concerns, career interruptions and selected design features may pose barriers preventing individuals from contributing enough voluntarily given their retirement income objective. Various policies exist to address the barriers that individuals face when saving for retirement and steer individuals towards contribution levels in line with their retirement income objective. The different policies include increasing mandatory contributions, encouraging voluntary employer contributions, nudging individuals, providing financial incentives, informing individuals, and addressing the needs of individuals.

The chapter first determines the contribution gap in OECD countries by calculating the contribution rate that would need to be paid into a defined contribution pension plan to offset the difference between the replacement rate promised by mandatory pension systems and a target replacement rate.

Section 2.2 looks at the actual saving behaviour of different individuals to see whether they already make additional voluntary contributions to complement their mandatory pensions and to understand the barriers that may prevent them from doing so. Section 2.3 assesses the effectiveness of different policies to steer people towards contribution levels in line with their retirement income objective. The final section concludes and provides 11 steps that policymakers could follow to ensure sufficiently high contributions to achieve retirement income objectives.

2.1. Contribution gaps in OECD countries

The first step to assess the need for higher contributions is to calculate contribution gaps. The analysis shows that contribution gaps vary widely across OECD countries and tend to be larger for middle and high earners, women and the self-employed.

The analysis defines the contribution gap as the contribution rate that a worker would need to pay into a defined contribution (DC) pension plan to offset the difference between a retirement income objective and the expected retirement income from the mandatory pension system. It shows how far workers are from reaching their retirement income objective, expressed as the voluntary contribution rate needed to complement their mandatory pension. The calculation of the contribution gap involves three steps:

1. **Defining the expected retirement income from the mandatory pension system**. The analysis uses the theoretical gross replacement rates from the *OECD Pensions at a Glance Database* (OECD, 2025[6]) as a proxy for the retirement income people in different countries can expect from mandatory pension systems. These rates measure how effectively, under current rules, mandatory pensions replace pre-retirement earnings after a full career for workers entering the labour market today (OECD, 2025[7]). They are available for different levels of earnings, sexes and types of employment.[2]
2. **Defining the retirement income objective**. The analysis uses different target replacement rates at different levels of earnings to reflect the retirement income objective of maintaining living standards. These common cross-country targets are 80% for low earners (half of average earnings), 70% for average earners and 60% for high earners (twice average earnings) (Box 2.1).
3. **Calculating the contribution gap**. The analysis calculates the difference between the target replacement rate and the theoretical gross replacement rate, and, if the difference is positive, it calculates the contribution rate that a worker would need to pay into a DC pension plan to reach a gross replacement rate equal to that difference. This calculation assumes that workers contribute a constant share of earnings every year to the DC plan, with earnings growing in line with 2% inflation and 1.25% productivity growth, contributions earning a constant real investment return of 2.5%, and fees of 1% of assets. It assumes further that workers contribute to the DC plan for a full career, from age 22 until the normal age of retirement in each country, and, at the time of retirement, they buy a lifelong annuity calculated using a fixed discount rate of 1.5% in real terms and survival probabilities from the United Nations' World Population Prospects 2024 database.[3]

Box 2.1. Definition of the retirement income objective

There is no universal retirement income objective. The analysis herein uses 80%, 70% and 60% as common target replacement rates for low earners (half of average earnings), average earners and high earners (twice average earnings), respectively. There is no authoritative source for using these specific targets, but they are consistent with the reviewed literature.

There are several factors that justify different retirement income objectives across countries and individuals:

- **Spending needs**: Spending needs in retirement likely vary across countries. For example, out-of-pocket healthcare expenses for retirees depend on the health insurance system. Within countries, spending needs may also vary across individuals, for example according to homeownership, debt levels, household composition or place of residence.
- **Desired lifestyle**: Individuals may have different preferences leading to different desired lifestyles in retirement. For example, some individuals may want to engage in new learning, volunteering or social activities, while others may want to travel, translating into different levels of expenditures.
- **Tax system**: The extent to which retirement income is taxed varies across countries, leading to different levels of net disposable income. Overall, 28 OECD countries out of 38 have some concession for older people or pensioners under their personal income tax system (e.g. higher personal tax allowances, extra tax credits, specific tax rules for pension income) (OECD, 2025[7]).

The retirement income objective could be expressed as a consumption benchmark. Unfortunately, only some countries have developed consumption benchmarks reflecting the specific expenditure levels that would be required to achieve different lifestyles in retirement, such as for example modest, moderate or comfortable, and their methodology may not be comparable (OECD, 2024[8]).

The retirement income objective is therefore expressed as a target replacement rate in this chapter. The replacement rate is defined as the ratio between the initial pension income and the final earnings and is commonly used to reflect the objectives of maintaining standard of living and smoothing consumption over working and retirement years. Only a few countries may have an explicit target replacement rate (OECD, 2014[9]).

The analysis herein uses a common target for all OECD countries. Although country differences in terms of income levels, spending needs and tax systems would suggest using different target replacement rates for different countries, a review of 52 studies and reports covering a range of countries shows that most target replacement rates fall between 70% and 85% (Government Accountability Office, 2016[10]). The OECD average replacement rate would be a convenient common target for all OECD countries, but the value of 52% for an average earner falls significantly below the range observed in other studies (OECD, 2025[7]).

The retirement income objective herein accounts for one important source of heterogeneity in target replacement rates, i.e. the income level. Studies in several countries find that the replacement rate needed to smooth consumption declines with income, since lower-income earners need to replace a higher proportion of their pre-retirement earnings to avoid falling into poverty in retirement (Binswanger and Schunk, 2011[11]; Schmied, 2023[12]; Yin, Chen and Munnell, 2023[13]). However, the range of target replacement rates across the income distribution varies across countries, for example from 95% to 45% in the United States, from 75% to 60% in the Netherlands, and from 80% to 50% in the United Kingdom (Binswanger and Schunk, 2011[11]; Broome and Mulheirn, 2024[14]).

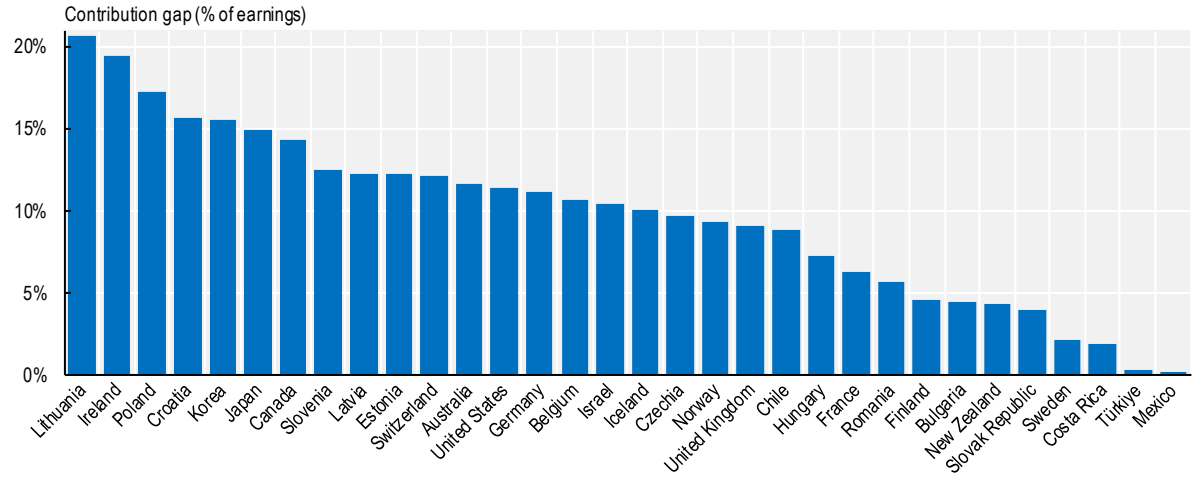
In conclusion, the analysis uses different retirement income objectives measured by different target replacement rates for low earners (80%), average earners (70%) and high earners (60%).

The theoretical gross replacement rates from the *OECD Pensions at a Glance Database* used as a proxy for the expected retirement income from the mandatory pension system have two main limitations. First, they represent the maximum expected retirement income since the pension models calculate them assuming that workers participate in the labour market during a full career from age 22 until the normal retirement age. However, most people lack full careers due to career breaks, immigration, periods of informality or spells of unemployment. Assuming a shorter career would reduce both the expected retirement income and the length of the contribution period into the voluntary DC pension plan, resulting in a larger contribution gap.

Second, the theoretical gross replacement rates assume that current rules for calculating mandatory pensions will remain in place throughout the entire career of workers entering the labour market today. However, the challenges facing pension systems in some countries may lead to lower future replacement rates. Indeed, public pension expenditures are expected to increase from 8.8% of GDP in 2023-2024 to 10.0% of GDP in 2050 on average across OECD countries with available data, with increases of more than three percentage points (p.p.) of GDP in Korea, Lithuania, Luxembourg, Slovenia and Spain (OECD, 2025[7]). Some countries may therefore implement pension reforms to limit the rise in expenditures, which could lead to lower future replacement rates from mandatory pension systems and increase the contribution gap. The calculated contribution gaps should therefore be interpreted as minimum estimates, as shorter careers and possible future pension reforms could make the true gaps larger.[4]

The contribution gap is 10% or more for male employees on average earnings in 17 countries out of 41. In other words, these workers would need to contribute at least 10% of their earnings to a voluntary DC pension plan to reach the 70% target replacement rate, on top of what they already contribute to their mandatory pension system. The contribution gap varies across countries, ranging from less than 5% in Bulgaria, Costa Rica, Finland, Mexico, New Zealand, the Slovak Republic, Sweden and the Republic of Türkiye (hereafter Türkiye), to more than 15% in Croatia, Ireland, Korea, Lithuania and Poland (Figure 2.1). In nine countries, the contribution gap is zero since the mandatory pension system already delivers an expected replacement rate of at least 70% for male employees on average earnings. In Switzerland, the 12% contribution gap may be partially offset by mandatory contribution rates in occupational pension plans above the legal minimum.

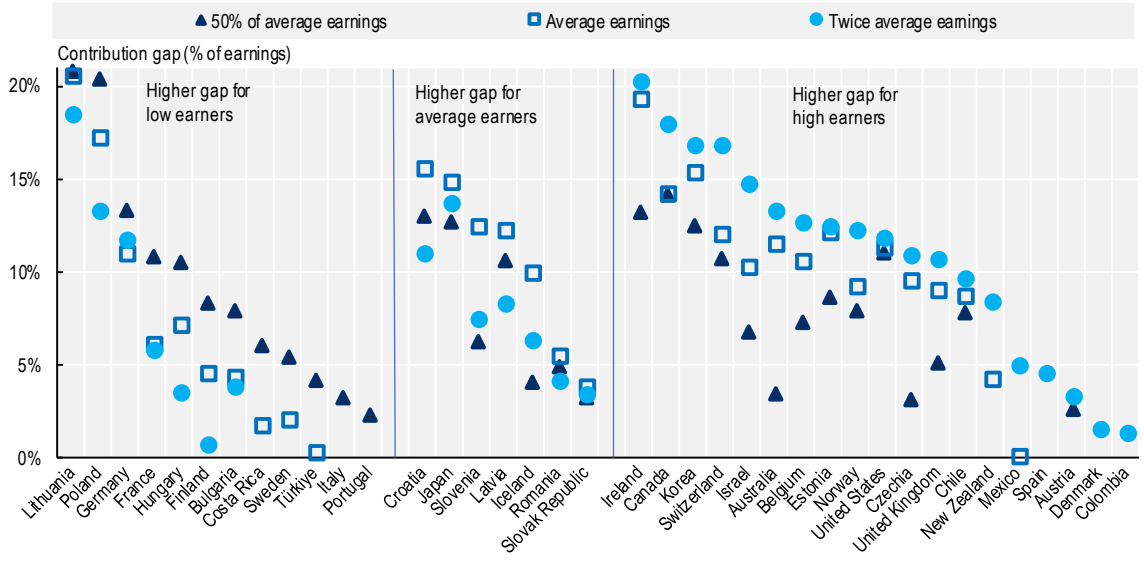
Figure 2.1. Contribution gap for male employees on average earnings



Note: Male employees on average earnings have a contribution gap of zero in Austria, Colombia, Denmark, Greece, Italy, Luxembourg, the Netherlands, Portugal and Spain, since the mandatory pension system already delivers an expected replacement rate of at least 70% for these workers.

The contribution gap is the largest for high earners in half of the countries, but in 12 other countries low earners need to contribute the most to a voluntary DC pension plan to reach their target replacement rate. Figure 2.2 shows contribution gaps for male employees split across three panels, with 12 countries in which there is a higher gap for low earners, 7 countries in which there is a higher gap for average earners and 19 countries in which there is a higher gap for high earners. The average contribution gap across countries with positive gaps is 8.6% for low earners and 9.7% for both average and high earners (among male employees). The progressivity in the mandatory pension systems could explain the larger contribution gaps for average and high earners. However, large contribution gaps for low earners may be of concern as they often face greater barriers to voluntary savings. Overall, there are 13 countries where low earners would need to contribute at least 10% of earnings (Canada, Croatia, France, Germany, Hungary, Ireland, Japan, Korea, Latvia, Lithuania, Poland, Switzerland and the United States).

Figure 2.2. Contribution gap for male employees by level of income

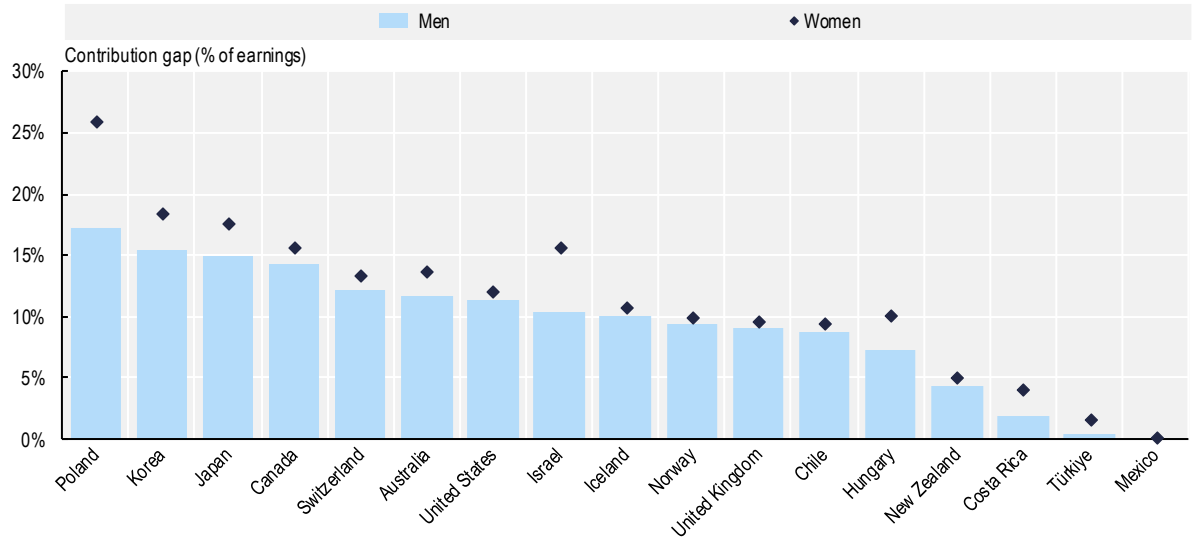


Note: Male employees have a contribution gap of zero in Greece, Luxembourg and the Netherlands, since the mandatory pension system already delivers an expected replacement rate of at least 70% for these workers, irrespective of the earnings level.

The contribution gap is larger for women than for men in 17 countries. Among employees on average earnings, the average contribution gap, across countries with positive gaps, is 9.7% for men and 10.8% for women (Figure 2.3). Two main factors explain this difference. First, women live on average longer than men. While insurance companies must use gender-neutral mortality tables to price annuities in EU Member States, annuity prices in other OECD countries reflect gender differences in life expectancy. In these countries, higher life expectancy increases the contribution gap, since assets accumulated in the voluntary DC pension plan must finance a longer retirement period.

Second, women can retire earlier than men in some countries. Earlier retirement shortens the contribution period in DC plans, increasing the share of earnings that one should save voluntarily each year to reach the target replacement rate. In Costa Rica, Hungary, Israel, Poland and Türkiye, women can retire two to five years earlier than men, leading to lower expected replacement rates from the mandatory pension system, shorter contribution periods in the voluntary DC pension plan and, therefore, larger contribution gaps.

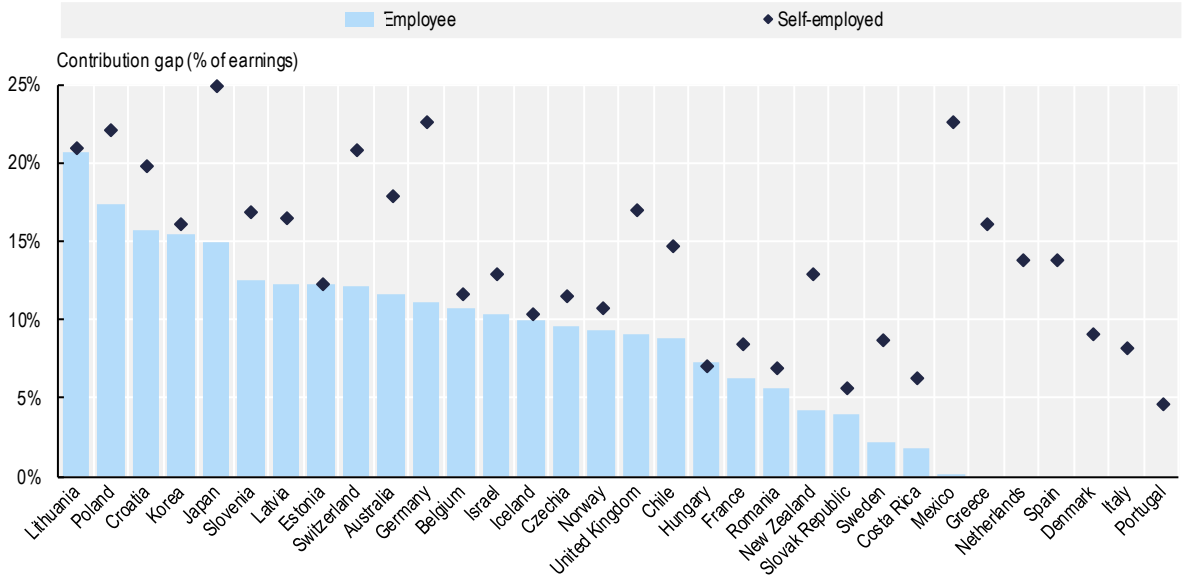
Figure 2.3. Contribution gap for employees on average earnings by sex



Note: The figure only shows countries where the contribution gap differs for male and female employees on average earnings.

The contribution gap is larger for the self-employed than for employees in 31 countries. This mainly reflects lower expected replacement rates from mandatory pension systems for the self-employed. In some countries, they are not required to participate in at least part of the mandatory pension system (e.g. Australia, Germany, Japan, Mexico, the Netherlands, Switzerland). In others, they contribute less than employees through lower contribution rates or flat-rate contributions and therefore accrue lower pension entitlements (e.g. Greece, Israel, Norway, Poland). The average contribution gap is 9.7% for employees and 13.1% for the self-employed, among male workers on average earnings. The contribution gap exceeds 15% for the self-employed in 13 countries (Figure 2.4).

Figure 2.4. Contribution gap for male workers on average earnings by type of employment



Note: The figure only shows countries where the contribution gap differs for employees and the self-employed on average earnings.

All but one of the 41 countries analysed have contribution gaps. For each category of workers, there are between 32 and 38 countries with a contribution gap, and when combining the different categories of workers, there are 40 countries with a contribution gap. The only OECD country where the mandatory pension system promises a replacement rate after a full career of 60% to 80% depending on income for men, women, employees and the self-employed is Luxembourg.

The calculated contribution gaps are sensitive to several assumptions. First, it may be too optimistic to assume that workers save in a voluntary DC pension plan throughout their entire career. Some people may only start saving for retirement later in life because early-career resources are devoted to repaying student loans, buying a first home or covering child-related expenses, for example. Starting voluntary contributions at age 45 instead of 22 would roughly halve the contribution period in a DC plan in most countries and double the contribution gap. Second, the contribution gap depends on the investment performance of the portfolio in a DC plan. Returns depend on the investment strategy chosen by or allocated by default to plan members and may vary across generations given different capital market conditions. Lower returns increase the contribution gap since they reduce the assets accumulated at retirement and, in turn, the complementary income provided by the voluntary DC plan.

2.2. Are voluntary contributions sufficient to close the gap?

The second step to assess the need for higher contributions is to explore whether individuals are currently saving enough voluntarily to close the contribution gaps identified previously. This section looks first at voluntary contributions to asset-backed pension plans across different individuals in selected OECD countries and shows that certain categories of workers may not contribute enough voluntarily to close their contribution gap and reach their retirement income objective. The section then looks at the barriers that may prevent sufficient voluntary contributions. It ends with a discussion about other forms of savings that individuals may tap into to finance retirement.

2.2.1. Voluntary contributions to asset-backed pension plans

There are significant portions of the working-age population in many countries that lack voluntary savings in asset-backed pension plans. The first step to close the contribution gap is to be a member of an asset-backed pension plan. However, few individuals participate in asset-backed pension plans on a voluntary basis to complement their mandatory pensions. Participation in voluntary pension plans varies across countries, from less than 10% of the working-age population in Costa Rica, Greece, Luxembourg or Mexico, to around 50% to 60% in Belgium, the Czech Republic (hereafter 'Czechia'), Germany, Iceland, Ireland, Japan and Poland (Chapter 1).[5] In 9 OECD countries out of 19 where only voluntary plans are available, fewer than half of the working-age population participates.

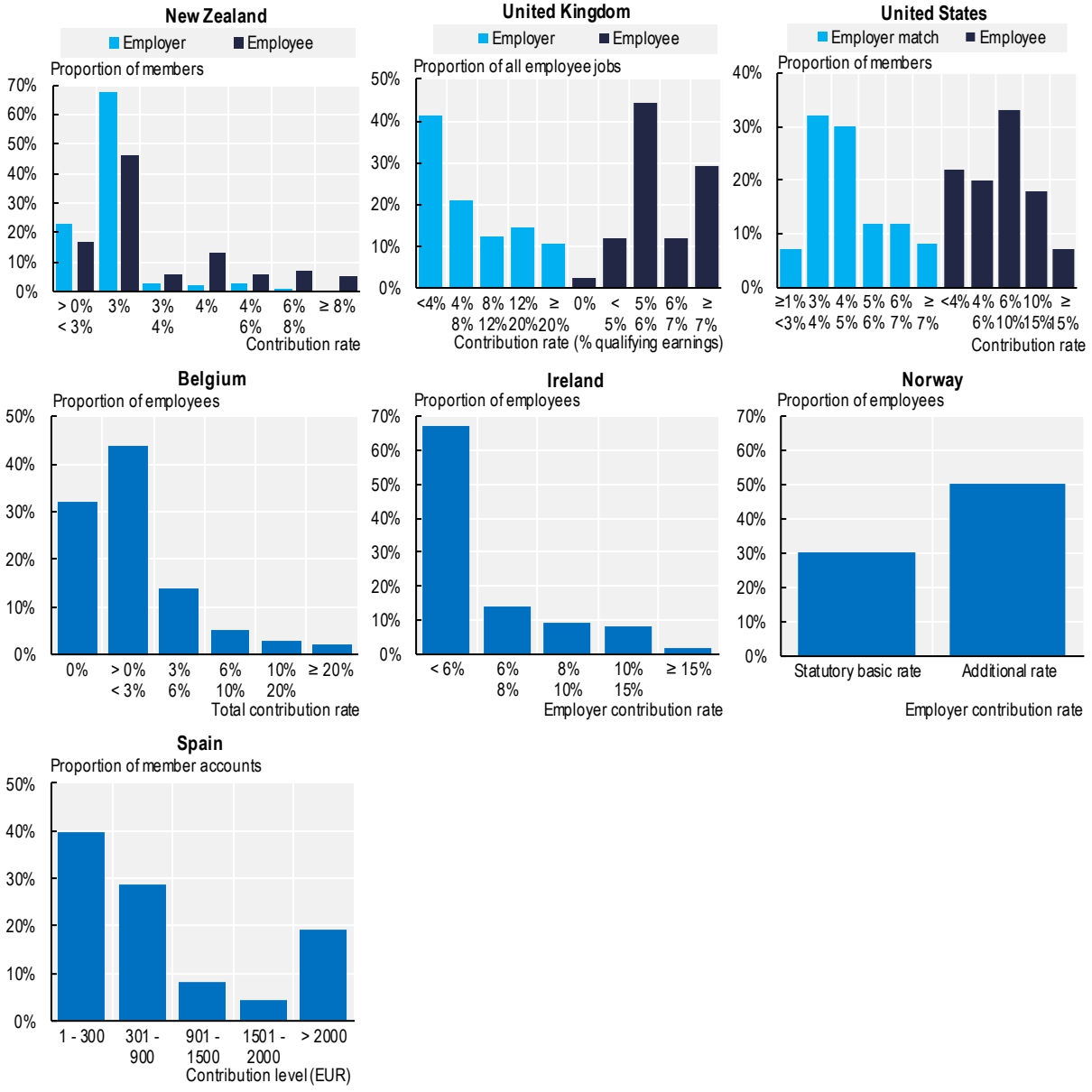
Participation rates in voluntary pension plans tend to be lower among younger workers, lower-income earners, the self-employed and women. Participation rates tend to increase with age and reach a peak towards the middle to the end of the career (OECD, 2012[15]). As a result, many workers may not contribute to a voluntary pension plan for a full career. Participation rates tend to increase with income, reaching a plateau from the 7th or 8th income decile (OECD, 2012[15]). Additionally, fewer women than men tend to participate in voluntary pension plans, in particular when occupational pension plans are not available in industries employing mostly women (OECD, 2021[16]). Finally, self-employed workers are less likely to participate in asset-backed pension plans than employees (OECD, 2019[17]).

Among individuals participating in an asset-backed pension plan, some may not actively and continuously contribute to it. For example, in Belgium, 78% of the labour force participates in a complementary pension plan, but this proportion falls to 59% when only considering individuals who currently contribute and accumulate pension entitlements (PensionStat.be, 2025[18]). In Ireland, around 20% of individuals with a

personal pension plan are not contributing to it (Central Statistics Office, 2024[19]). In New Zealand, 30% of KiwiSaver members aged 18 to 65 were not contributing as of 31 March 2025 (Financial Markets Authority, 2025[20]), and the self-employed are more likely to be non-contributing members than employees (Te Ara Ahunga Ora Retirement Commission/Hnry, 2025[21]). In the United Kingdom, 58% of adults have a pension plan in the accumulation phase, but this proportion falls to 45% when focussing on pension plans into which contributions are currently being paid (Financial Conduct Authority, 2025[22]).

Contribution rates tend to be around a few and relatively low values. This is particularly the case when default or minimum contribution rates are present (Figure 2.5). In the United Kingdom, the most common employer and employee contribution rates to occupational DC plans correspond to the minima established for automatic enrolment, i.e. 3% of qualifying earnings for employers and 5% for employees. Similarly, in New Zealand, approximately 63% of KiwiSaver members contribute at the minimum and default rate, while 91% received employer contributions at the minimum rate. These figures include members who did not contribute for the full year and therefore have an annualised contribution rate below 3%.[6] In Norway, 30% of employees receive the statutory minimum 2% contribution rate from their employer, while 50% receive an additional rate of 9.1% on average. Even in the absence of a minimum or default contribution rate, the distribution of contributions rates tends to be skewed towards low values. For example, in Belgium, 66% of employees who actively participate in an occupational pension plan have a total contribution rate below 3%. In Spain, 54% of occupational pension accounts did not receive any contribution in 2024, and among those with positive contributions, 68% received no more than EUR 900 during the year.

Figure 2.5. Distribution of voluntary contributions, selected OECD countries

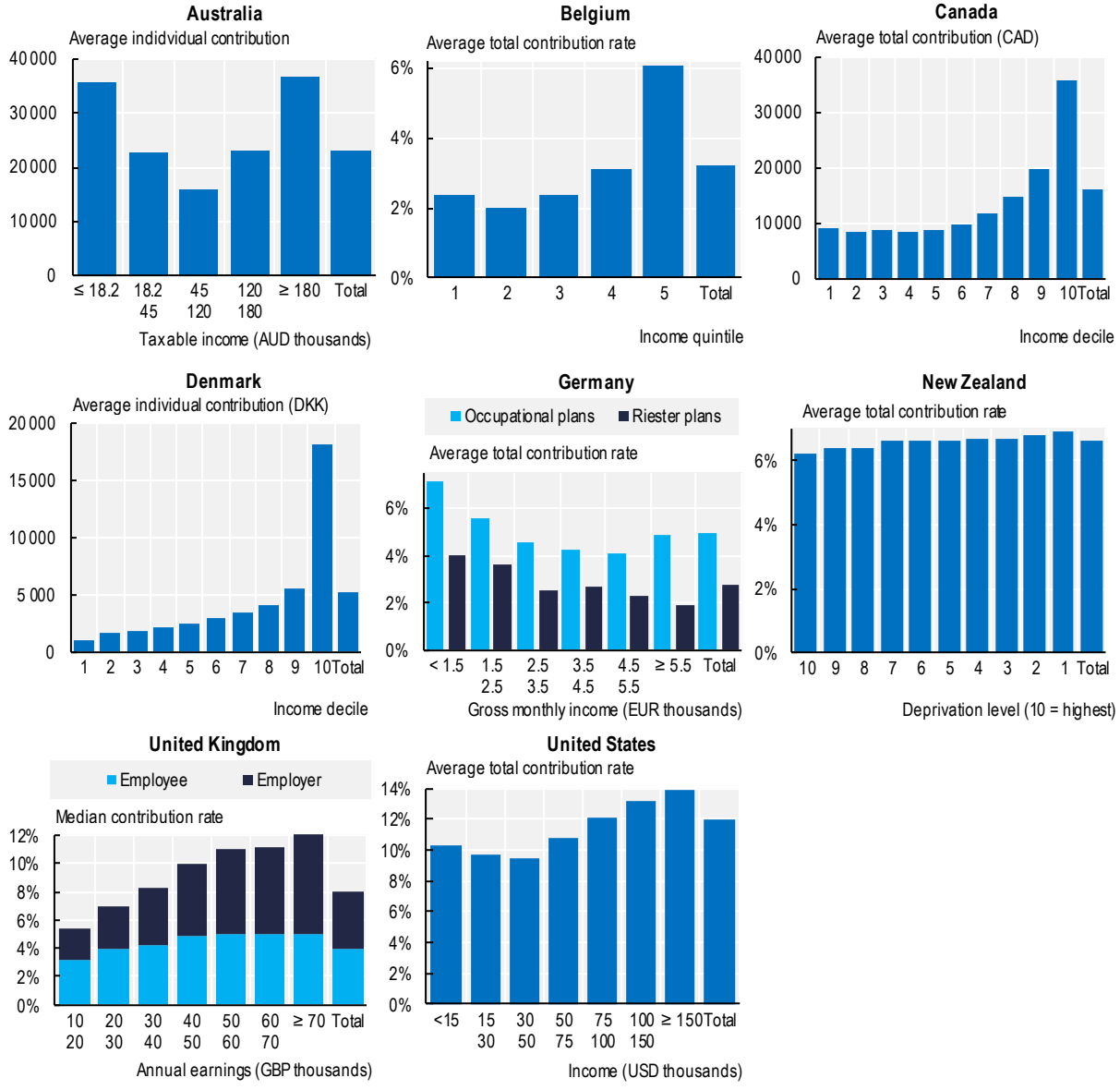


Notes: Data refer to complementary pension plans for employees for Belgium, occupational pension plans managed by Irish Life for Ireland, KiwiSaver plans for New Zealand, occupational DC schemes for Norway and the United Kingdom, occupational pension plans for Spain and occupational pension plans managed by Vanguard for the United States.
Source: Based on Sigedis (2025[23]); Irish Life (2018[24]); Kirkpatrick, L., L. Meehan and G. Pacheco (2024[25]); Finance Norway (2025[26]); DGSFP (2025[27]); ONS (2024[28]); ONS (2024[29]); Vanguard (2025[30]).

Average voluntary contributions tend to vary with income. In Belgium, New Zealand and the United States, contribution rates increase with income among individuals participating in a plan (Figure 2.6). By contrast, average contribution rates to Riester plans decline with income in Germany, as these personal pension plans benefit from government subsidies that are more attractive for lower-income earners. For Australia, data suggest that average contribution rates may be higher for lower-income earners than for middle-income earners. This could be the result of the super co-contribution programme, which encourages lower-income earners to make voluntary contributions as the government pays matching

contributions only to individuals earning below a certain threshold. In Canada and Denmark, average contribution levels are very similar up to the 6th or 7th decile and increase more sharply with income afterwards.

Figure 2.6. Average voluntary contributions by income, selected OECD countries

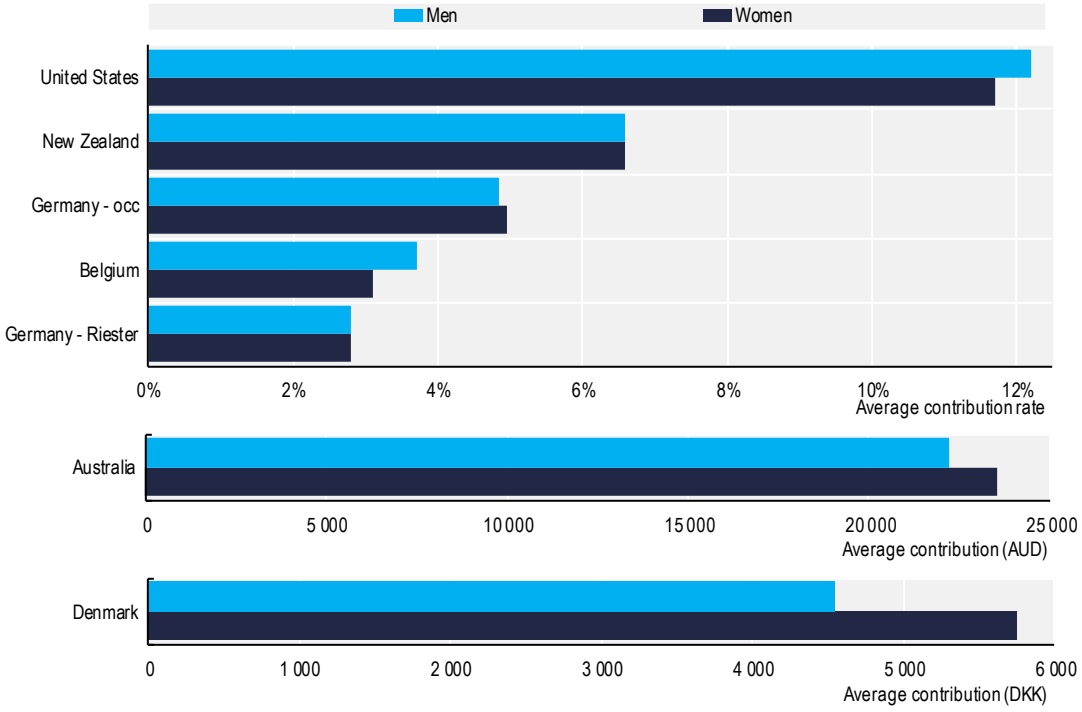


Notes: Data refer to personal contributions to superannuation funds for Australia, complementary pension plans for employees for Belgium, registered pension plans, registered retirement savings plans and tax-free savings accounts for Canada, personal pension plans for Denmark, occupational and Riester pension plans for Germany, KiwiSaver plans for New Zealand, occupation DC schemes for the United Kingdom and occupational pension plans managed by Vanguard for the United States.

Source: Based on Australian Taxation Office (2025[31]), Sigedis (2025[23]); Statistics Canada (2023[32]); F&P (2025[33]); Federal Ministry of Labour and Social Affairs (2025[34]); Kirkpatrick, L., L. Meehan and G. Pacheco (2024[25]); Department for Work & Pensions (2025[35]); Vanguard (2025[30]).

Men and women tend to have relatively comparable voluntary contribution rates or levels. In the United States and Belgium, contribution rates are higher for men than for women, but differences are below 60 basis points of earnings (Figure 2.7). In Australia and Denmark, women contribute more than men on average annually, respectively by around AUD 1 300 and DKK 1 200.

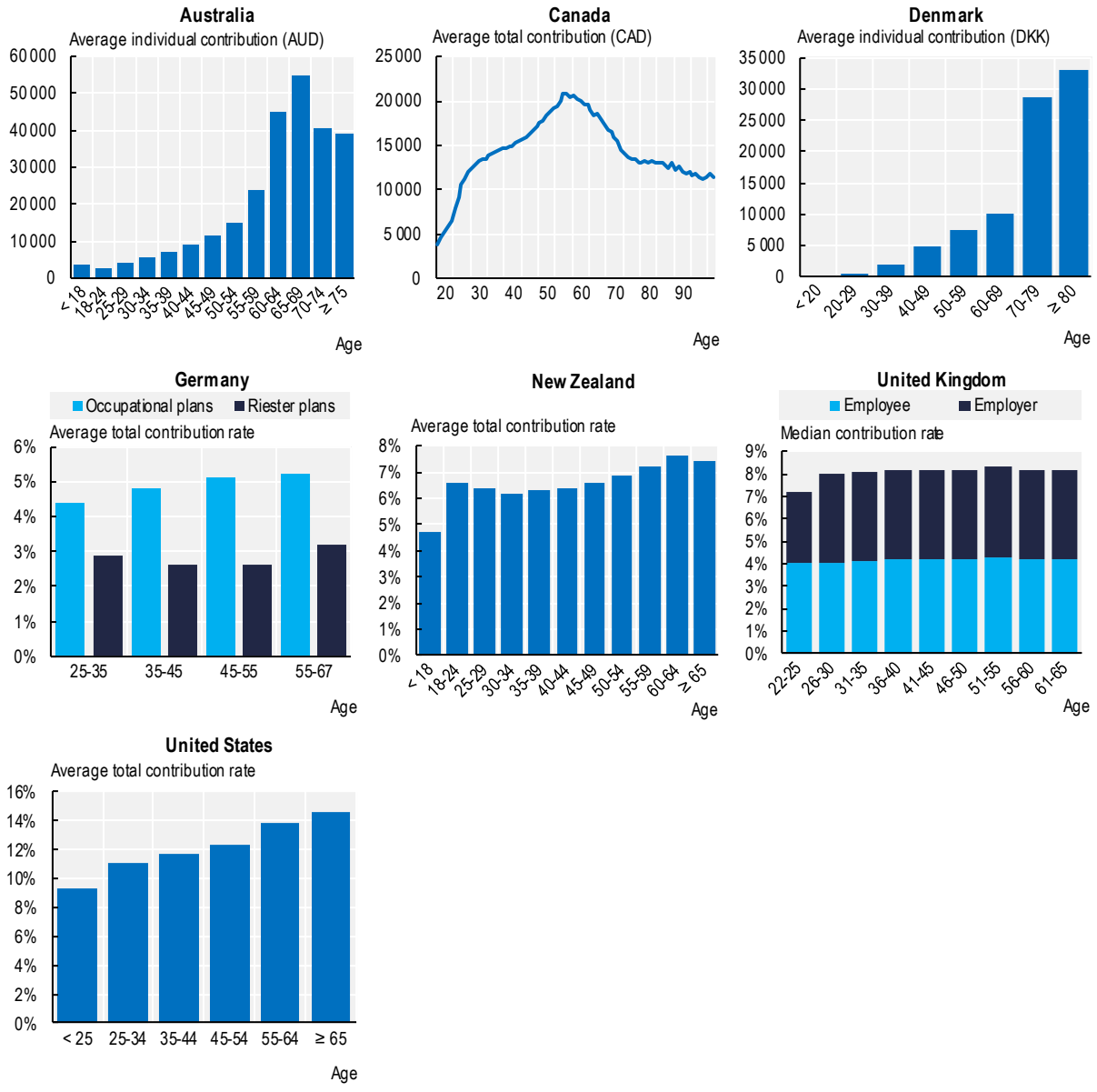
Figure 2.7. Average voluntary contributions by sex, selected OECD countries



Notes: Data refer to personal contributions to superannuation funds for Australia, complementary pension plans for employees for Belgium, personal pension plans for Denmark, occupational ("occ" in the figure) and Riester pension plans for Germany, KiwiSaver plans for New Zealand and occupational pension plans managed by Vanguard for the United States.
Source: Based on Australian Taxation Office (2025[31]); Sigedis (2025[23]); F&P (2025[33]); Federal Ministry of Labour and Social Affairs (2025[34]); Kirkpatrick, L., L. Meehan and G. Pacheco (2024[25]); Vanguard (2025[30]).

Finally, voluntary contributions tend to increase with age, reaching a maximum when people are in their 50s or 60s, and sometimes even later. In most countries, average contribution rates or levels are higher for older people, indicating that individuals may increase their voluntary contributions as they get closer to retirement age (Figure 2.8). However, in Germany, individuals aged 25 to 35 contributed slightly more as a percentage of their earnings to their Riester plan (2.9%) than those aged 35 to 55 (2.6%) in 2021. In the United Kingdom, median contribution rates are relatively constant between 26 and 65 years old. Increasing contributions with age is in line with what the literature suggests is optimal for individuals to do, given higher liquidity constraints at the beginning of a career (e.g. repaying student loans, saving for a deposit to buy a home) and higher earnings at the end (Schlafmann, Setty and Vestman, 2024[36]; Fischer, Jensen and Koch, 2023[37]). However, needed late-career contribution rates may end up being too large and individuals may not have the discipline to raise contribution rates to that level.

Figure 2.8. Average voluntary contributions by age, selected OECD countries



Note: Data refer to personal contributions to superannuation funds for Australia, registered pension plans, registered retirement savings plans and tax-free savings accounts for Canada, personal pension plans for Denmark, occupational and Riester pension plans for Germany, KiwiSaver plans for New Zealand, occupational DC schemes for the United Kingdom and occupational pension plans managed by Vanguard for the United States.

Source: Based on Australian Taxation Office (2025[31]); Statistics Canada (2023[32]); F&P (2025[33]); Federal Ministry of Labour and Social Affairs (2025[34]); Kirkpatrick, L., L. Meehan and G. Pacheco (2024[25]); Department for Work & Pensions (2025[35]); Vanguard (2025[30]).

This analysis suggests that low earners, women and self-employed workers, who have the largest contribution gaps in some countries, are also the ones least likely to participate in asset-backed pension plans and the ones contributing the least. Additionally, the pattern of rising participation and contributions by age suggests that voluntary contributions may need to increase significantly at the end of the career to close the overall contribution gap.

2.2.2. Barriers preventing individuals from contributing enough voluntarily

Several barriers may prevent individuals from contributing enough voluntarily to achieve their retirement income objective. These include behavioural biases, low levels of financial literacy, affordability concerns, career interruptions and selected design features.

Behavioural biases may affect individuals' contribution decisions. Inertia and procrastination, due to the complexity of retirement planning and regret aversion, often lead individuals to delay or fail to make decisions that would be in their best interest, such as increasing contributions (Money & Pensions Service, 2020[38]; OECD, 2018[39]). Saving for retirement requires self-control, but due to present bias, individuals tend to put more emphasis on immediate gratification (e.g. through consumption) rather than future benefits (e.g. through savings), thereby failing to act on their good intentions. Distance to retirement makes future pension benefits more abstract and harder to evaluate for individuals, who may underestimate how much income they will need in retirement. This also relates to the fact that individuals think in nominal terms and fail to consider the impact of inflation on future spending. Loss aversion may also affect pension contributions as individuals may be reluctant to reduce take-home pay to increase contributions.

Individuals may have low levels of financial literacy affecting their decision on an appropriate contribution rate. Determining the appropriate contribution rate requires knowledge, numeracy and financial skills (OECD, 2018[39]). Individuals should figure out how much money they will need in retirement and understand how contributions paid into a DC pension plan affect future retirement income. This requires numeracy and financial skills to assess whether the contributions paid will eventually translate into an income that will cover their needs in retirement. That assessment should be done given the level of retirement income that they may expect from other components of the pension system, which requires knowledge of how benefits are calculated in other pension schemes. Individuals also need to understand that income from DC pension plans is uncertain due to financial, demographic and labour market risks. A given level of contribution may be sufficient to achieve a retirement income objective only under certain circumstances, depending on how the different risks materialise. Moreover, many adults may have insufficient understanding of basic financial concepts and insufficient financial skills to take sound financial decisions (OECD, 2023[40]).

Low levels of financial literacy may lead to the use simple rules of thumb or heuristics to determine contribution rates. For example, individuals may select contribution rates at multiples of 5%, based on the maximum contribution rate allowed by the plan or by tax rules, or based on the minimum necessary to get the full employer matching contributions (Benartzi and Thaler, 2007[41]). However, such rules may not result in an appropriate level of contribution given their personal circumstances.

Another consequence of behavioural biases and low levels of financial literacy is a lack of engagement of people participating in a pension plan. As a result of this lack of engagement, they know little about how much they have accumulated, how much they should contribute and how their money is invested. In 2024, only 24% of UK adults actively contributing to a DC pension plan were considered as highly engaged with their pension based on a combination of nine indicators. While 62% knew how much was contributed to their plan, only 20% had thought a lot about how much they should be contributing each year to maintain a reasonable standard of living in retirement (Financial Conduct Authority, 2025[22]).

Willingness to trade current pay for future pension benefits may vary across different individuals. In the United Kingdom, workers are willing to forego 0.3% of their wage on average for a 1 p.p. increase in future retirement income (Deschacht, Guillemyn and Vujić, 2025[42]). The willingness to forego wages for pension benefits is larger for older workers, workers actively saving for their pension, higher-income earners, and workers with higher financial literacy and higher risk aversion. This indicates that willingness to contribute to a pension plan would differ across workers with different characteristics to the extent that such contributions would reduce their take-home pay.

Competing financial goals and affordability concerns may prevent people from saving for retirement. People may prioritise saving towards a major expense (e.g. a house, a car, education) and paying down debt over saving for retirement (Pew, 2025[43]). Low-income earners may feel that pension contributions are not affordable and prioritise short-term budgeting (Department for Work and Pensions, 2024[44]). Moreover, the economic environment may affect individuals' ability to save for retirement, with people more likely to reduce or stop contributions in times of economic uncertainty and rising costs of living (Allianz Center for the Future of Retirement, 2026[45]; Living Wage Foundation, 2024[46]). In the United Kingdom, low-income earners on precarious jobs feel their income is too unsecure to save for retirement (Department for Work and Pensions, 2024[44]).

Mandatory pension contributions may crowd out voluntary contributions. The average effective contribution rate to mandatory or quasi-mandatory pension schemes equalled 18.8% for private-sector employees on average earnings in the OECD in 2024 (OECD, 2025[7]).[7] It exceeded 25% in Czechia, France, Greece, Italy, Spain and the United Kingdom. This may leave limited room for voluntary contributions.

Employers may be unwilling to contribute more than the minimum on behalf of their employees. In New Zealand, only 9% of employees receive employer contributions to their KiwiSaver plan above the minimum rate of 3% (Te Ara Ahunga Ora Retirement Commission, 2025[47]). In the United Kingdom, 37% of employers only offer the minimum contribution rate established in the automatic-enrolment legislation, i.e. 3% of a qualifying band of earnings, to all their employees (Nest Insight, 2022[48]). This proportion increases to 59% among employers with less than 50 employees. Affordability is the main reason cited by 51% of employers offering the minimum, while 31% believe this is the amount recommended by the government, 26% prioritise putting money into base salary, and 24% say this is the norm in their sector. Employees may also lack interest in occupational pension plans, thereby discouraging employers to offer such plans or to contribute beyond the minimum (OECD, 2022[49]).

Moreover, trade unions may not push for higher contributions to occupational pension plans negotiated through collective bargaining. Trade unions may fear that occupational pensions may undermine the role of PAYG pensions and affect wages. For example, in Austria and Belgium, unions show little interest in raising contribution rates to occupational and sectoral pension plans respectively, as they tend to prioritise the public pension scheme as the main vehicle to provide retirement income, favour the maintenance of wage levels in the context of low wage growth, and consider that investment risk makes occupational pension benefits insecure (Keune, 2018[50]).

Career interruptions may also reduce individuals' ability to pay steady contributions. Temporary employees may not always be able to contribute to an occupational pension plan when the plan imposes a minimum length of employment or contract duration for participation (OECD, 2019[17]). Additionally, in some countries, employer contributions to voluntary pension plans stop during maternity leave (e.g. Austria, New Zealand, Poland, the United States) (OECD, 2021[16]).[8] Unemployment spells also prevent continuous contributions.

Even when employers contribute, employees may lose some of these contributions by leaving the employer before the end of the vesting period. In several countries, employer contributions to occupational pension plans may not vest immediately (OECD, 2019[17]). Employers mainly use vesting periods as a retention tool and to reduce costs. However, vesting periods affect the retirement savings of employees. In the United States, the proportion of participants leaving their employer before the end of their vesting period increased from 19% in 2010 to 29% in 2018. The average forfeiture represents 37% of the account balance of departing individuals, mostly affecting younger and lower-income employees (Carranza and Goodman, 2024[51]).

Contribution caps may constrain voluntary contributions. Many countries limit the level of contributions attracting tax relief (OECD, 2025[52]). Some countries express the cap as a percentage of income up to a nominal ceiling, while others express the cap as a fixed amount (OECD, 2024[53]). For example, fixed caps represent less than 10% of the average wage in seven OECD countries (OECD, 2024[53]). These caps are

useful to limit the fiscal cost of tax incentives for the government and avoid rewarding higher-income earners disproportionately as they are more likely to save for retirement and have a higher capacity to save. However, they may be constraining for these individuals when they have significant contribution gaps. Some countries also calculate contributions on capped earnings. In the United Kingdom, the minimum total contribution rate under automatic enrolment must be at least 8% of a band of earnings, but the effective contribution rate as a percentage of total salary follows a hump shape with salary level and reaches a peak of 7% of total salary for employees earning GBP 50 000 (Pensions Policy Institute, 2024[54]). This means that higher-income earners may need to make the active decision to contribute beyond the default minimum to achieve their retirement income objective.

Minimum and default contribution rates for voluntary contributions tend to be relatively low. For example, default contribution rates used in the context of automatic enrolment are below 5% in Quebec (Canada) and Türkiye. Low default contribution rates may be useful to encourage people to save and reduce opt-out rates. However, they may be an issue as people tend to stick with default contribution rates even when these are not appropriate for them (Madrian and Shea, 2001[55]; Choi et al., 2004[56]). People may also opt for the minimum due to affordability concerns or lack of understanding of the impact of contributions on future retirement income (OECD, 2018[39]).

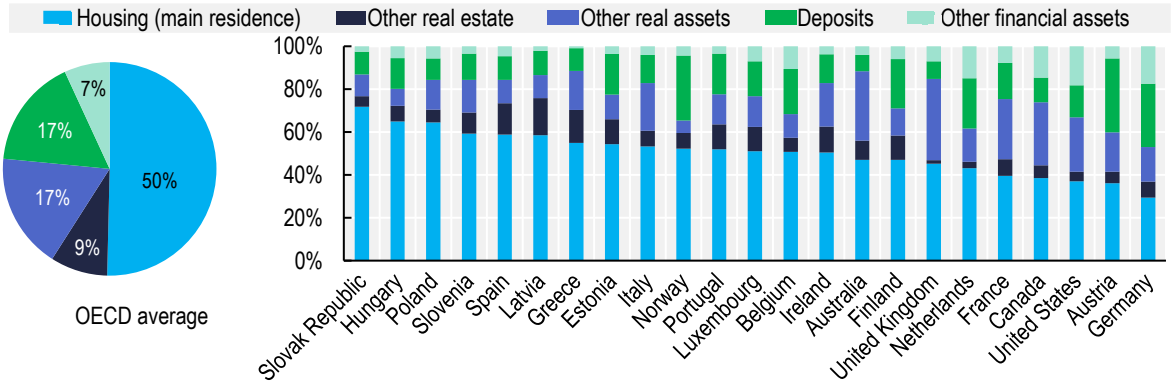
Poor performance records may also put individuals off saving for retirement in asset-backed pension plans. If conservative investment strategies lead to low or negative returns, due for example to guarantees, high fees and high inflation, individuals may question the value of saving in asset-backed pension plans and look for alternative saving vehicles. For example, in Germany, the number of Riester contracts declined from 16.6 million in 2017 to less than 15.0 million in 2024, and 20% to 25% of contracts no longer receive contributions (Federal Ministry of Labour and Social Affairs, 2025[57]). This is due to several shortcomings of Riester plans, including low returns, high costs and insufficient transparency. In particular, the statutory capital guarantee limits investment in asset classes with higher risks and higher return potential, often leading to negative real returns net of costs (Deutsche Bank Research, 2026[58]).[9]

2.2.3. Other forms of savings

Other forms of savings can play a role in financing retirement, reducing the need for voluntary contributions. Indeed, failure to contribute enough to asset-backed pension plans may not be an issue if individuals can tap into other sources to finance retirement. However, other forms of savings are not perfect substitutes for pension savings.

Housing is the main asset in households' portfolios. The main residence represents 50% of total assets on average in the OECD when looking at the asset decomposition of households' portfolios, excluding public and occupational pension plans (Figure 2.9). This share ranges from 25% in Germany to 72% in the Slovak Republic. Even among lower-income earners, the share of homeowners is relatively high in many countries, reaching 54% on average in the OECD (OECD, 2024[59]). Other real assets (e.g. secondary residence) and deposits are also relatively important in household's portfolios, representing 17% on average.

Figure 2.9. Asset decomposition of households' portfolios



Note: Public and occupational pension plans are not included in financial assets.
Source: OECD (2021[60]), "Measuring the Role of Housing in the Distribution of Wealth" in *Brick by Brick: Building Better Housing Policies*, https://doi.org/10.1787/b453b043-en.

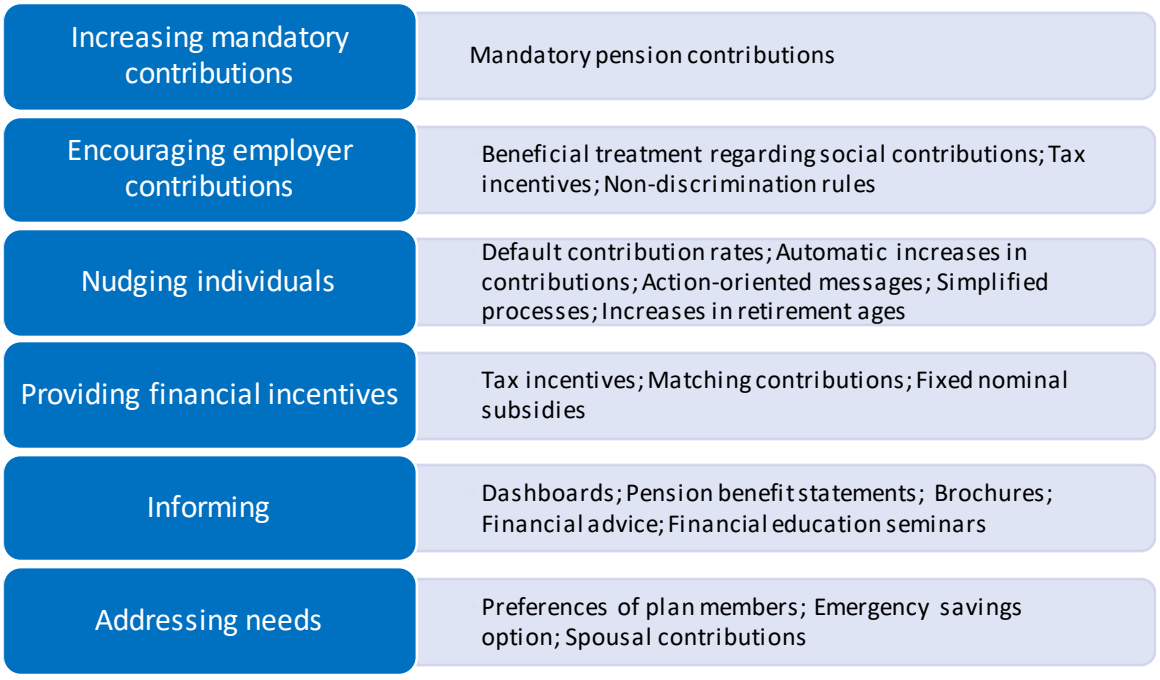
Given that homeownership is widespread in many countries, home equity release products could be a valuable additional source to finance individuals' needs in retirement for many retirees. However, home equity release products are not suitable for every situation (OECD, 2024[61]). They are better suited for older individuals who plan to stay in their homes for the rest of their lives and for those who do not prioritise leaving a bequest to their heirs. Moreover, the use of these products remains very limited due to lack of awareness, lack of trust in financial providers, debt aversion and emotional attachment to homes. There is also limited supply of home equity release products because financing and capital requirements are a major barrier to entry, and providers may not always be able to effectively mitigate their own risk exposures.

Even after factoring in home equity, some individuals may still have a remaining contribution gap. In the United Kingdom, 34% of the working-age population may fail to meet their target replacement rate (as defined by the 2004 Pensions Commission) when summing up their expected income from public pensions, private pensions, financial assets and home equity (Pensions Policy Institute, 2025[62]). In the Netherlands, employees without an occupational pension do not compensate by accumulating more other assets (including home equity, business equity and financial assets). In 2020, the median net total assets equalled EUR 132 802 for employees with an occupational pension and EUR 90 445 for employees without an occupational pension. However, the self-employed without an occupational pension had accumulated more total assets, with a median value of EUR 196 622, with home equity being an important factor (Biesenbeek, Heerma van Voss and Mastrogiacomo, 2020[63]).

2.3. Policies to steer individuals towards contribution levels allowing them to reach their retirement income objective

There is a range of policies that could ensure that individuals contribute to asset-backed pension plans in line with their retirement income objective.[10] The different policies can be grouped under six categories (Figure 2.10).

Figure 2.10. Overview of different policies to increase contributions



2.3.1. Increasing mandatory contributions

Increasing mandatory contributions may raise the chances that individuals will reach their retirement income objective. However, this may have negative implications. Increasing mandatory contributions from employers may affect labour markets, while increasing mandatory contributions from employees may affect household finances and consumption. The impact on total savings may be uncertain as individuals could lower their voluntary savings to offset the increase in mandatory contributions.

Increasing mandatory pension contributions or introducing new mandatory contributions may be the most efficient way to raise pension benefits and reach individuals' retirement income objective. This may be particularly the case when barriers to voluntary savings are difficult to overcome. For example, Norway introduced mandatory occupational pension plans for private-sector employees with a minimum employer contribution rate of 2%, as trade unions and employer representatives were unable to reach an agreement on collectively bargained occupational pension schemes (Trampusch, 2013[64]; Pedersen et al., 2018[65]). In general, increases in mandatory contributions tend to be gradual to allow employers and employees to adjust to the change. This is currently the case in Chile and Mexico, for example.

Increasing mandatory pension contributions may have negative implications on labour markets, in particular employment, wages and formality. Mandatory pension contributions paid by employers increase labour costs, potentially reducing demand for labour. For example, in Finland, higher payroll taxes (pension and health contributions) reduced employment, with the most affected workers being those with lower levels of education and those performing routine and manual tasks (Benzarti and Harju, 2021[66]). In addition, employers may shift the cost of mandatory pension contributions to employees' remuneration. Mandatory pension contributions may have a stronger impact on wages in more flexible and competitive labour markets (Kim, Kim and Koh, 2022[67]). The extent to which an increase in employer contributions is shifted to workers through lower wage growth indeed varies across countries, from 30% in the Netherlands (Bosch et al., 2022[68]), to 50% in the United Kingdom (Scarfe, Schaefer and Sulka, 2024[69]), 70% to 100% in Australia (Breunig and Sobeck, 2020[70]; Coates, Cowgill and Mackey, 2020[71]) and 100% in France (Bozio et al., 2025[72]). Moreover, mandatory pension contributions may decrease labour formality as they

impose a liquidity constraint on low-income workers by reducing take-home pay. Based on modelling and using data on Chile, Colombia and Peru, several studies show that mandatory pension contributions affect workers' decision to take formal or informal jobs (Pardo, 2023[73]; Moreno, 2025[74]; Joubert, 2015[75]).

Increasing mandatory pension contributions may also have negative implications on household finances. Higher mandatory pension contributions may reduce household consumption, potentially putting serious constraints on lower-income earners. In Israel, the introduction in 2008 of mandatory pension contributions to pension funds led to a reduction in consumption, mostly due to a reduction in net wages (Frish, 2025[76]). Similarly, in Denmark, individuals subject to higher increases in pension contributions have lower consumption growth during working years (Larsen et al., 2025[77]). An increase in mandatory pension contributions may also lead to higher levels of household debt. Workers may take on higher debt, either because they feel more confident about their capacity to reimburse a loan due to the expected higher income in retirement (Andersen, Hansen and Kuchler, 2022[78]), or because they need to borrow to partially finance the increase in contributions (Beshears et al., 2025[79]; Choukhmane and Palmer, 2025[80]). However, higher mandatory pension contributions do not increase household debt in all countries (Sigurdardóttir, 2023[81]; Beshears et al., 2021[82]).

The impact of an increase in mandatory contributions on total savings depends on the extent to which individuals reduce their voluntary savings, and this varies across countries. In Iceland, the increase in the mandatory contribution rate to occupational pension funds between 2016 and 2018 led to an overall increase in household savings as private-sector workers did not reduce significantly their voluntary savings, potentially due to a lack of awareness of the reform (Jensen et al., 2025[83]). In the United States, employees of a public university employed after an increase of 5 p.p. in mandatory pension contributions only had voluntary DC contribution rates 1.5 p.p. lower on average than employees hired before the change, showing that most people were not sensitive to the level of mandatory contributions (Friedberg, Leive and Cai, 2024[84]). In Australia, increases in employer contributions to mandatory superannuation funds reduce voluntary private savings, but the substitution effect is less than one, leading to an increase in household wealth (Ruthbah and Pham, 2020[85]). In Switzerland, workers subject to mandatory participation in occupational pension funds tend to reduce private non-pension wealth, except lower-income earners with liquidity constraints as they are less able to reduce their private savings to offset mandatory pension contributions (Burgherr, 2025[86]). In Denmark, increases in mandatory pension contributions are associated with lower savings outside the pension system (Larsen et al., 2025[77]).

2.3.2. Encouraging employers to contribute voluntarily on behalf of their employees

Employers hold a unique position in supporting their employees' retirement savings. By linking occupational pension plan participation with employment contracts, enabling payroll deductions, and making contributions on behalf of their workers, employers can make it easier for staff to prepare for retirement (OECD, 2022[49]). However, cost may be a barrier for voluntary employer contributions.

In many OECD countries, employer contributions enjoy a beneficial treatment regarding social contributions. Social contributions are usually levied on gross income to finance social benefits such as healthcare, unemployment and pensions. Exempting employer pension contributions from social contributions or subjecting them to reduced rates makes it more cost-effective for employers to contribute to pension plans than to pay equivalent amounts as salary. Examples include Australia, Austria, Belgium, Ireland, Italy, Poland, Slovenia and the United Kingdom, where employer pension contributions are not counted towards calculating social contributions or receive preferential rates (OECD, 2024[53]).

Another way to reduce costs and encourage voluntary employer contributions is to provide tax incentives to employers. Employer contributions to asset-backed pension plans are always considered as tax-deductible business expenses for the purpose of corporate income tax. Some countries provide additional tax relief. In Germany, employers contributing at least EUR 240 per year to an occupational pension plan on behalf of an employee earning less than EUR 2 575 monthly get a tax credit of 30% of the contribution,

up to a maximum contribution of EUR 960. In Spain, employers can deduct from corporate income tax 10% of their contributions to an occupational pension plan in favour of employees with an annual gross remuneration of less than EUR 27 000 (OECD, 2024[53]).[11]

Regulation can also ensure that employers contribute enough voluntarily on behalf of all categories of employees, in particular lower-income earners. In the United States, non-discrimination rules in traditional 401(k) plans ensure that contributions made by and on behalf of lower-earning employees are proportional to the contributions for higher-earning employees. If that is not the case, the employer needs to take corrective actions, such as making a taxable distribution of the excess contributions to higher-earning employees or contributing on behalf of all lower-earning employees. One way to satisfy the non-discrimination test is to implement automatic enrolment and automatic escalation of contributions to ensure high participation rates and sufficient contributions among lower-earning employees. Another way is to adopt a safe-harbour plan offering all lower-earning employees an employer contribution equal to at least 3% of pay or offering an employer matching contribution using an approved formula (OECD, 2022[49]).

2.3.3. Nudging individuals

A nudge is an intervention adapting the decision environment of individuals to influence their behaviour and decision making. Thaler and Sunstein (2008[87]) define a nudge as “any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives.” In the context of pension contributions, nudges include default contribution rates, automatic increases in contributions, action-oriented messages, simplified processes and increases in retirement ages.

Default contribution rates

Choosing a default contribution rate is far from straightforward. A default contribution rate is a pre-selected contribution rate that applies to all plan members who do not choose a rate. It can increase participation by simplifying decision making (OECD, 2018[39]). However, individuals tend to have different optimal contribution rates depending on their personal characteristics, such as income, age, gender and tenure (Choi et al., 2003[88]). When heterogeneity is high, any single default could be inappropriate for many workers. Moreover, it is important to consider the level of the default contribution rate carefully, as individuals may keep it for several years (Beshears et al., 2023[89]), either because they perceive it to be the implicit recommendation of the plan sponsor or the government (McKenzie, Liersch and Finkelstein, 2006[90]), or because of inertia. Lower-income earners may be less likely to depart from the default, in part because they face higher barriers to active decision making due to lower levels of financial literacy (Burke, Hung and Luoto, 2017[91]; Beshears et al., 2023[89]).

Low default contribution rates may reduce effective contribution rates. Default contribution rates tend to be low, typically below 5%, to avoid having too many people oversaving and to limit opt-out rates in the context of automatic enrolment. However, evidence suggests that some individuals would select a higher contribution rate in the absence of a default option (Nest Insight, 2025[92]; Carroll et al., 2009[93]). The average positive effect of automatic enrolment on contributions in 401(k) plans in the United States nearly disappears after three years of tenure as workers enrolled automatically stay at the default contribution rate, while those who opt in voluntarily increase their contribution rate over time (Choukhmane, 2025[94]). In the United Kingdom, the median total contribution rate to DC pension plans among participating private-sector employees is lower now (8% of total pay) than before the rollout of automatic enrolment in 2012 (9% of total pay), because automatic enrolment brings in new savers contributing at the minimum, default levels (Department for Work and Pensions, 2025[35]).

Setting higher default contribution rates could increase contribution rates without significantly reducing participation rates, although individuals may be more likely to depart from the default. When individuals

have heterogeneous preferences, it may be preferable to select a default contribution rate that is slightly higher than the optimal rather than lower, since it would tend to increase retirement savings, while it may be easier for individuals to reduce their contribution rate from a high default than to increase it from a low default due to loss aversion (Choi et al., 2003[88]). In the United States, setting default contribution rates between 7% and 11% leads to an increase in average contribution rates of 20 to 50 basis points of salary relative to a 6% default, with only the 11% default leading to an increase of 3.7 p.p. in the likelihood of not participating in the plan (Beshears et al., 2017[95]). In Italy, the number of self-employed workers contributing more than the minimum to their mandatory pension fund was multiplied by 2.7 between 2016 and 2017 as a result of increasing the default contribution rate from 10% (the minimum) to 20% and explaining the consequences of pension choices in terms of future pension income and tax savings (Rubaltelli and Lotto, 2021[96]). Moreover, higher default contribution rates may be less sticky than lower ones, as demonstrated by the United Kingdom, where only 25% of employees participating in a DC plan with a 12% default contribution rate were still contributing at this rate after 12 months of tenure (Beshears et al., 2023[89]).

Automatic increases in contributions

Increasing contributions automatically up to a pre-set level, as an alternative to higher defaults, could help individuals to contribute more. In New Zealand, providing KiwiSaver members with the possibility to join a scheme with automatic increases of contributions could result in a difference between the initial and maximum contribution rate of 2.8 p.p. on average, without reducing the initial contribution rate (Hobbs and Feld, 2021[97]).[12]

Contribution increases could be linked to salary increases. This would reduce the feeling of loss of a lower take-home pay and mitigate the affordability issue of increased contributions for low-income earners. In the United States, asking employees to commit to future increases in their contribution rate each time they get a pay rise up to a pre-set maximum led participants in the Save More Tomorrow™ (“SMarT”) programme to almost quadruple their contribution rates over the course of 40 months, from 3.5% to 13.6% on average (Thaler and Benartzi, 2004[98]). In Spain, employees of a large financial institution who had just experienced an increase of minimum 1% in their salaries automatically participated in a programme whereby 50% of the salary increase was paid as a default contribution to the company pension plan and the default contribution was automatically increasing by 10% every year thereafter. Annual contributions increased by 19% and 31% after one year for employees enrolled in the programme in 2016 and 2017, respectively (García and Vila, 2020[99]).

The acceptance of automatic increases in contributions varies and may decline over time. In the United States, among individuals who were newly entitled to participate in a Vanguard-administered plan with automatic enrolment and automatic annual increases in contributions in 2015, 54% were still in the contribution increase programme and 27% had reached their maximum pre-set rate by 2020 (Proctor and Young, 2021[100]). In Spain, only 22% of employees of a large financial institution enrolled automatically in an automatic increase in voluntary pension contributions withdrew from the programme during the following year (García and Vila, 2020[99]). However, acceptance of the default automatic contribution increase may not remain that high in subsequent years. Among 21 US firms that implemented automatic increases, 43% of employees were still in the programme at the time of the first increase, going down to 29% by the third increase, with other plan participants not accepting the automatic increases (Choi et al., 2024[101]).

Moreover, automatic increases in contributions may not work for workers changing jobs frequently. Workers changing employers may not keep up with their initial contribution increase schedule. Indeed, the new employer may not offer a pension plan, there may not be a programme of automatic increases in contributions in the new plan, or the worker may start a new contribution increase schedule from a low initial contribution rate in the new plan (OECD, 2022[49]). Mobile workers may never reach the maximum contribution rate and therefore under-save for retirement during most of their career.

Action-oriented messages

Sending simple messages prompting pension plan members to increase their contributions can encourage higher contributions. In the United States, state government employees aged 50 to 69 participating in a DC pension plan who received a flyer by email with general information about DC pension plans and catch-up contributions increased their contributions by 1 p.p. more than those who did not receive the flyer one month after the intervention, and by 2.2 p.p. more after nine months (Clark et al., 2018[102]).[13] Similarly, about 15% of employees participating in the pension plan of a US company but contributing less than 6% of earnings raised their contribution rate after receiving a form by mail allowing them to simply tick a box to increase their total contribution rate to 6% (Beshears et al., 2013[103]; Choi et al., 2017[104]). In comparison, only about 1% of low contributors raised their contribution rate to 6% when not receiving a similar form. Moreover, highlighting a higher potential increase in contribution rates rather than a smaller one in an email can nudge individuals towards higher contribution rates (Choi et al., 2017[104]).

When offering the option to increase contributions in the future, messages should associate the future date with a fresh start. Committing to increase contributions at a future date may help to overcome present bias. However, offering individuals an opportunity to delay savings for several months runs the risk of reducing contributions as people may interpret the intervention as evidence that saving for retirement is not an urgent priority (Beshears et al., 2016[105]; Reiff et al., 2023[106]). Expressing the future date as a fresh start, such as the individual's next birthday or the first day of spring, can counteract this negative effect (Beshears et al., 2021[107]; Beshears et al., 2016[105]). This may be because fresh start moments are more salient than ordinary dates and can make people more optimistic about their ability to achieve their goals (Beshears et al., 2021[107]).

The effectiveness of messages including information about peer contributions may depend on how achievable individuals perceive the objective to be. Sharing peer information is expected to influence behaviour towards the peer-group average because it shows that a certain behaviour is relatively common and may encourage some individuals to do the same thing. In Norway, individuals receiving a message on the online portal of their pension provider describing how much other individuals in the same age group save per month increased their contributions to their personal pension plan in the following month (Døskeland et al., 2025[108]). Similarly, US Army service members who received an email encouraging them to participate in the Thrift Savings Plan and highlighting a contribution rate at which some coworkers start contributing, were more likely to contribute exactly at the highlighted rate (Goldin et al., 2020[109]). However, peer information may not significantly affect pension contributions when the goal is perceived to be challenging. Employees in a large US manufacturing firm who had low contribution rates and received information about the proportion of coworkers in the same age group contributing at least 6% of pay to the company pension plan were not more likely to raise their contribution rate to 6% than those who did not receive information about peers (Beshears et al., 2015[110]). This may be because low contributors may perceive the 6% contribution rate objective as hard to achieve.

Asking individuals to formulate a plan to save for retirement and sending reminders in line with this commitment can increase retirement savings. Reminders can increase retirement savings by helping individuals to keep their savings goals at the top of their mind. They may be particularly useful when individuals can flexibly decide how often and how much to save in their pension plans. In Colombia, sending monthly reminders personalised based on a savings plan formulated by participants in the *Beneficios Económicos Periódicos* (BEPS) programme increases the number of deposits without reducing the average amount deposited, compared to participants who did not formulate a savings plan and to participants who formulated a savings plan but did not receive personalised reminders (Gars et al., 2025[111]). Additionally, reminders with a savings goal perform better when framed as a monthly goal rather than as an annual goal because small amounts reduce the feeling of loss and increase the feeling of affordability (Azuara Herrera et al., 2021[112]).

Simplified contribution processes

Extending the mechanisms through which individuals can deposit contributions can remove some of the barriers to voluntary saving. In Mexico, there are eight different ways to make voluntary contributions, including through convenience stores (e.g. 7-Eleven shops, pharmacies), mobile applications, providers' websites and employers, to facilitate contributions across formal and informal workers in urban and rural areas. Digital platforms capture most of the flow of voluntary contributions (OECD, 2020[113]). Making it possible to deposit voluntary contributions at 7-Eleven stores increased the number of workers making at least one contribution by 9% and the number of voluntary contributions by 6% after 43 months in municipalities with 7-Eleven stores, compared to those without (Bosch and Rubli, 2021[114]). In Switzerland, the introduction of a digital pension application increased the probability of making additional voluntary contributions to mandatory occupational pension funds by 1.8 p.p., from an initial 2.8% prior to the introduction of the app. The simplification of the process of making voluntary contributions through the app was the main factor (Daminato, Filippini and Haufler, 2024[115]).

Automatic savings mechanisms can also simplify contribution processes by giving individuals peace of mind once the mechanism is set. Such mechanisms can harness the power of inertia for self-employed and informal workers the same way payroll deductions do for employees. In India, informal workers participating in the PM-SYM scheme contribute through auto-debit from a savings bank account. The contribution level is fixed during the entire accumulation phase, matched by the government and set at a higher amount as the individual joins the scheme at an older age. Pension savings may also be automatically associated with consumption. In Mexico, the application Miles for Retirement allows individuals to automatically save a percentage of their consumption when using their credit or debit card and to receive promotions from stores and brands in the form of contributions to their retirement account. This implies that even individuals who cannot afford to contribute on their own can receive contributions (Vižintin and Peksevim, 2021[116]).

Increases in retirement ages

Increasing the statutory age of retirement could push people to postpone retirement and increase the amount of pension contributions. Postponing retirement could have two opposite effects on voluntary savings. First, to the extent that workers work longer, they may continue to save for retirement, thereby accumulating more pension assets and entitlements than otherwise, i.e. the income effect. Second, some workers may anticipate the longer working life and reduce their voluntary contributions to keep the total amount of contributions constant, i.e. the substitution effect. In Denmark, people born after 1953 who experienced a six-month increase in pension eligibility ages in 2011 had higher contributions to occupational and personal pension plans than those not affected by the reform (García-Miralles and Leganza, 2024[117]). This is mostly because people postponed retirement by extending employment and continued to contribute as before. In Japan, a reform delaying men's eligibility for public pension benefits also raised savings, although this was not associated with an increased enrolment in private pension plans (Nakazawa, 2022[118]). By contrast, in Germany, women reduced their savings rate following the increase in the early retirement age in 1999 as they anticipated that their longer working life would raise their overall lifetime income (Etgeton, Fischer and Ye, 2023[119]).

2.3.4. Providing financial incentives to individuals

Financial incentives are monetary rewards offered to encourage a certain behaviour that may not take place otherwise. There are two types of financial incentives encouraging pension contributions. Tax incentives are indirect financial incentives provided by the government through the tax system. They come from a differential tax treatment applied to retirement savings as compared to other forms of savings (OECD, 2025[52]). Non-tax financial incentives are contributions paid directly into the pension account of eligible contributing individuals by the government and/or by employers. They can take the form of

matching contributions or fixed nominal subsidies. Financial incentives provided by the government are more affordable when they create new savings, but they may still be a valuable mechanism to reallocate savings towards the long term and ensure that individuals have enough resources to finance retirement (OECD, 2018[120]).

Tax incentives

The possibility to deduct pension contributions from taxable income encourages individuals to contribute. Most OECD countries provide tax incentives for retirement savings. The most common tax treatment for retirement savings is the one where contributions are deductible from taxable income, investment income is not taxed and pension benefits are taxed (OECD, 2024[53]). Studies in a range of countries show that the tax-deductibility of contributions is effective at increasing contributions to asset-backed pension plans (OECD, 2018[120]). Higher-income earners are those who respond the most to such tax incentives, which benefit more those with higher marginal tax rates. For example, a recent study in France shows that voluntary employee contributions to occupational pension plans increased in firms introducing a tax-deductible option (Brière, Poterba and Szafarz, 2025[121]). This increase was not compensated by lower contributions to other occupational savings plans. Moreover, older workers and those with larger retirement saving balances and higher income were more likely to take advantage of the new tax-deductible option.

Tax incentives may also allow individuals to contribute more some years to compensate for periods with lower contributions. Contributions attracting tax relief are usually subject to annual caps. Some countries, such as Australia, Canada, Italy, Switzerland and the United Kingdom, allow some individuals to carry forward caps that were unused in the previous years (OECD, 2024[53]). The possibility to make "catch-up" or "retroactive" contributions aims to give flexibility to those who take time out of work, work part-time, or have irregular income and therefore have periods in which they make no or low contributions to their pension plan. An alternative way to allow for catch-up contributions is to set higher caps for older workers (e.g. Denmark, Ireland, Korea, the United States), acknowledging that they have a higher capacity to save (OECD, 2024[53]).

However, several factors may prevent individuals from taking full advantage of tax incentives:

- **Inertia**: Most individuals are passive savers who do not react when there is a change in the tax treatment of pension plans. In Denmark, only 19% of individuals affected by a reform that reduced the tax-deductibility of contributions to a particular type of pension plan changed their saving behaviour by reducing or stopping contributions to these pension plans (Chetty et al., 2014[122]).
- **Lack of understanding of different tax treatments**: Misunderstanding of tax rules may lead individuals to fail to contribute differently to pension plans with different tax treatments because they do not realise the impact on after-tax pension benefits (Beshears et al., 2017[123]). This is the case for example when offering choice between plans with upfront taxation and plans with deferred taxation,[14] as individuals fail to understand that they need higher after-tax contributions with deferred taxation than with upfront taxation to achieve the same after-tax benefit in retirement, provided they are subject to constant tax rates over time (Blaufus and Milde, 2021[124]).
- **Lack of value for low-income earners**: Non-refundable tax credits and tax deductions are not very valuable for individuals with low or no income-tax liability (OECD, 2018[120]). In many countries, people earning below a certain threshold do not file income tax and thus cannot benefit from tax incentives. In the United States, less than 6% of taxpayers claim the Saver's Credit, a non-refundable tax credit provided on voluntary contributions to occupational and personal pension plans.[15] However, there are important differences across income levels, with claiming rates increasing from 0.03% among taxpayers with less than USD 10 000 in adjusted gross income to 63% among those with an adjusted gross income between USD 25 000 and USD 50 000 (Congressional Research Service, 2025[125]).

- **Lack of awareness of the incentives offered**: One of the factors explaining the low take-up of the Saver's Credit in the United States is the lack of awareness of the programme, which remained below 50% in 2025 among workers in a surveyed company (Transamerica Institute, 2026[126]).

Non-tax financial incentives

Matching contributions are the most common type of non-tax financial incentives in the OECD and can take different forms (OECD, 2024[53]). An employer or government matching contribution may be expressed as a percentage of the individual's own contribution or as a percentage of the individual's salary. When expressed as a percentage of the individual's own contribution, several tiers may be defined, such as 100% of the employee contribution up to 3% of salary and 50% of the employee contribution on the next 2% of salary. There may be a cap on the employee contribution rate subject to the match or on the nominal amount of the matching contribution.

The presence of a matching contribution can encourage individual contributions since individuals would otherwise leave free money on the table. In the United States, federal civilian workers eligible for an employer matching contribution contribute 3.5 p.p. more on average than those non-eligible (Falk and Karamcheva, 2022[127]). In Australia, eligibility for the government matching contribution, known as the co-contribution programme, increases the proportion of individuals making after-tax voluntary contributions to their superannuation fund (Chan et al., 2020[128]). Moreover, decreasing the income threshold above which individuals are no longer eligible for the government match reduces the percentage of individuals making a voluntary contribution by 0.9 p.p. and the amount contributed by 6.2% (Australian National University, 2021[129]).[16] Among individuals who contributed voluntarily before the reform and lost eligibility for the government match following the decline in the income threshold, the decline was even larger, between 16% and 22% (Sobeck and Breunig, 2026[130]). However, individuals may reallocate their savings between different forms of voluntary schemes depending on eligibility for the government matching contribution (Chan et al., 2020[128]; Australian National University, 2021[129]).

A higher match rate may encourage higher contributions, although the impact may be hard to measure when match formulas vary on different parameters. In Australia, the increase in the proportion of individuals making after-tax voluntary contributions is larger when eligibility for the government matching contribution is associated with higher match rates, by 0.6 p.p., 0.9 p.p. and 2.7 p.p. for a match rate of 50%, 100% and 150%, respectively (Chan et al., 2020[128]).[17] In Peru, offering a 100% match rate to informal workers raises the probability of contributing at least once by 2.3 p.p. in normal economic conditions, while a 50% match rate has no impact on contributions (Bernal, Galiani and Molina, 2025[131]). Evidence in the United States is mixed, with studies finding contradictory results on the link between employer match rates and employee contributions (Madrian, 2012[132]; Choi, 2015[133]). This could be because employer matching contributions use different combinations of match rates (i.e. the percentage applied on the employee contribution) and match thresholds (i.e. the maximum employee contribution matched by the employer). Moreover, employee contribution rates do not vary much according to the match formula on a sample of Vanguard-administered DC plans (Greig et al., 2024[134]).

The match threshold serves as an anchor that may lead some individuals to increase their contributions and others to reduce them. In the United States, the proportion of employees contributing at higher rates increased in a company that augmented the match threshold from 5% to 7% of salary for union workers, and from 6% to 8% of salary for management employees, without changing the match rate (50%), suggesting that the match threshold serves as an anchor for some employees to select their contribution rate (Choi et al., 2002[135]). However, this anchoring effect may also reduce the contribution rate of some employees who might otherwise contribute more (Huberman, Iyengar and Jiang, 2007[136]). Vanguard data show that the proportion of employees contributing more than the match threshold increases with income (Greig et al., 2024[134]).[18] In Australia, the co-contribution programme increases the proportion of individuals contributing at or below AUD 1 000, which is the maximum individual contribution matched by

the government, but decreases the proportion of individuals contributing at higher levels (Chan et al., 2020[128]). Indeed, many individuals contribute to maximise the government payment, while those who would have made voluntary contributions without the programme no longer need to contribute as much to reach the same overall contribution level.

Depending on the formula, matching contributions may advantage higher-income earners. When matching contributions are expressed as a percentage of the individual's income, all workers receive the same amount in proportion of their income provided they contribute at a minimum rate. However, matching contributions may advantage higher-income earners when they are expressed as a percentage of the employee's contribution, in particular single-tier match formulas, since higher-income earners are more likely to have the financial capacity to contribute up to the match threshold.[19] A multi-tier match formula can partially address this regressive feature since a higher match rate is applied on the first tranche of employee contributions.[20] Matching contributions can also be associated with a nominal cap to limit the absolute contribution made towards higher-income earners (OECD, 2024[53]). In the United States, match formulas with a nominal cap on the employer match are progressive while all the others are regressive (Greig et al., 2024[134]).

Irrespective of the formula used, higher-income earners may be more likely to respond to a matching contribution incentive than lower-income earners. In Australia, higher-income earners are more likely to increase their voluntary contributions when eligible for the government matching contribution (Chan et al., 2020[128]). This could be because lower-income earners have budgetary constraints, making it harder for them to save more for retirement. Similarly, in New Zealand, KiwiSaver members not receiving the government matching contribution or only receiving a partial payment tend to have lower incomes than those receiving the full contribution (Te Ara Ahunga Ora Retirement Commission, 2025[137]). Indeed, the proportion of contributing members falls from around 90% for members with an annual income above NZD 50 000 to 50% or less for those with an annual income below NZD 30 000.

Matching contributions can target lower-income earners specifically. In Australia, the government matching contribution is for individuals with a total income below AUD 58 445 making voluntary non-deducted contributions, and the maximum entitlement is reduced by 3.333 cents for every dollar that the individual earns above AUD 43 445. In Chile, workers aged between 18 and 35 with an income lower than 1.5 times the minimum wage are entitled to a government matching contribution for their first 24 monthly continuous or discontinuous contributions to the pension system. In Colombia, the BEPS programme focusses on low-income earners and matches 20% of their voluntary contributions by the time of retirement.

Fixed nominal subsidies provide a greater incentive for lower-income earners without the need to be targeted. Governments in several OECD countries provide fixed nominal subsidies to encourage individuals to make voluntary contributions (e.g. Germany, Lithuania, Poland) (OECD, 2024[53]). The fixed amount has a higher economic value for lower-income earners as it represents a higher share of their income. Fixed nominal subsidies may target women specifically to compensate for periods out of work to give birth and raise children (e.g. Chile, Estonia, Lithuania) (OECD, 2024[53]). However, lower-income earners may reallocate their savings when subsidies are available from a low contribution amount, such as in Germany (Corneo, Keese and Schröder, 2008[138]; Kolerus, Koske and Hüfner, 2012[139]; Pfarr and Schneider, 2012[140]).

2.3.5. Informing individuals

Providing information on pension plan design, expected benefits, how much income individuals may need in retirement and how to make voluntary contributions, may improve individuals' understanding of the process to contribute and how pension contributions translate into retirement income. It could make them realise they need to contribute more and prompt them to increase their contributions or to ask trade unions to negotiate pension contributions as part of remuneration packages. Pension providers, plan sponsors,

advisers and pension authorities may deliver information through brochures, pension benefit statements, pension dashboards, financial advice or financial education seminars.

Communication about pension contributions should be positive, plausible, plain spoken and personal to engage plan members. Messages framed in a positive way are more likely to engage individuals than those with a negative or loss frame (Nest Insight, 2020[141]). Credible expectations are also important as telling individuals they could reach a "comfortable" retirement is more likely to motivate them to revisit their contribution rate than telling them they could reach a "dream" retirement. Technical jargon should also be avoided with terms like "investment" and "pension pot" better understood than "asset classes" and "capital", respectively. Moreover, communicating on future retirement income instead of future pension account size is more likely to prompt individuals to increase their contributions. Finally, messages should be personal, taking the perspective of the individual ("you" or "your") rather than the one of employees or members.

Pension dashboards, as well as simplified brochures and pension benefit statements, can facilitate information processing but do not necessarily increase contributions.[21] In the Netherlands, visiting a pension dashboard increases pension knowledge among pension plan participants but does not impact the willingness to save more even if there is a need to do so (Kramer, Lensink and Plantinga, 2024[142]). In the United States, receiving a shorter description of an occupational pension plan makes information more accessible and easier to process but does not affect the anticipated contribution rate (Cardella, Kalenkoski and Parent, 2021[143]). In Mexico, simplifying pension benefit statements by improving the readability and visual appeal of the information may have enhanced the efficiency of information processing for certain individuals (Shah et al., 2024[144]). In turn, this may have helped them to assess the relative performance of their pension provider, thereby encouraging or discouraging voluntary contributions (Shah et al., 2024[144]).

Including explanatory diagrams on pension benefit statements can favour higher contributions. In Ireland, individuals who saw, on a pension benefit statement, diagrams showing how projected fund sizes and income in retirement could be increased by contributing more now, were more likely to recommend raising the contribution rate compared to those who saw the same information presented in a table (McGowan and Lunn, 2019[145]). Diagrams improved individuals' rationale for their decision. However, they did not improve recall and comprehension of information.

Providing personalised projections of account balances and retirement income can increase voluntary contributions. In Australia, individuals who received projected retirement income information increased their voluntary pension contributions during the two following years, compared to individuals who only received information about their current account balance (Smyrnis et al., 2019[146]). Moreover, showing projections of account balances in addition to retirement income projections had a larger impact on voluntary contributions. In Chile, individuals who received personalised projections of their future pension benefits, as well as projections of the difference in benefits resulting from three possible actions to increase benefits (increasing mandatory contributions, increasing voluntary contributions or delaying retirement), increased their voluntary savings by 10% on average in the first eight months after treatment, compared to those who only received general information (Fuentes et al., 2024[147]). The effect was concentrated among individuals who had previously overestimated their expected pension. In Germany, individuals who received a letter showing expected public pension payments increased their contributions to personal pension plans (Riester pensions) during the following three years without crowding out other forms of savings (Dolls et al., 2018[148]).

Providing context that enhances individuals' understanding of the implications of different contribution rates can lead to higher contributions. Relative to simply listing different contribution rates and their associated expected retirement income projections, additionally associating the expected retirement income projections with retirement income standards (e.g. minimum, moderate, comfortable) and consumption baskets (i.e. a description of consumption possibilities for housing, transport, holidays and leisure) can lead to higher contribution rates (Barrett et al., n.d.[149]). Indeed, consumption baskets make future

consumption possibilities more tangible, which in turn increases selected contribution rates as individuals are eager to achieve the related retirement consumption outcomes.

Financial advice may be more impactful for lower-income earners. Chapter 4 shows that financial advice can significantly contribute to improving financial outcomes in retirement by helping individuals to better plan for retirement, select more appropriate levels of investment risk and mitigate emotional reactions. However, individuals seeking financial advice tend to have higher income, be older, more educated, and more financially literate (Burke and Hung, 2015[150]). As these individuals are more likely to save for retirement in general, the positive impact of financial advice on retirement savings is more likely to be greater for lower-income earners. In addition, the impact varies across countries. In New Zealand, financial advice does not significantly influence contribution rates to KiwiSaver plans (Fang, Hao and Reyers, 2022[151]). By contrast, in Switzerland, individuals who discuss retirement-related matters with an adviser make higher contributions to voluntary personal pension plans in the days following the discussion (Hoechle et al., 2023[152]). In the United States, the impact of a financial adviser on the confidence of having enough money to live comfortably in retirement is larger among individuals with lower savings (Blanchett, 2025[153]).

Financial education seminars can have a positive impact on voluntary contributions. In Australia, working-age individuals who attended a financial education seminar organised by their pension fund were more likely to make voluntary contributions compared to the control group and made higher voluntary contributions of about AUD 15 000 on average over the span of two years, representing 6% of attendees' pre-seminar account balances (Ghafoori, Ip and Kabátek, 2021[154]). The seminars provided general advice related to retirement and basic financial skills and knowledge, and informed attendees about how much money one needs for retirement and how to make voluntary contributions, as well as their associated tax benefits.

2.3.6. Addressing the needs of individuals

Individuals may value certain design features that respond to their needs and could encourage them to contribute more to asset-backed pension plans. Adjusting the characteristics of pension funds to the preferences of plan members, providing an emergency savings option and allowing spousal contributions could help to increase voluntary contributions.

Certain characteristics of pension funds may influence the extent to which plan members may be willing to contribute. Individuals in six European countries would prefer to increase their contribution by 2 p.p. of their monthly salary in occupational pension plans with higher past performance, with boards considering the preferences and demands of plan members in their decision-making process, and with member representatives on the board (Fernández et al., 2024[155]). Higher employer contributions would also encourage higher contributions from individuals.

Providing an emergency savings option alongside a pension plan can improve individuals' well-being without reducing retirement savings. Financial resilience is a strong predictor of saving for retirement (Suh, 2020[156]). Indeed, having emergency savings can reduce financial stress and provide confidence in saving for the long term. In the United States, employees participating in the emergency savings option within their 401(k) plan were twice as likely to increase their contributions to the retirement account of the 401(k) plan than other employees (Commonwealth, 2022[157]). The emergency savings option allows plan members to take early withdrawals to face contingencies without jeopardising future retirement income adequacy.

Permitting spousal contributions could allow couples to jointly plan for retirement and compensate for lower salaries or time taken out of work by one of the members of the couple to perform caretaking responsibilities. Several countries allow for contributions to the partner's pension account or to a dedicated spousal retirement account (e.g. Australia, Canada, Spain, the United Kingdom, the United States). The

same contribution limits typically apply for tax purposes, and spouse contributions count towards either the contributor's or the recipient's limit. Spousal contributions are particularly useful for women to accrue more pension rights and assets on their own to make up for unpaid activities performed for the household (OECD, 2021[16]).

2.4. Conclusion and policy guidance

The analysis shows that in 40 out of 41 countries, at least one category of workers would need to complement their mandatory pensions with voluntary pension contributions to reach their retirement income objective. The contribution gap shows how far workers are from reaching their retirement income objective. It is defined as the contribution rate that an individual would need to pay into a defined contribution (DC) pension plan to offset the difference between a retirement income objective and the expected retirement income from the mandatory pension system. The expected retirement income used is the theoretical gross replacement rates from the *OECD Pensions at a Glance Database*, and the retirement income objective used is a target replacement rate of 80% for low earners (half of average earnings), 70% for average earners and 60% for high earners (twice average earnings).

Contribution gaps are larger for average and high earners, women and the self-employed (Table 2.1). For a given distance between the expected and objective retirement incomes, the contribution gap is larger for workers with lower retirement ages, higher life expectancies, shorter contribution periods and lower investment performance.

Table 2.1. Average contribution gap by category of workers

	Retirement income objective	Number of countries with a contribution gap	Average contribution gap
Low earner, employee, male	80%	33	8.6%
Low earner, employee, female	80%	33	9.5%
Average earner, employee, male	70%	32	9.7%
Average earner, employee, female	70%	32	10.8%
Average earner, self-employed, male	70%	38	13.1%
High earner, employee, male	60%	33	9.7%
High earner, employee, female	60%	34	10.4%

Young workers, low earners, women and self-employed workers tend to participate and contribute less to asset-backed pension plans, making it more difficult for them to reach their retirement income objective. Behavioural biases, low levels of financial literacy, affordability concerns, career interruptions and selected design features are barriers that may prevent individuals from contributing voluntarily to achieve their retirement income objective. Additionally, contribution levels frequently align with low default and minimum contribution rates. Allowing individuals to use home equity release products reduces the need for additional pension contributions. However, these products are complicated, not easily available, and are not popular.

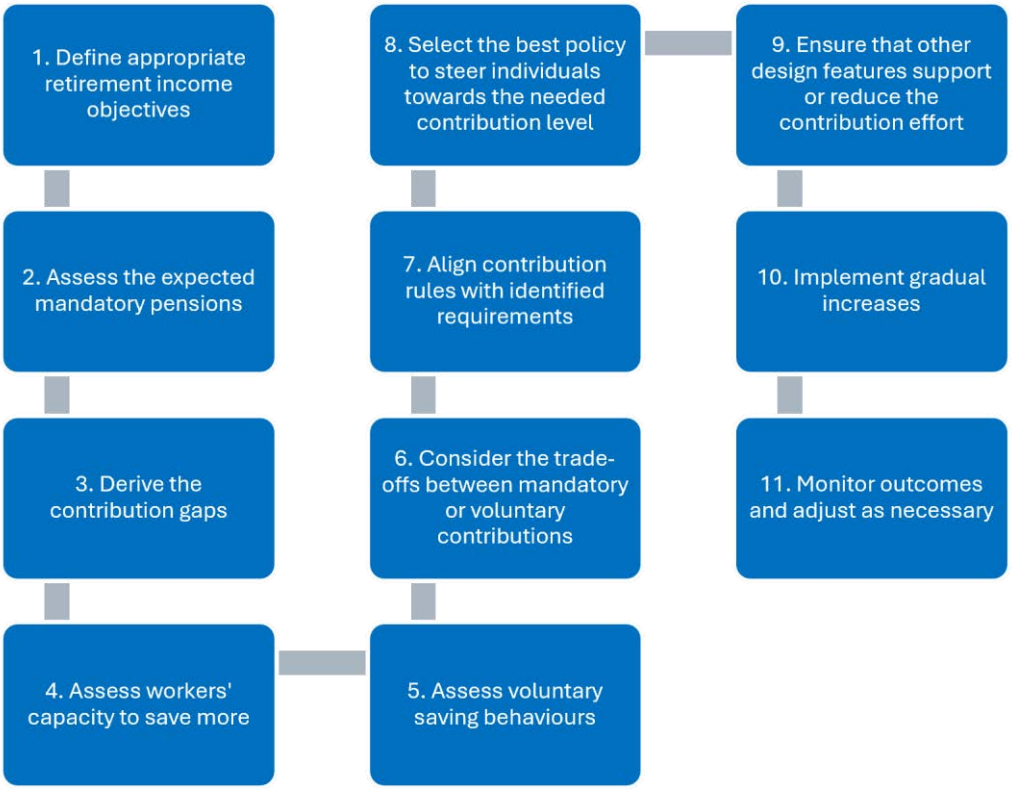
Various policies could address these barriers and steer individuals towards contribution levels that would allow them to achieve their retirement income objective. They are:

- increasing mandatory contributions
- encouraging voluntary employer contributions
- nudging individuals through default options, automatic mechanisms, reminders or simplified processes
- providing tax or non-tax financial incentives
- informing individuals
- addressing the needs of individuals.

2.4.1. Policy guidance

Policymakers could consider 11 steps to assess the need for additional pension contributions and ensure that individuals contribute enough to reach their retirement income objective (Figure 2.11).

Figure 2.11. Steps to ensure that individuals contribute enough to reach their retirement income objective



Define appropriate retirement income objectives

Policymakers could define appropriate retirement income objectives for the population considering the spending needs of retirees. Retirement income objectives should account for the extent to which retirees have to self-finance certain costs, such as healthcare and long-term care. Retirement income objectives should also account for the population's heterogeneity. This implies identifying the relevant groups of individuals who are likely to have different needs in retirement, for example distinguishing by income level, household composition (e.g. singles or couples, with or without children), homeownership and place of residence (e.g. in cities or in the countryside). The retirement income objective may be expressed as a target replacement rate or as a target amount in nominal terms depending on whether the policy objective is to smooth consumption or to reach a certain consumption standard (OECD, 2020[158]).

Assess the expected mandatory pensions

Policymakers could project the retirement income that the mandatory pension system is likely to deliver to future cohorts of retirees under realistic assumptions. Retirement income projections should consider the actual career patterns, earnings profiles and contribution densities of current workers, the effects of past pension reforms on different cohorts, and any behavioural changes and labour market transformations that may affect career paths and earnings. Assumptions should align closely to actual observations to provide

a realistic view of future retirement incomes. It is important to model different categories of workers to account for different career patterns and earnings profiles, as well as the redistributive and means-tested features of the mandatory pension system.

Policymakers could then compare the expected retirement income to the retirement income objective across different groups of individuals to identify which ones would need additional pension contributions to reach their retirement income objective.

Policymakers could reflect on the financial sustainability of the mandatory pension system and on the level of diversification of the sources to finance retirement to evaluate the risks that the mandatory pension system may not eventually deliver as much as expected.

Derive the contribution gaps

Policymakers could estimate the level of additional pension savings that different categories of workers would need to contribute to reach their retirement income objective, when expected mandatory pensions fall short.

The calculation of this contribution gap could be tailored to the type of pension plan into which the additional contributions would be paid, i.e. mandatory or voluntary, with or without guarantees. Indeed, the mandatory or voluntary nature of the plan would affect the potential length of time during which the additional pension contributions would be paid as workers may not start saving from the beginning of their career in the case of a voluntary plan. The annual contribution effort to reach a given retirement income objective is indeed larger for shorter contribution periods. Moreover, contributions to a voluntary pension plan may be less constant during an individual's career than those to a mandatory pension plan, as individuals may save less voluntarily when young as they have more demands on their income. The calculation of the contribution gap could consider the likely contribution pattern to derive what would be the maximum contribution effort during the career. Finally, it is also important to consider whether the plan receiving the additional contributions would provide guarantees or not (e.g. defined benefit versus defined contribution). In the absence of guarantees, the expected rate of return has a greater influence on the contribution gap, with a lower investment performance increasing the contribution effort.

The assumptions used to calculate the contribution gap could also consider variables such as inflation, productivity growth, expected return, interest rate, life expectancy, age of retirement and the level of fees and charges for managing pension assets.

Assess workers' capacity to save more

Policymakers could assess the capacity of different categories of workers to contribute the amount needed to reach their retirement income objective. They could identify vulnerable groups that may be worse-off if forced or pushed to save more for retirement. For example, it may be suboptimal to push individuals to pay additional pension contributions at the beginning of their career since they may face higher liquidity constraints linked to repaying a student loan, starting a family or buying their first home (Schlafmann, Setty and Vestman, 2024[36]; Fischer, Jensen and Koch, 2023[37]). Individuals with high-interest-rate loans may be better-off paying off their debt first, while workers on precarious jobs and low earnings may prioritise building precautionary savings. Moreover, migrant workers may have unaffordable contribution gaps as they may have lower entitlements from the mandatory pension system and shorter time to accumulate additional pension income. Policymakers could reflect on these situations and figure out whether increasing pension contributions is the best approach.

When assessing workers' capacity to save more for retirement, policymakers could also consider the role of employers. In most OECD countries, employers pay a significant share of total contributions to asset-backed pension plans (OECD, 2022[49]). Employers may be willing to contribute beyond the legal

requirements on behalf of their employees to attract and retain skilled workers. However, not all employers may be able or willing to do so, in particular smaller employers who may lack sufficient resources.

Assess voluntary saving behaviours

Policymakers could assess voluntary saving behaviours before implementing measures to increase pension contributions when mandatory pensions fall short. They could check the extent to which workers are already saving enough voluntarily to complement their mandatory pension and reach their retirement income objective. Policymakers could gather evidence on the voluntary savings of the population across different categories of workers and savings vehicles, including asset-backed pensions, long-term savings vehicles and real estate. When considering savings that are not earmarked for retirement, studies could be conducted to assess the extent to which they may be used to finance retirement.

Consider the trade-offs between increasing mandatory or voluntary contributions

Policymakers need to decide whether to increase mandatory or voluntary contributions when workers with contribution gaps are not saving enough voluntarily and have the capacity to contribute more. There are important trade-offs to consider. Increasing mandatory pension contributions may be the most efficient way to raise pension benefits and reach retirement income objectives. However, mandatory pension contributions may reduce employment, wages and household consumption, while it may increase labour informality and household debt.

Identifying which categories of workers have larger contribution gaps could shed some light on which type of contribution to increase.

- When contribution gaps are widespread across all categories of workers, including low-income earners, increasing mandatory pension contributions may be the best approach to lift everyone up. Effects on the labour market could be monitored and compliance measures reinforced to avoid an increase in informality.
- When contribution gaps are concentrated among high-income earners, increasing voluntary contributions may be the best approach as these workers are the most likely to save voluntarily, and leaving mandatory contributions untouched would avoid forcing low-income earners to oversave.
- When contribution gaps are concentrated among the self-employed and they contribute less than employees towards the mandatory pension system, increasing their mandatory pension contributions may be the best approach. It would level the playing field between employees and the self-employed.

Align contribution rules with identified requirements

Policymakers could ensure that the rules related to contributions to asset-backed pension plans are in line with the additional pension contributions required to reach retirement income objectives. This implies reviewing contribution limits, as well as default and minimum contribution rates. For example, default contribution rates may be raised if they are well below what most workers would need to save additionally. Still, when contributions attracting tax relief are capped, the cap may be set below the largest contribution gap identified across all categories of workers to limit fiscal costs. In particular, high-income earners may not need to receive full tax relief on their contributions to save at the required level as they are likely to save anyway.

Select the best policy to steer individuals towards the contribution level they need to achieve their retirement income objective

The best policy to steer individuals towards the contribution level they need to achieve their retirement income objective would depend on the proportion and categories of workers having a contribution gap, the level of the contribution gap and the level of financial literacy.

There are trade-offs involved when selecting the best policy. On the one hand, relatively high default contribution rates, automatic increases in contributions and increases in statutory retirement ages are likely to affect the saving behaviour of many individuals as these policy options rely on inertia. However, inertia leads to low levels of engagement and individuals may passively accept contribution levels that are not optimal given their circumstances. On the other hand, policy options that rely on individuals or employers to actively respond to new information or financial incentives may not bring the expected result for many individuals as the expected behavioural response may not always happen. Nevertheless, better informed and engaged individuals may be more likely to select the contribution level that best matches their circumstances.

In any case, policymakers should avoid reducing mandatory pension contributions to PAYG schemes to make room for higher contributions to asset-backed pension plans. While this may diversify the sources of retirement income, it may not help individuals achieve their retirement income objective if PAYG pensions are reduced proportionately. It also creates a transition cost for the PAYG scheme. Instead, contributions to complementary asset-backed pension plans should come from new savings or reallocated savings, thereby increasing total pension benefits.

Ensure that other design features support or reduce the contribution effort

The other design features of asset-backed pension plans should not undermine the effect of increasing pension contributions on retirement income outcomes. Policymakers could minimise or eliminate vesting periods to reduce the number of workers forfeiting part of their employer contributions when changing jobs. They could also ensure that pension contributions are invested so as to reach the highest risk-adjusted returns possible as better performance reduces the contribution effort to reach a given retirement income objective. This involves some level of equity allocation to achieve better long-term performance and higher retirement income (OECD, 2024[159]). Additionally, policymakers could ensure that pension providers offer good services and value for the fees they charge to avoid unnecessary reductions to asset accumulations.

Implement gradual increases

Policymakers could implement gradual increases in contribution rates in the context of compulsory or automatic enrolment to allow workers and employers to adjust. Increases in mandatory or default contribution rates can be phased in over several years, such as in Australia (2.5 p.p. in four years), Chile (6 p.p. in nine years), Ireland (9 p.p. in 10 years), Mexico (8.5 p.p. in 10 years) and the United Kingdom (6 p.p. in seven years). Indicators could also be calculated to monitor the economic climate during the planned increase and trigger a temporary pause in the increase in case of economic turbulences affecting the capacity of workers and employers to contribute (WPI Economics, 2023[160]).

Monitor outcomes and adjust as necessary

Policymakers could monitor the effects of any new policy to steer individuals towards contribution levels that better match their retirement income objectives. They could calculate relevant indicators broken down for different groups of individuals to follow progress on contributions. If the impact on contributions is insufficient given broader adequacy objectives (OECD, 2020[158]), policymakers could adjust the policy

based on the challenges faced or implement a new policy that would be more likely to succeed given past experience.

References

Allianz Center for the Future of Retirement (2026), *Americans Cutting Back on Retirement Savings, Allianz Life Study Finds*, https://www.allianzlife.com/about/newsroom/2026-Press-Releases/Americans-Cutting-Back-on-Retirement-Savings. [45]

Andersen, H., N. Hansen and A. Kuchler (2022), "Mandatory pension savings and long-run debt accumulation: evidence from Danish low-wage earners", *Journal of Pension Economics and Finance*, Vol. 22/3, pp. 371-399, https://doi.org/10.1017/s1474747221000482. [78]

Australian National University (2021), *The impact of government funded retirement contributions (matching) on the retirement savings behaviour of low and middle income individuals*, https://coilink.org/20.500.12592/zfv68n. [129]

Australian Taxation Office (2025), *Taxation statistics 2021–22 - Individuals - Table 23*, https://data.gov.au/data/dataset/4be150cc-8f84-46b8-8c61-55ff1d48a700/resource/545be24d-b8a2-4abd-9193-097e8114dcbc/download/ts22individual23contributionsbyagesextaxableincome.xlsx. [31]

Azuara Herrera, O. et al. (2021), *Saving without Barriers: Lessons from the Retirement Savings Laboratory's Pilot Projects*, Inter-American Development Bank, https://doi.org/10.18235/0003177. [112]

Barrett, A. et al. (n.d.), "Can Evaluative Structures Assist Retirement Saving Decisions?", https://doi.org/10.26481/dis.20240416ab. [149]

Benartzi, S. and R. Thaler (2007), "Heuristics and Biases in Retirement Savings Behavior", *Journal of Economic Perspectives*, Vol. 21/3, pp. 81-104, https://doi.org/10.1257/jep.21.3.81. [41]

Benzarti, Y. and J. Harju (2021), "Using Payroll Tax Variation to Unpack the Black Box of Firm-Level Production", *Journal of the European Economic Association*, Vol. 19/5, pp. 2737-2764, https://doi.org/10.1093/jeea/jvab010. [66]

Bernal, N., S. Galiani and O. Molina (2025), *Does Matching Contribution Incentivize Informal Workers to Participate in Retirement Saving Plans? A Randomized Evaluation Interacted with a Natural Experiment*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w33925. [131]

Beshears, J. et al. (2017), "How Do Consumers Respond When Default Options Push the Envelope?", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3050562. [95]

Beshears, J. et al. (2025), "Does Pension Automatic Enrollment Increase Debt? Evidence from a Large-Scale Natural Experiment", *Working Paper*, https://www.hbs.edu/faculty/Pages/item.aspx?num=65671. [79]

Beshears, J. et al. (2021), "Borrowing to Save? The Impact of Automatic Enrollment on Debt", *The Journal of Finance*, Vol. 77/1, pp. 403-447, https://doi.org/10.1111/jofi.13069. [82]

Beshears, J. et al. (2017), "Does front-loading taxation increase savings? Evidence from Roth 401(k) introductions", *Journal of Public Economics*, Vol. 151, pp. 84-95, https://doi.org/10.1016/j.jpubeco.2015.09.007. [123]

Beshears, J. et al. (2015), "The Effect of Providing Peer Information on Retirement Savings Decisions", *The Journal of Finance*, Vol. 70/3, pp. 1161-1201, https://doi.org/10.1111/jofi.12258. [110]

Beshears, J. et al. (2013), "Simplification and saving", *Journal of Economic Behavior & Organization*, Vol. 95, pp. 130-145, https://doi.org/10.1016/j.jebo.2012.03.007. [103]

Beshears, J. et al. (2021), "Using fresh starts to nudge increased retirement savings", *Organizational Behavior and Human Decision Processes*, Vol. 167, pp. 72-87, https://doi.org/10.1016/j.obhdp.2021.06.005. [107]

Beshears, J. et al. (2023), "Automatic enrollment with a 12 percent default contribution rate", *Journal of Pension Economics and Finance*, Vol. 24/1, pp. 152-182, https://doi.org/10.1017/s1474747223000148. [89]

Beshears, J. et al. (2016), "Framing the Future: The Risks of Pre-Commitment Nudges and Potential of Fresh Start Messaging", *Working Paper*, https://static1.squarespace.com/static/5353b838e4b0e68461b517cf/t/583ca5acd2b8571174b28e40/1480369581625/48-Beshears_et_al_2016.pdf. [105]

Biesenbeek, C., B. Heerma van Voss and M. Mastrogiacomo (2020), "Workers without pension accrual", *DNB Occasional Studies*, Vol. 20 - 3, https://www.dnb.nl/publicaties/publicaties-onderzoek/occasional-study/nr-3-2022-werkenden-zonder-pensioenopbouw/. [63]

Binswanger, J. and D. Schunk (2011), "What is an adequate standard of living during Retirement?", *Journal of Pension Economics and Finance*, Vol. 11/2, pp. 203-222, https://doi.org/10.1017/s1474747211000618. [11]

Blanchett, D. (2025), *Financial Advice and Retirement Confidence: What's Wealth Got to Do With It?*, https://www.kiplinger.com/retirement/retirement-planning/financial-advice-and-retirement-confidence-by-wealth-level. [153]

Blaufus, K. and M. Milde (2021), "Tax Misperceptions and the Effect of Informational Tax Nudges on Retirement Savings", *Management Science*, Vol. 67/8, pp. 5011-5031, https://doi.org/10.1287/mnsc.2020.3761. [124]

Bosch, M. and A. Rubli (2021), "Increasing Retirement Savings through Access Points and Persuasive Messages", *Journal of Human Resources*, Vol. 58/5, pp. 1752-1781, https://doi.org/10.3368/jhr.58.5.0220-10750r2. [114]

Bosch, N. et al. (2022), "The Incidence of Pension Contributions: A Panel Based Analysis of the Impact of Pension Contributions on Labor Cost, Wages and Labor Supply", *De Economist*, Vol. 170/1, pp. 107-132, https://doi.org/10.1007/s10645-022-09401-z. [68]

Bozio, A. et al. (2025), "Does Tax-Benefit Linkage Matter for the Incidence of Payroll Taxes?", *Review of Economic Studies*, https://doi.org/10.1093/restud/rdaf059. [72]

Breunig, R. and K. Sobeck (2020), *The economic incidence of superannuation*, https://treasury.gov.au/sites/default/files/2020-07/01-r2019-100554.pdf. [70]

Brière, M., J. Poterba and A. Szafarz (2025), "Does Tax Deductibility Increase Retirement Saving? Lessons from a French Natural Experiment", *Amundi Investment Institute Working Paper* 166, https://research-center.amundi.com/article/does-tax-deductibility-increase-retirement-saving-lessons-french-natural-experiment. [121]

Broome, M. and I. Mulheirn (2024), *Perfectly adequate?: Revisiting pensions adequacy 20 years after the Pensions Commission*, Resolution Foundation, https://doi.org/10.63492/vmzf40. [14]

Burgherr, D. (2025), "Saving Responses to Mandatory Pension Plans", *Equality of Opportunity Research Series* 78, https://www.urpp-equality.uzh.ch/dam/jcr:665c0dd7-bd77-454f-9155-5666feaa7d5f/78_Burgherr_SavingResponsesToMandatoryPensionPlans.pdf. [86]

Burke, J. and A. Hung (2015), *Do Financial Advisers Influence Savings Behavior?*, RAND Corporation, http://www.jstor.org/stable/10.7249/j.ctt19w72kb. [150]

Burke, J., A. Hung and J. Luoto (2017), "Opting out of Retirement Plan Default Settings", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2910771. [91]

Cardella, E., C. Kalenkoski and M. Parent (2021), "Less is not more: 401(k) plan information and retirement planning choices", *Journal of Pension Economics and Finance*, Vol. 22/3, pp. 331-351, https://doi.org/10.1017/s1474747221000445. [143]

Carranza, G. and A. Goodman (2024), *Retention or regressivity? The empirical effects of 401(k) vesting schedules*, Elsevier BV, https://doi.org/10.2139/ssrn.4876231. [51]

Carroll, G. et al. (2009), "Optimal Defaults and Active Decisions", *Quarterly Journal of Economics*, Vol. 124/4, pp. 1639-1674, https://doi.org/10.1162/qjec.2009.124.4.1639. [93]

Central Statistics Office (2024), *Pension Coverage 2024*, https://www.cso.ie/en/releasesandpublications/ep/p-pens/pensioncoverage2024/personalpensions/ (accessed on 20 February 2025). [19]

Chan, M. et al. (2020), "How effective are Matching Schemes in enticing low-income earners to save more for retirement? Evidence from a national scheme", *IZA Discussion Papers* 13939, https://hdl.handle.net/10419/232691. [128]

Chetty, R. et al. (2014), "Active vs. Passive Decisions and Crowd-Out in Retirement Savings Accounts: Evidence from Denmark *", *The Quarterly Journal of Economics*, Vol. 129/3, pp. 1141-1219, https://doi.org/10.1093/qje/qju013. [122]

Choi, J. (2015), "Contributions to Defined Contribution Pension Plans", *Annual Review of Financial Economics*, Vol. 7/1, pp. 161-178, https://doi.org/10.1146/annurev-financial-111914-041834. [133]

Choi, J. et al. (2017), "Small cues change savings choices", *Journal of Economic Behavior & Organization*, Vol. 142, pp. 378-395, https://doi.org/10.1016/j.jebo.2017.08.010. [104]

Choi, J. et al. (2024), *Smaller than We Thought? The Effect of Automatic Savings Policies*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w32828. [101]

Choi, J. et al. (2004), "For better or for worse: Default effects and 401 (k) savings behavior", in Wise, D. (ed.), *Perspectives on the Economics of Aging*, University of Chicago Press, http://www.nber.org/chapters/c10341. [56]

Choi, J. et al. (2003), "Optimal Defaults", *American Economic Review*, Vol. 93/2, pp. 180-185, https://doi.org/10.1257/000282803321947010. [88]

Choi, J. et al. (2002), "Defined Contribution Pensions: Plan Rules, Participant Choices, and the Path of Least Resistance", *Tax Policy and the Economy*, Vol. 16, pp. 67-113, https://doi.org/10.1086/654750. [135]

Choukhmane, T. (2025), "Default Options and Retirement Saving Dynamics", *American Economic Review*, Vol. 115/11, pp. 3749-3787, https://doi.org/10.1257/aer.20210881. [94]

Choukhmane, T. and C. Palmer (2025), "The Effect of Increasing Retirement Saving on Consumption, Balance Sheets, and Welfare", *Working Paper*, https://mitsloan.mit.edu/centers-initiatives/cfi/how-do-consumers-finance-increased-retirement-savings. [80]

Clark, R. et al. (2018), "Informing Retirement Savings Decisions: A Field Experiment on Supplemental Plans", *Economic Inquiry*, Vol. 57/1, pp. 188-205, https://doi.org/10.1111/ecin.12731. [102]

Coates, B., M. Cowgill and W. Mackey (2020), *No free lunch: Higher super means lower wages*, https://grattan.edu.au/wp-content/uploads/2020/02/No-free-lunch-Higher-superannuation-means-lower-wages.pdf. [71]

Commonwealth (2022), *A Case Study in Workplace Emergency Savings: How UPS and Voya Designed a Solution Resulting in $10 Million in Savings*, https://buildcommonwealth.org/research/a-case-study-in-workplaceemergency-savings/. [157]

Congressional Research Service (2025), "The Retirement Savings Contribution Credit and the Saver's Match", *In Focus* IF11159, https://www.congress.gov/crs-product/IF11159. [125]

Corneo, G., M. Keese and C. Schröder (2008), "Can governments boost voluntary retirement savings via tax incentives and subsidies? A German case study for low-income households", *Economics Working Papers* 2008-18, https://www.econstor.eu/bitstream/10419/27673/1/EWP-2008-18.pdf. [138]

Department for Work and Pensions (2025), *Analysis of Automatic Enrolment saving levels*, https://www.gov.uk/government/statistics/analysis-of-automatic-enrolment-saving-levels/analysis-of-automatic-enrolment-saving-levels. [35]

Department for Work and Pensions (2025), *Analysis of future pension incomes*, https://www.gov.uk/government/statistics/analysis-of-future-pension-incomes-2025/analysis-of-future-pension-incomes-2025. [4]

Department for Work and Pensions (2024), "Low Earners and workplace pension saving – a qualitative study", *DWP research report* 1046, https://www.gov.uk/government/publications/low-earners-and-workplace-pension-saving-a-qualitative-study/research-report-low-earners-and-workplace-pension-saving-a-qualitative-study. [44]

Deschacht, N., I. Guillemyn and S. Vujić (2025), "Trading Pay for Pensions: Evidence from a Discrete Choice Experiment in the United Kingdom", *IZA Discussion Paper Series* 18164, https://docs.iza.org/dp18164.pdf. [42]

Deutsche Bank Research (2026), *Private pension reform in Germany – a bold move towards capital markets*, https://www.dbresearch.com/PROD/IE-PROD/PDFVIEWER.calias?pdfViewerPdfUrl=PROD0000000000620489&rwnode=REPORT. [58]

DGSFP (2025), *Seguros y Fondos de Pensiones: Informe 2024*, https://dgsfp.mineco.gob.es/es/Publicaciones/DocumentosPublicaciones/Memoria%20informe%20del%20sector%202024.pdf. [27]

Dolls, M. et al. (2018), "Do retirement savings increase in response to information about retirement and expected pensions?", *Journal of Public Economics*, Vol. 158, pp. 168-179, https://doi.org/10.1016/j.jpubeco.2017.12.014. [148]

Døskeland, T. et al. (2025), "The role of social norms in retirement saving: Evidence from two natural field experiments", *Journal of Business Research*, Vol. 190, p. 115201, https://doi.org/10.1016/j.jbusres.2025.115201. [108]

Etgeton, S., B. Fischer and H. Ye (2023), "The effect of increasing retirement age on households' savings and consumption expenditure", *Journal of Public Economics*, Vol. 221, p. 104845, https://doi.org/10.1016/j.jpubeco.2023.104845. [119]

European Commission (2024), *The 2024 pension adequacy report – Current and future income adequacy in old age in the EU. Volume I*, Publications Office of the European Union, https://data.europa.eu/doi/10.2767/909323. [1]

F&P (2025), *Pensionsindbetalinger*, https://fogp.dk/media/y3tjoqdj/pensionsindbetalinger.xls. [33]

Falk, J. and N. Karamcheva (2022), "The impact of an employer match and automatic enrollment on the savings behavior of public-sector workers", *Journal of Pension Economics and Finance*, Vol. 22/1, pp. 38-68, https://doi.org/10.1017/s1474747221000366. [127]

Fang, J., W. Hao and M. Reyers (2022), "Financial advice, financial literacy and social interaction: what matters to retirement saving decisions?", *Applied Economics*, Vol. 54/50, pp. 5827-5850, https://doi.org/10.1080/00036846.2022.2053654. [151]

Federal Ministry of Labour and Social Affairs (2025), *Statistik zur privaten Altersvorsorge (Riester-Rente)*, https://www.bmas.de/DE/Service/Statistiken-Open-Data/Statistik-zu-Riester-Vertraegen/statistik-zusaetzliche-altersvorsorge.html (accessed on 1 April 2026). [57]

Federal Ministry of Labour and Social Affairs (2025), *Verbreitung der Altersvorsorge 2023*, https://www.bmas.de/DE/Service/Publikationen/Forschungsberichte/fb-653-verbreitung-der-altersvorsorge-2023.html. [34]

Finance Norway (2025), *Statistikk: Slik er pensjonsordningene i ulike bransjer*, https://www.finansnorge.no/tema/statistikk-og-analyse/pensjon-og-sparing/sparesatser-i-innskuddspensjon/. [26]

Financial Conduct Authority (2025), *Financial Lives 2024 survey*, https://www.fca.org.uk/financial-lives/financial-lives-2024. [22]

Financial Markets Authority (2025), *KiwiSaver Annual Report 2025*, https://www.fma.govt.nz/assets/Reports/KiwiSaver-Annual-Report-2025.pdf. [20]

Fischer, M., B. Jensen and M. Koch (2023), “Optimal retirement savings over the life cycle: A deterministic analysis in closed form”, *Insurance: Mathematics and Economics*, Vol. 112, pp. 48-58, https://doi.org/10.1016/j.insmatheco.2023.05.010. [37]

Friedberg, L., A. Leive and W. Cai (2024), “Does mandatory retirement saving crowd out voluntary retirement saving?”, *Journal of Economic Behavior & Organization*, Vol. 225, pp. 20-36, https://doi.org/10.1016/j.jebo.2024.06.024. [84]

Frish, R. (2025), “The effect of mandated savings on private consumption: Evidence from Israel’s pension reform”, *Research in Economics*, Vol. 79/2, p. 101038, https://doi.org/10.1016/j.rie.2025.101038. [76]

Fuentes, O. et al. (2024), “Personalized Information as a Tool to Improve Pension Savings: Results from a Randomized Control Trial in Chile”, *Economic Development and Cultural Change*, Vol. 72/2, pp. 725-770, https://doi.org/10.1086/720718. [147]

García, J. and J. Vila (2020), “Financial literacy is not enough: The role of nudging toward adequate long-term saving behavior”, *Journal of Business Research*, Vol. 112, pp. 472-477, https://doi.org/10.1016/j.jbusres.2020.01.061. [99]

García-Miralles, E. and J. Leganza (2024), “Public Pensions and Private Savings”, *American Economic Journal: Economic Policy*, Vol. 16/2, pp. 366-405, https://doi.org/10.1257/pol.20220019. [117]

Gars, J. et al. (2025), “Personalized reminders: Evidence from a field experiment with voluntary retirement savings in Colombia”, *Journal of Behavioral and Experimental Finance*, Vol. 48, p. 101112, https://doi.org/10.1016/j.jbef.2025.101112. [111]

Ghafoori, E., E. Ip and J. Kabátek (2021), “The impacts of a large-scale financial education intervention on retirement saving behaviors and portfolio allocation: Evidence from pension fund data”, *Journal of Banking & Finance*, Vol. 130, p. 106195, https://doi.org/10.1016/j.jbankfin.2021.106195. [154]

Goldin, J. et al. (2020), “How much to save? Decision costs and retirement plan participation”, *Journal of Public Economics*, Vol. 191, p. 104247, https://doi.org/10.1016/j.jpubeco.2020.104247. [109]

Government Accountability Office (2016), *Retirement Security: Better Information on Income Replacement Rates Needed to Help Workers Plan for Retirement*, https://www.gao.gov/products/gao-16-242. [10]

Greig, F. et al. (2024), *Are employers optimizing their 401(k) match?*, https://corporate.vanguard.com/content/dam/corp/research/pdf/are_employers_optimizing_their_401k_match.pdf. [134]

Henkens, K. (ed.) (2024), “Can pension fund design increase pension savings? Evidence from a conjoint experiment in six European countries”, *Work, Aging and Retirement*, https://doi.org/10.1093/workar/waae021. [155]

Hobbs, B. and J. Feld (2021), “What would happen if people could choose automatically increasing KiwiSaver contributions?”, *New Zealand Economic Papers*, Vol. 57/1, pp. 61-75, https://doi.org/10.1080/00779954.2021.1998198. [97]

Hoechle, D. et al. (2023), "Financial Advice and Retirement Savings", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4339769. [152]

Huberman, G., S. Iyengar and W. Jiang (2007), "Defined Contribution Pension Plans: Determinants of Participation and Contributions Rates", *Journal of Financial Services Research*, Vol. 31/1, pp. 1-32, https://doi.org/10.1007/s10693-007-0003-6. [136]

Irish Life (2018), *A guide to defined contribution plan contribution structures*, https://web.archive.org/web/20240523001906/https://www.irishlifeemployersolutions.ie/report-launch-guide-dc-plan-contribution-structures. [24]

Jensen, S. et al. (2025), "Does Mandatory Saving Reduce Voluntary Saving? Evidence from a Pension Reform", *Review of Economics and Statistics*, pp. 1-48, https://doi.org/10.1162/rest.a.264. [83]

Joubert, C. (2015), "Pension design with a large informal labor market: Evidence from Chile", *International Economic Review*, Vol. 56/2, pp. 673-694, https://doi.org/10.1111/iere.12118. [75]

Keune, M. (2018), "Opportunity or threat? How trade union power and preferences shape occupational pensions", *Social Policy & Administration*, Vol. 52/2, pp. 463-476, https://doi.org/10.1111/spol.12377. [50]

Kim, J., S. Kim and K. Koh (2022), "Labor market institutions and the incidence of payroll taxation", *Journal of Public Economics*, Vol. 209, p. 104646, https://doi.org/10.1016/j.jpubeco.2022.104646. [67]

Kirkpatrick, L., L. Meehan and G. Pacheco (2024), *Distributional analysis of KiwiSaver contributions*, New Zealand Policy Research Institute, Auckland, https://assets.retirement.govt.nz/public/Uploads/Policy/Distributional-analysis-of-KiwiSaver-contributions.pdf. [25]

Kolerus, C., I. Koske and F. Hüfner (2012), "Selected Aspects of Household Savings in Germany: Evidence from Micro-Data", *OECD Economics Department Working Papers*, No. 999, OECD Publishing, Paris, https://doi.org/10.1787/5k8zpt6w2k7h-en. [139]

Kramer, M., R. Lensink and A. Plantinga (2024), "Do online pension dashboards affect pension knowledge and expectations? Evidence from a randomized survey experiment", *Journal of Pension Economics and Finance*, Vol. 23/4, pp. 504-527, https://doi.org/10.1017/s1474747224000040. [142]

Larsen, L. et al. (2025), "Mandatory pension contributions, household consumption, and savings", *Journal of Pension Economics and Finance*, pp. 1-24, https://doi.org/10.1017/s147474722510005x. [77]

Living Wage Foundation (2024), *Retirement realities: Understanding the impact of the cost-of-living on pension savings and retirement expectations*, https://www.livingwage.org.uk/retirement-realities-understanding-impact-cost-living-pension-savings-and-retirement-expectations. [46]

Madrian, B. (2012), "Matching Contributions and Savings Outcomes: A Behavioral Economics Perspective", in Hinz, R. et al. (eds.), *Matching Contributions for Pensions: A Review of International Evidence*, The World Bank, https://doi.org/10.1596/978-0-8213-9492-2. [132]

Madrian, B. and D. Shea (2001), "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior", *The Quarterly Journal of Economics*, Vol. 116/4, pp. 1149-1187, https://doi.org/10.1162/003355301753265543. [55]

McGowan, F. and P. Lunn (2019), "Supporting decision-making in retirement planning: Do diagrams on Pension Benefit Statements help?", *Journal of Pension Economics and Finance*, Vol. 19/3, pp. 323-343, https://doi.org/10.1017/s1474747219000015. [145]

McKenzie, C., M. Liersch and S. Finkelstein (2006), "Recommendations Implicit in Policy Defaults", *Psychological Science*, Vol. 17/5, pp. 414-420, https://doi.org/10.1111/j.1467-9280.2006.01721.x. [90]

Money & Pensions Service (2020), *Barriers to planning for retirement and later life*, https://legacymasassets.blob.core.windows.net/production-fincap-cms/files/000/000/524/original/Barriers_to_ret_MAPS_final.pdf. [38]

Moreno, C. (2025), "The impact of pension systems in labor markets with informality", *Working Paper*, https://carlamoreno.org/files/jmp_moreno.pdf. [74]

Nakazawa, N. (2022), "The Effects of Increasing the Eligibility Age for Public Pension on Individual Labor Supply", *Journal of Human Resources*, Vol. 60/1, pp. 102-128, https://doi.org/10.3368/jhr.0421-11627r1. [118]

Nest Insight (2025), *Simplifying retirement savings for self-employed people*, https://www.nestinsight.org.uk/wp-content/uploads/2025/06/Simplifying-retirement-savings-for-self-employed-people.pdf. [92]

Nest Insight (2022), *Employer pension contributions in the UK*, https://www.nestinsight.org.uk/wp-content/uploads/2022/10/Employer-pension-contributions-in-the-UK.pdf. [48]

Nest Insight (2020), *Beyond the defaults*, https://www.nestinsight.org.uk/wp-content/uploads/2020/11/Beyond-the-defaults.pdf. [141]

OECD (2025), *Annual survey of financial incentives for retirement savings: Country profiles 2025*, OECD Publishing, Paris, https://doi.org/10.1787/631aa80d-en. [52]

OECD (2025), *OECD Pensions at a Glance Database*, https://data-explorer.oecd.org/s/568 (accessed on 24 March 2026). [6]

OECD (2025), *Pensions at a Glance 2025: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e40274c1-en. [7]

OECD (2024), "Assessing the design of financial incentives for retirement savings in OECD countries", in *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [53]

OECD (2024), "Designing the payout phase for defined contribution pensions to better meet financial needs in retirement", in *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [8]

OECD (2024), “Does investing in equity markets bring better retirement income outcomes to members of defined contribution pension plans?”, in *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [159]

OECD (2024), “Home equity release products for the elderly: opportunities and challenges”, in *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [61]

OECD (2024), *OECD Affordable Housing Database - indicator HM1.3 Housing tenures*, https://oe.cd/ahd. [59]

OECD (2023), “OECD/INFE 2023 International Survey of Adult Financial Literacy”, *OECD Business and Finance Policy Papers*, No. 39, OECD Publishing, Paris, https://doi.org/10.1787/56003a32-en. [40]

OECD (2022), “How best to involve employers in the provision of asset-backed pension arrangements”, in *OECD Pensions Outlook 2022*, OECD Publishing, Paris, https://doi.org/10.1787/41f6fe2a-en. [49]

OECD (2021), *Brick by Brick: Building Better Housing Policies*, OECD Publishing, Paris, https://doi.org/10.1787/b453b043-en. [60]

OECD (2021), *Towards Improved Retirement Savings Outcomes for Women*, OECD Publishing, Paris, https://doi.org/10.1787/f7b48808-en. [16]

OECD (2020), “A framework for assessing the adequacy of retirement income”, in *OECD Pensions Outlook 2020*, OECD Publishing, Paris, https://doi.org/10.1787/67ede41b-en. [158]

OECD (2020), “Increasing the role of retirement savings plans for workers in non-standard forms of work”, in *OECD Pensions Outlook 2020*, OECD Publishing, Paris, https://doi.org/10.1787/67ede41b-en. [113]

OECD (2019), “Are funded pensions well designed to adapt to non-standard forms of work?”, in *Pensions at a Glance 2019: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/b6d3dcfc-en. [17]

OECD (2018), *Financial Incentives and Retirement Savings*, OECD Publishing, Paris, https://doi.org/10.1787/9789264306929-en. [120]

OECD (2018), “Improving retirement incomes considering behavioural biases and limited financial knowledge”, in *OECD Pensions Outlook 2018*, OECD Publishing, Paris, https://doi.org/10.1787/pens_outlook-2018-8-en. [39]

OECD (2014), “Saving for retirement and the role of private pension provision in retirement readiness”, in *OECD Pensions Outlook 2014*, OECD Publishing, Paris, https://doi.org/10.1787/9789264222687-en. [9]

OECD (2012), “Coverage of Private Pension Systems: Evidence and Policy Options”, in *OECD Pensions Outlook 2012*, OECD Publishing, Paris, https://doi.org/10.1787/9789264169401-en. [15]

ONS (2024), *Employee contribution bands by age group and pension type: Table P5*, https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions/datasets/annualsurveyofhoursandearningspensiontablesemployeecontributionbandsbyagegroupandbypensiontypep5. [28]

ONS (2024), *Employer contribution bands by age group and pension type: Table P9*, https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/workplacepensions/datasets/annualsurveyofhoursandearningspensiontablesemployercontributionbandsbyagegroupandbypensiontypep9. [29]

Oxford Economics (2026), *Higher auto-enrolment contributions, pension adequacy and economic outcomes*, https://www.oxfordeconomics.com/resource/higher-auto-enrolment-contributions-pension-adequacy-and-economic-outcomes/. [5]

Pardo, O. (2023), "Mandatory retirement savings in the presence of an informal labor market", *Journal of Population Economics*, Vol. 36/4, pp. 2857-2888, https://doi.org/10.1007/s00148-023-00967-9. [73]

Pedersen, A. et al. (2018), "Trade unions and the politics of occupational pensions in Denmark and Norway", *Transfer: European Review of Labour and Research*, Vol. 24/1, pp. 109-122, https://doi.org/10.1177/1024258917748873. [65]

Pensions Policy Institute (2025), *Modelling of pension policy options, analysis based upon the Wealth and Assets Survey dataset and PPI individual modelling – updated for 2025 PLSA RLS Update*, https://www.pensionspolicyinstitute.org.uk/research-library/research-reports/2025/modelling-of-pension-policy-options-updated-for-2025-plsa-rls-update/. [62]

Pensions Policy Institute (2024), *Automatic enrolment contributions briefing paper*, https://www.pensionspolicyinstitute.org.uk/media/mwal1sfp/20240620-ae-contributions-briefing-paper-final.pdf. [54]

PensionStat.be (2025), *Taux de participation*, https://www.pensionstat.be/fr/chiffres-cles/pension-complementaire/taux-de-participation. [18]

Pew (2025), "Workers Without Access to Retirement Benefits Struggle to Build Wealth", *Issue Brief*, https://www.pew.org/en/research-and-analysis/issue-briefs/2025/06/workers-without-access-to-retirement-benefits-struggle-to-build-wealth. [43]

Pfarr, C. and U. Schneider (2012), "Choosing between subsidized or unsubsidized private pension schemes: evidence from German panel data", *Journal of Pension Economics and Finance*, Vol. 12/1, pp. 62-91, https://doi.org/10.1017/s1474747212000170. [140]

Proctor, D. and J. Young (2021), *Automatic escalation and DC saving rates*, https://institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/2022/automatic-escalation-and-dc-saving-rates.pdf. [100]

Ramadorai, T. (ed.) (2024), "Designing Pension Plans According to Consumption-Savings Theory", *The Review of Financial Studies*, https://doi.org/10.1093/rfs/hhae061. [36]

Ramadorai, T. (ed.) (2024), "Digitalization and Retirement Contribution Behavior: Evidence from Administrative Data", *The Review of Financial Studies*, Vol. 37/8, pp. 2510-2549, https://doi.org/10.1093/rfs/hhae015. [115]

Reiff, J. et al. (2023), "Save More Today or Tomorrow: The Role of Urgency in Precommitment Design", *Journal of Marketing Research*, Vol. 60/6, pp. 1095-1113, https://doi.org/10.1177/00222437231153396. [106]

Rubaltelli, E. and L. Lotto (2021), "Nudging freelance professionals to increase their retirement pension fund contributions", *Judgment and Decision Making*, Vol. 16/2, pp. 551-565, https://doi.org/10.1017/s1930297500008664. [96]

Ruthbah, U. and N. Pham (2020), *Household Savings and the Superannuation Guarantee*, https://www.monash.edu/__data/assets/pdf_file/0005/2406893/Household-Savings-and-the-Superannuation-Guarantee.pdf. [85]

Scarfe, R., D. Schaefer and T. Sulka (2024), "The incidence of workplace pensions: Evidence from the UK's automatic enrollment mandate", *Working Paper* No. 2402, https://hdl.handle.net/10419/289841. [69]

Schmied, J. (2023), "The replacement rate that maintains income satisfaction through retirement: The question of income-dependence", *The Journal of the Economics of Ageing*, Vol. 26, p. 100471, https://doi.org/10.1016/j.jeoa.2023.100471. [12]

Sigedis (2025), *La constitution d'une pension complémentaire chez les salariés en Belgique: Participation et montant des cotisations en 2023*, https://www.pensionstat.be/file/cc73d96153bbd5448a56f19d925d05b1379c7f21/20a8ad78d927df7ad0d4a0d22451c2ec04356edf/rapport-thematique---la-constitution-dune-pension-complementaire-chez-les-salaries-en-belgique.pdf. [23]

Sigurdardóttir, E. (2023), *Do Mandatory Pension Savings Cause Debt Accumulation? An Event Study Approach*, https://research.cbs.dk/en/studentProjects/do-mandatory-pension-savings-cause-debt-accumulation-an-event-stu/. [81]

Smyrnis, G. et al. (2019), "Motivated Saving: The Impact of Projections on Retirement Saving Intentions", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3464813. [146]

Sobeck, K. and R. Breunig (2026), "Retirement Savings Incentives for Low- and Middle-Income Individuals: Does Government Funded Matching Change Behaviour?*", *Economic Record*, Vol. 102/337, pp. 208-226, https://doi.org/10.1111/1475-4932.70032. [130]

Statistics Canada (2023), "Recent trends in families' contributions to three registered savings accounts", *Income Research Paper Series*, https://www150.statcan.gc.ca/n1/pub/75f0002m/75f0002m2023008-eng.htm#n3-refa. [32]

Suh, E. (2020), *Younger Adults' Retirement Saving and Wealth Accumulation in Britain: A Quantitative Investigation*, https://etheses.lse.ac.uk/4135/1/Suh__Younger-adults-retirement.pdf. [156]

Te Ara Ahunga Ora Retirement Commission (2025), *KiwiSaver Employer Contribution Insights 2025*, https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/2025-RRIP/KiwiSaver-Employer-Contribution-Insights.pdf. [47]

Te Ara Ahunga Ora Retirement Commission (2025), *KiwiSaver Government Contribution Distributional Analysis 2025*, https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/2025-RRIP/KiwiSaver-Government-Contribution-Distributional-Analysis-2025.pdf. [137]

Te Ara Ahunga Ora Retirement Commission/Hnry (2025), *Improving the retirement savings of the self-employed*, https://assets.retirement.govt.nz/public/Uploads/Improving-the-retirement-savings-of-the-self-employed_Final.pdf. [21]

Thaler, R. and S. Benartzi (2004), "Save More Tomorrow™: Using Behavioral Economics to Increase Employee Saving", *Journal of Political Economy*, Vol. 112/S1, pp. S164-S187, https://doi.org/10.1086/380085. [98]

Thaler, R. and C. Sunstein (2008), *Nudge: Improving decisions about health, wealth, and happiness*, Yale University Press, https://yalebooks.yale.edu/book/9780300262285/nudge/. [87]

Trampusch, C. (2013), "Employers and collectively negotiated occupational pensions in Sweden, Denmark and Norway: Promoters, vacillators and adversaries", *European Journal of Industrial Relations*, Vol. 19/1, pp. 37-53, https://doi.org/10.1177/0959680112474882. [64]

Transamerica Institute (2026), *Less Than Half of U.S. Workers Know About a Tax Credit for Retirement Savers*, https://www.transamericainstitute.org/in-the-news/press-releases/details/less-than-half-of-workers-know-about-tax-credit-for-retirement-savers. [126]

Vanguard (2025), *How America Saves 2025*, https://corporate.vanguard.com/content/dam/corp/research/pdf/how_america_saves_report_2025.pdf. [30]

Vižintin, Ž. and S. Peksevim (2021), "How to Increase Your Savings While Spending", *Behavioral Scientist*, https://behavioralscientist.org/how-to-increase-your-savings-while-spending/. [116]

Wolf, I. and Lorena (2021), "Benefit Adequacy in Funded Pension Systems: Micro-Simulation of the Israeli Pension Scheme", *International Journal of Economics and Business Administration*, Vol. IX/Issue 2, pp. 143-164, https://doi.org/10.35808/ijeba/694. [2]

Wood, S. and C. Morewedge (eds.) (2024), "The Beneficent and Maleficent Effects of Simplification on Retirement Savings", *Journal of Consumer Research*, Vol. 52/2, pp. 244-265, https://doi.org/10.1093/jcr/ucae067. [144]

WPI Economics (2023), *Raising the bar: A framework for increasing auto-enrolment contributions*, https://wpieconomics.com/publications/raising-the-bar/. [160]

Yin, Y., A. Chen and A. Munnell (2024), "The National Retirement Risk Index: An Update from the 2022 SCF", *Issue in Brief* 24-5, https://crr.bc.edu/the-national-retirement-risk-index-an-update-from-the-2022-scf/. [3]

Yin, Y., A. Chen and A. Munnell (2023), "The National Retirement Risk Index: Version 2.0", *Issue in Brief* 23-10, https://crr.bc.edu/the-national-retirement-risk-index-version-2-0/. [13]

Notes

[1] The analysis covers all OECD countries as well as Bulgaria, Croatia and Romania.

[2] For New Zealand and the United Kingdom, the voluntary schemes with an automatic enrolment mechanism are considered as quasi-mandatory for employees and therefore included in the expected retirement income from the mandatory pension system because they cover more than 85% of the target population.

[3] These assumptions are in line with those used in the OECD Pensions at a Glance Database to ensure consistency with the theoretical gross replacement rates used.

[4] By contrast, the contribution gaps estimated for Swiss employees are likely to be overstated, as contribution rates in mandatory occupational pension plans are often higher than the legal minimum. As a result, employees typically accrue higher pension entitlements than those reflected in the theoretical replacement rates used in this analysis. These additional contributions vary across pension funds and are therefore difficult to model.

[5] In Belgium, the complementary pension system is generally classified as voluntary, even though participation is mandatory for some employees, such as those covered by industry-wide pension plans.

[6] Among members aged 55 and older, 19% to 20% contributed at 4% and this could be because 4% was the default rate up to April 2009.

[7] Pension contributions in some countries also finance disability or invalidity benefits, as well as other social security benefits.

[8] In New Zealand, the government makes a matching contribution equivalent to the employer contribution for recipients of paid parental leave (PPL) who elect to continue KiwiSaver deductions from their PPL payments, since 1 July 2024.

[9] The newly introduced retirement savings account (Altersvorsorgedepot) without mandatory guarantee aims to overcome the shortcomings of Riester plans and make the tax-subsidised pension system more attractive by offering greater flexibility, lower costs and improved long-term return potential.

[10] To the extent possible, the analysis relies on empirical studies in the literature to assess the effectiveness of the different policies on contribution levels.

[11] In the case of employees with an annual gross remuneration higher than EUR 27 000, the tax deduction applies only to the proportional part. The same deduction applies to self-employed workers with employees (employers who are liable for personal income tax).

[12] The experiment allowed individuals to select an initial contribution rate, a rate of increase in their contribution rate (0.5, 1, 1.5 or 2 p.p.), an increase period (yearly or every second year) and a maximum contribution rate (from 3.5% to 10%).

[13] In the United States, the catch-up provision raises the contribution limit for individuals aged 50 and over.

[14] In a plan with upfront taxation, contributions are not tax deductible, while investment income and pension benefits are tax free. By contrast, in a plan with deferred taxation, contributions are tax deductible, investment income is tax free and pension benefits are taxed.

[15] From 2027, the Saver's Credit will be replaced by the Saver's Match, a government matching contribution.

[16] The maximum entitlement is phased out at a constant taper rate to zero between the lower- and upper-income thresholds. Therefore, individuals with an income above the upper-income threshold are not entitled to the government co-contribution.

[17] The parameters of the co-contribution programme in Australia have changed several times since its inception. In particular, the match rate has varied, taking values of 50%, 100% and 150% depending on the years. As the maximum individual contribution matched by the government has remained at AUD 1 000 the whole time, the maximum entitlement has been equal to AUD 500, AUD 1 000 or AUD 1 500 depending on the years.

[18] Higher-income earners still have an incentive to contribute beyond the match threshold because of the possibility to deduct contributions from taxable income in the United States.

[19] Single-tier match formulas may still be preferable to tax incentives when the objective is to encourage retirement savings from different income groups, as low-income earners with no tax liability can still benefit from matching contributions, while they do not benefit from tax incentives.

[20] For example, consider a high-income employee who can contribute 8% of salary and a low-income employee who can only afford a contribution rate of 4%. With a 50% match rate up to 8% of salary, the high-income employee would receive the maximum employer matching contribution of 4% of salary, while the low-income employee would only receive an employer matching contribution of 2% of salary. With a 100% match rate on the first 3% of salary and 50% on the next 2% of salary, the high-income employee would still receive the maximum employer match of 4%, while the low-income employee would now receive 3.5% of salary from the employer.

[21] The European Commission uses the term pension tracking services to refer to pension dashboards.

3 Pension and insurance investors' integration of sustainability risks into investment processes

This chapter provides insights into how pension and insurance investors integrate risks that may affect the long-term sustainability of their portfolios into their investment and risk management processes. It discusses the regulatory context and other drivers for these investors to consider sustainability risks and the challenges they face in doing so. It also looks at how institutional and governance frameworks are adapting and how investors are thinking about and integrating sustainability considerations in practice.

The integration of risks that may affect the long-term sustainability of the portfolios of pension and insurance investors is increasingly becoming mainstream in investment processes and decisions, as these risks can have significant implications for the long-term returns of portfolios. Regulatory frameworks and other measures to support the integration of sustainability risks have been evolving rapidly and have served as a key driver for pension and insurance investors to consider these risks in their investment processes. These investors' institutional and governance frameworks have also been adapting to accommodate these changes, with the systematic consideration of these risks becoming embedded in the investment process.

This chapter aims to better understand how pension and insurance investors are integrating these sustainability risks into their investment and risk management processes and the drivers for them to do so. It provides insights to regulators and supervisors regarding the challenges these investors face and how they are thinking about and applying sustainability considerations in practice. The information included draws significantly from interviews with pension and insurance stakeholders involved in investment processes.[1]

The discussion focusses on the drivers and processes of integration. The first section describes the relevant measures in place for pension and insurance investors to incorporate risks affecting the long-term sustainability of their portfolios to provide some context for the environment in which they operate. The second section highlights how these investors are thinking about sustainability in the context of their investment strategies and the drivers for them to integrate these considerations further into their investment processes. The third section looks at how they are adapting their institutional and governance frameworks to better integrate the consideration of sustainability risks. The fourth section examines in more detail how they are integrating these risks into their investment processes in practice, providing case studies to illustrate the aspects discussed. The final section concludes.

3.1. Measures relevant for pension and insurance investors to incorporate risks affecting the long-term sustainability of their portfolios into their investment processes

Regulatory frameworks and measures to incorporate risks affecting the long-term sustainability of the portfolios of pension and insurance investors have been evolving rapidly. To understand the approaches and extent to which these investors integrate sustainability considerations in practice, it is useful to first understand the regulatory environment in which they operate and the frameworks and tools they may have at their disposition.

Jurisdictions have introduced numerous measures to require, facilitate, or standardise how pension and insurance investors integrate sustainability risks into their investment processes. Such measures, which are described in Table 3.1, play a large role in shaping how investors consider and incorporate these risks. The analysis herein uses the information that the OECD has collected about the measures jurisdictions have implemented to incorporate environmental, social and governance risk factors into insurance and pensions investments.[2] This information provides insights into global developments and standard setting relevant to insurance and pension investors and allows for a comparison of approaches across jurisdictions.

Table 3.1. Measures to incorporate environmental, social and governance risk factors into insurance and pensions investments

Measure		Description
Integration	Policy disclosure	A mandatory requirement to disclose whether and how sustainability risks are considered in investment and risk management processes.
	Integration requirement	The mandatory integration of sustainability risks into investment processes or policies.
	Corporate disclosure	Disclosure requirements for companies or issuers aimed at increasing the quantity and/or quality of information on sustainability risks that are available to investors for making investment decisions.
Standards and definitions	Taxonomies	Standard definitions and criteria used to determine whether economic activities can be considered sustainable.
	Standardised reporting frameworks	Standardised reporting frameworks and metrics designed to guide sustainability disclosures to help ensure comparability and reliability of sustainability-related information reported by entities.
	Product disclosures	Disclosure requirements for pension investment and insurance products to detail how sustainability risks have been considered in their design, strategy, or management.
	Labels	Requirements for investment products to be labelled or named as sustainable.

Source: OECD (2026[1]), *OECD Database of measures to incorporate environmental, social and governance risk factors into insurance and pensions investments*, https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/pensions-and-insurance/Database-of-Sustainable-Investment-Measures-for-Insurance-and-Pensions.xlsx

Pension and insurance investors are often subject to specific requirements regarding whether and how they should consider sustainability risks in their investment decisions. Pension funds are more often required to disclose whether and how they incorporate these risks into their investment and risk management processes, even if they are not required to do so. This is the case for pension funds in Canada (Ontario), Colombia, Israel and Switzerland. Insurance companies in Israel are also required to disclose any consideration of sustainability.

However, requirements are increasingly moving away from simple disclosure to requiring that pension funds and insurance companies integrate sustainability risks into their investment processes. Figure 3.1 shows that 41 of the 53 jurisdictions assessed have some requirement for pension or insurance investors to integrate sustainability risks in their investment and risk management processes.[3] Of these, three have requirements in place only for pensions and two for insurers but not pensions. Six jurisdictions additionally have mandatory exclusion policies prohibiting investment in certain sectors, usually applying to all investors. France is unique in requiring that occupational pension funds offer a sustainable investment option to members.

Figure 3.1. Jurisdictions that have requirements to integrate sustainability risks in investment and risk management processes

Jurisdiction	Pensions	Insurance	Asset managers	Mandatory exclusion
Argentina				
Australia	●			
Austria	●	●		
Belgium	●	●	●	●
Brazil	●	●		
Canada				
Chile	●			
Chinese Taipei		●		
Colombia	●	●		
Costa Rica				
Egypt				
European Union	●	●	●	
France	●	●	●	
Greece	●			
Hong Kong, China	●	●	●	
Iceland	●	●	●	
India				
Indonesia	●	●	●	
Ireland	●	●	●	●
Israel				
Italy	●	●	●	●
Japan				
Korea				
Luxembourg	●	●	●	●
Mexico	●	●		
Netherlands	●	●	●	
New Zealand				
Norway	●			●
Peru	●	●		
South Africa	●	●		
Spain	●	●	●	●
Switzerland		●	●	
Thailand				
Türkiye				
United Kingdom	●	●		
United States				

Note: Requirements noted under European Union apply to all 27 EU Member States. Jurisdictions listed in the table are included in the *OECD Database of measures to incorporate environmental, social and governance risk factors into insurance and pensions investments*, except for EU Member States not implementing additional requirements. In Norway, mandatory exclusions of companies involved in severe environmental or social misconduct apply only to the Norwegian Government Pension Fund Global. Jurisdictions with no requirements are not listed in the table.

Source: OECD (2026[1]), *OECD Database of measures to incorporate environmental, social and governance risk factors into insurance and pensions investments*, https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/pensions-and-insurance/Database-of-Sustainable-Investment-Measures-for-Insurance-and-Pensions.xlsx

Requirements for corporate disclosures on sustainability are now the norm across the OECD. Such requirements, however, usually only apply to listed or large companies and allow for more flexibility for smaller companies. All OECD Members have implemented or will be implementing sustainability-related corporate disclosure requirements. Thirty also require the disclosure of sustainability-related metrics, and three recommend that companies do so (OECD, 2025[2]).

Taxonomies are a classification system to define which economic activities are considered sustainable. They normally include clearly defined objectives, details of the economic activities that contribute to these objectives, and criteria to determine whether the activity can be considered sustainable against that objective. As such, they can provide a common understanding of what sustainability means and provide investors with more certainty regarding whether their chosen investment aligns with their own priorities and objectives. In this way, they can also help to prevent greenwashing, where a financial product is marketed as sustainable without necessarily being so, as claims of sustainability can be more easily verified. Of the 53 jurisdictions covered in the OECD's Database of measures to incorporate ESG risk factors into insurance and pensions investments, 41 either have their own taxonomy or, in the case of EU Member States, apply a common regional framework (OECD, 2026[1]). Some taxonomies, such as the Mexican Sustainable Taxonomy and the draft Brazilian Sustainable Taxonomy, go further by integrating social and developmental priorities alongside traditional environmental objectives. More recent taxonomies have often aimed to align with existing taxonomies of adjacent jurisdictions, as is the case for Iceland, Türkiye and the United Kingdom with respect to the EU Taxonomy.

Labels intend to provide assurance to customers that products being sold as sustainable are indeed integrating sustainability considerations into their investment strategy and go hand in hand with product disclosure that provides evidence that the investment products meet the criteria required for the label. They intend to provide more transparency around how these risks are accounted for and to prevent "greenwashing". Labels may involve a specific sustainability focus, allow for several categories within the label, and sometimes require independent certification for products to use the label.

A number of jurisdictions have introduced rules to ensure that sustainability labels are meaningful and not misleading. Label-based or certification-style systems require investment funds to meet defined sustainability criteria, apply exclusions, and provide transparent information, and are often supported by independent verification. Others (e.g. Brazil, the European Union, the Slovak Republic, Thailand, the United Kingdom, the United States) have introduced naming regulations that control the use of sustainability-related terminology, requiring that products using such terms actually invest in line with the terminology used and disclose clearly how sustainability considerations are integrated. Overall, despite differences in exact requirements, the common regulatory trend across jurisdictions is to strengthen transparency, comparability, and the credibility of sustainability claims.

A growing number of jurisdictions are adopting standardised reporting frameworks for sustainability-related information. These aim to provide investors with comparable, reliable, and financially relevant data that can be integrated into risk assessments and investment decision-making processes. Despite the numerous frameworks available, there has been a strong global convergence towards the adoption of the International Sustainability Standards Board (ISSB) IFRS Sustainability Disclosure Standards. IFRS S1 and S2 establish a global baseline for sustainability reporting by setting out general requirements for sustainability-related financial disclosures (S1) and specific climate-related disclosure requirements (S2). Thirty-nine jurisdictions have already mandated adoption, initiated harmonisation processes, or developed national sustainability standards directly based on IFRS S1 and S2 (IFRS, 2026[3]). In parallel, regional frameworks such as the European Union's European Sustainability Reporting Standards (ESRS) represent another major pillar in the global reporting landscape. While conceptually aligned with international efforts, the ESRS reflect the European Union's distinct regulatory approach, characterised by double materiality and a broader disclosure scope under the Corporate Sustainability Reporting Directive (CSRD).

3.2. Drivers of the integration of risks affecting the sustainability of portfolios in investment processes

Regulation is one of the main drivers of the integration of risks affecting the sustainability of portfolios in investment processes, with particular challenges and considerations relevant for pension and insurance investors. However, many other factors also play a role in pension and insurance investors' consideration of these risks in their investment decisions. These include financial results, concerns around image and reputation, member or client preferences, competition and market practices, structural differences, and finally societal norms and values.

3.2.1. Regulation

Regulation has been a strong driver for the integration of sustainability risks to investment. Thirty per cent of Principles for Responsible Investment (PRI) signatories indicate that they took action on sustainability in response to legal and regulatory developments (PRI, 2025[4]). A survey by the CFA Institute in Europe indicated that 60% of asset managers considered regulation to be a top driver for them to consider sustainability-linked factors in their investment strategies and products. Another survey of selected institutional investors in the United Kingdom indicated that 70% felt that regulation was the top driver of integration (Barnett Waddingham LLP, 2025[5]).

There is a consensus among those interviewed that corporate disclosure requirements and the increased transparency they have brought has been significantly beneficial to investors' ability to integrate sustainability risks to investment in their investment decisions. Several pension and insurance investors felt that disclosure could go even further by requiring more granular data in some cases, or data for areas that are more difficult for investors to assess, such as biodiversity, supply chains, and tax compliance. Others nevertheless cautioned that it may still be early to go too far with standardised requirements before there is more industry-wide agreement on the most useful measures and metrics.

Pension and insurance investors have also largely welcomed sustainability disclosure requirements as positive for their efforts towards integrating risks affecting the sustainability of their portfolios into their own investment processes Several investors observed that the requirement to simply disclose their own practices provided an incentive to do more and make sure their processes and procedures were robust. Stronger regulations pushed those who were already integrating sustainability risks in their investment processes to formalise this in their approach and governance structures. In some cases, investors have been proactive in anticipating additional regulation, particularly in Latin America, preferring to develop robust processes and procedures in advance rather than be rushed into complying with the regulations later on. However, others observed that many would not take any actions regarding sustainability unless regulation forced them to do so.

Pension and insurance investors have also welcomed standardised reporting frameworks such as IFRS S1 and S2 to improve the comparability and understandability of the information disclosed. Even where the use of such frameworks is not mandatory, companies often rely on them on a voluntary basis because they provide a common language for reporting. Taxonomies have additionally helped investors to assess reported targets and companies' ambitions relating to their sustainability goals.

While many of these regulatory initiatives are broadly viewed as positive, numerous challenges to ensuring an effective regulatory framework remain. Additional challenges are more specific to insurance and pensions, including the interpretation of fiduciary duty and its compatibility with the integration of risks that may affect the sustainability of their investment portfolios.

Regulatory challenges

Regulatory challenges that investors have highlighted include a lack of clarity and coherence, complexity, political commitment, and the fragmentation of regulation.

Pension and insurance investors feel that sustainability disclosures need improvement with regards to definitions and the relevance of the information disclosed. The information disclosed is not always comparable. One survey of 350 institutional investors indicated that 80% felt that sustainability reporting needed more comparability (EY, 2024[6]). In addition, there are often no clear thresholds regarding the materiality of the information to disclose, leading companies to disclose too much, including information that is not necessarily meaningful for investors.

Investors' lack of confidence in the information disclosed also leads to concerns around "greenwashing", with 85% indicating that the problem has worsened over the last five years (EY, 2024[6]). Investors have expressed broad support for external audits of sustainability disclosures to improve the quality and comparability of data. Sixty-four per cent of investors in the survey expressed support for independent audits of ISSB and CSRD disclosures (EY, 2024[6]). Countries are increasingly adopting such measures. New Zealand, Norway and Türkiye have already adopted limited assurance requirements and another 27 OECD jurisdictions plan to do so. Colombia, Mexico and Spain plan to adopt reasonable assurance requirements at the level required for the auditing of financial statements (OECD, 2025[2]). Australia is currently consulting on potential amendments to its current approach of a staggered implementation of assurance requirements for different tranches of corporates (Australian Treasury, 2026[7]).

Several pension and insurance investors in Latin America expressed dissatisfaction with the lack of clear definitions for information that companies disclose. The quality of local companies' reporting tends to be poor, particularly from smaller companies, with different interpretations of the information to be disclosed that are not always comparable. In addition, regulators and supervisors are not necessarily providing the needed clarifications and guidance.

In Europe, the Sustainable Finance Disclosure Regulation (SFDR) has been subject to wide criticism for not providing sufficiently clear definitions and standards. In particular, there was confusion around the interpretation and market use of Articles 8 and 9, which were increasingly used as de facto product labels despite not being designed for that purpose.[4] Over time, this informal labelling system contributed to inconsistent classifications, concerns about "greenwashing" and limited comparability for end investors. Such criticism led to the European Commission's proposal for a revised Sustainable Finance Disclosure Regulation (often referred to as "SFDR 2.0") in November 2025. The Commission's proposal replaces the Articles 8 and 9 with a voluntary three-category system: Sustainable, Transition and ESG Basic. These categories aim to provide clearer distinctions around the sustainability ambition while simplifying product-level disclosures and limiting the use of sustainability related terms. The proposal nevertheless still has to be negotiated and adopted by the European Parliament and the Council of the EU (European Commission, 2025[8]; Robinson-Tillett, 2025[9]).

While clear definitions are important, the enforcement of inflexible standards can have a negative impact on investors' willingness to publicly commit to sustainable investment even when they are practicing it, a tendency commonly referred to as "greenhushing". Pension and insurance investors have broadly echoed the need for better engagement with the industry and communication guidelines to assist investors with regulatory compliance and avoid greenwashing. The greenhushing phenomenon has been observed in Australia, where the regulator ASIC's greenwashing enforcement actions have primarily been taken against institutional investors, some of which are now more measured in their communications about their consideration of sustainability risks in their investment strategies. Pension investors in Europe also expressed potential legal liability as a concern, leading them to downplay the extent to which their fund offerings consider sustainability factors, while noting that this was not the case for all their competitors. Anti-trust laws may also present a barrier to net zero alliances, with concerns that collective action could

be anti-competitive (Dhondt, Chadd and Rocha, 2025[10]). Recently, several large pension and insurance investors have pulled out of their net zero commitments due to regulatory uncertainty. The Canada Pension Plan Investment Board (CPPIB) ended its net zero commitment following changes to Canada's Competition Act requiring entities to prove any environmental claims (Robinson-Tillett, 2025[11]). However, CPPIB officials have indicated that this change does not affect other climate-related actions it is taking and has recently announced an expanded portfolio carbon footprint reporting. Munich Re pulled out of several net zero alliances and coalitions due to conflicting regulatory requirements.

Another challenge is a lack of coherence in definitions and requirements across regulations, even within a given jurisdiction. In Europe, stakeholders have highlighted inconsistencies across the SFDR, the EU Taxonomy, the EU Benchmark Regulation and the Corporate Sustainability Reporting Directive (CSRD) (Boni and Scheitza, 2025[12]). For example, there is no clear and common definition of sustainability across the SFDR and the EU Taxonomy. Additionally, disclosure requirements for benchmark providers have not been sufficient for the users of those benchmarks to meet their own reporting requirements under the SFDR. Furthermore, regulations do not apply equally across the investment chain. Recently adopted regulation for ESG rating providers is expected to reduce investors' sole responsibility for ensuring these outputs are fit for purpose by requiring providers to disclose methodologies, models, assumptions and data sources.

Disclosure requirements can also be overly complex and resource intensive to comply with. Pension and insurance investors feel that the information required is not always necessarily useful or relevant at a portfolio level or for different countries or regions. Furthermore, given the resources required to comply with requirements, they risk becoming a tick-box exercise, particularly for smaller companies and in emerging markets, highlighting the importance of proportionality and consideration of local context. In an effort to reduce compliance burdens, the SFDR review in Europe seeks to remove previously required entity-level disclosures reflecting the overarching policy objective of streamlining sustainability regulation and reducing reporting complexity.

There is a need for additional efforts to ensure that product disclosure requirements are effective and understandable for their target audience. Retail consumers generally do not understand the information provided by sustainability product disclosures such as the SFDR. One survey of retail investors in Europe showed that 45% reported increased confusion from the amount and complexity of the information being disclosed to them when making an investment decision (CFA Institute, 2024[13]).

In addition to clear and internally coherent requirements, investors also need requirements to be consistent with political objectives and other regulations. If countries have net zero goals, for example, policies implemented for other sectors of the economy need to be consistent with that goal. A reallocation of capital to sustainable sectors by institutional investors will not achieve the desired objective, including in terms of better returns for consumers, unless the real economy also moves in that direction.

The stability of political objectives and guidance is also important to give pension and insurance investors the comfort to commit the resources necessary to effectively consider sustainability risks in their investment processes. Government commitment and stability have helped to advance sustainable investment practices in South Africa. Japan's government has also demonstrated commitment to sustainability over the years, which is one reason why it is more advanced in terms of sustainable investment compared to other jurisdictions in the region. Investors have indicated that political objectives in relation to sustainability are now more predictable across Asia, which should increase the appetite from pension and insurance investors to adopt more sustainable investment policies.

In contrast, the US Department of Labor has modified its guidance to fiduciaries for the consideration of sustainability factors several times since 1994 leading to difficulties for pension plan fiduciaries to consider such factors. Changes in political priorities globally, however, will not necessarily deter all investors who have already established sustainable investment policies from continuing their approach, particularly for those with a long-term investment horizon like pension funds. Nevertheless, political changes have still

affected investors' views and engagement on sustainability-related issues. Net zero alliances have lost support in recent years, and the Net Zero Banking Alliance was disbanded in 2025.

The fragmentation of regulations across jurisdictions can present compliance challenges for global investors. Generally, investors must comply with the most restrictive regulations. Global investors, particularly asset managers, are having increasing difficulty to create funds that are globally relevant and compliant with all applicable requirements for product labelling, for example. Adoption of the South African Green Finance Taxonomy has been low in part because entities choose to apply the EU Taxonomy to be compliant with requirements of international providers of capital (FSCA, 2024[14]). In the Netherlands, local requirements tend to be more advanced and ahead of other countries, so Dutch pension investors outsourcing their investment management sometimes have difficulty because their asset managers are not yet familiar with their local requirements and must consequently adapt their approach.

Conflicting regulations and requirements are also emerging that make it more difficult for institutional investors to integrate sustainability considerations in their investment processes. For example, the US Securities and Exchange Commission (SEC) recently updated its interpretation of shareholder engagement on environmental, social and governance issues, which increases disclosure requirements if shareholders intend to influence the issuer's policies (SEC, 2026[15]). This complicates investor engagement with US entities regardless of where they are based. In addition, the SEC has proposed rescinding Rule 14a-8 which would make it more difficult to get shareholder resolutions on proxy ballots. Such regulatory fragmentation can increase compliance costs and harm effective resource allocation, preventing investors from considering financially material risks that could have a negative impact on returns. This can be particularly harmful on the competitiveness of medium-sized companies (Empresa Global, 2025[16]).

Regulatory considerations specific to insurance and pensions

Insurance and pension investors operate under specific regulatory frameworks that may also have consequences relating to their integration of risks impacting the long-term sustainability of their portfolio. The extent to which the regulatory framework requires or prevents the integration of sustainability risks can vary across insurance and pensions. In the United Kingdom, for example, trustees of workplace pension schemes are under more stringent requirements to consider sustainability factors in their investment decisions than insurers are (PRI, 2024[17]). In contrast, European regulatory requirements relating to sustainability are largely not applicable to the pension plans for independent workers in Germany, which is a significant factor in the lack of integration of sustainability factors among these plans. German insurers, however, more often integrate sustainability factors in part because they are subject to many of the European regulatory requirements in place.

Capital requirements could also be a barrier to integrating sustainability considerations more comprehensively into investment decisions. While insurers subject to Solvency II requirements in Europe must now include climate risks in their Own Risk and Solvency Assessment (ORSA), capital charges have not been adjusted to reflect sustainability risks. This is currently under discussion.

Some investors indicated that another potential barrier to integration, particularly for pensions, is the cost of doing so when regulators and supervisors in many jurisdictions have been focussed on reducing costs to members. The effective integration of sustainability risks into investment processes involves additional costs to gather and analyse the relevant information and to develop internal tools to use that information for investment decisions. Cost pressures may also impede more granular approaches to integration by asset class or fund as investors aim to be as efficient as possible in managing their portfolios.

The use of performance benchmarks that do not incorporate sustainability considerations may also be a barrier to integration. The comparison of investment returns of pension funds to such benchmarks can present a challenge for funds to integrate sustainability risks in their investment decisions because of the

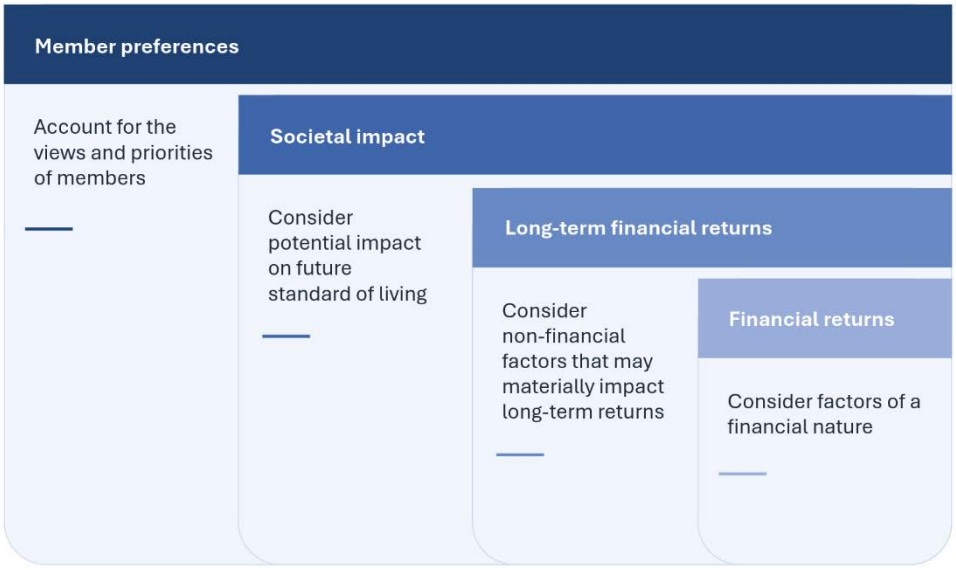
increased risk of tracking error. Several investors highlighted this as a challenge considering the government mandated performance test used for superannuation funds in Australia.

Interpretation of fiduciary duty for pensions

Fiduciary duty obliges pension investors to act in the best interests of plan beneficiaries and ensure their investment activities are carried out with loyalty and care and in the sole interest of their members. The interpretation of fiduciary duty in any given jurisdiction, and more precisely the interpretation of the scope of members' interests, will strongly influence the approach that a pension investor will take to incorporate sustainability risks in its investment strategy because the interpretation must view doing so as being in the interest of members.

The interpretation of fiduciary duty can vary widely across jurisdictions and is one driver of differences observed globally regarding pension investors' approaches to integration. Broadly speaking, this hinges on how members' interests are viewed. The narrowest interpretation of fiduciary duty is that member interest is only the short-term financial return they receive, and therefore only factors that are financial in nature may be considered. A similar but more flexible interpretation is that members' interest should also consider non-financial factors that may be financially material because these can also be expected to impact financial returns over the long term. More general interpretations of interest include considering the impact that factors may have on members' future standard of living and accounting for the preferences of the members themselves. The spectrum of the interpretation of members' interest in the context of fulfilling fiduciary responsibilities is illustrated in Figure 3.2.

Figure 3.2. Scope of the interpretation of pension members' interest in a fiduciary context



The narrowest interpretation of fiduciary duty is that fiduciaries may only consider factors of a financial nature in their investment decisions and only short-term financial returns are relevant for members' interest. Most fiduciaries of occupational plans in the United States rely on this interpretation, largely because of precedent, frequently changing guidance, and fear of legal liability. The definition of fiduciary duty in the United States requires that the sole purpose of fiduciaries be to ensure the provision of benefits and to pay reasonable administrative costs of the plan. The Department of Labor has frequently changed its guidance on the interpretation of fiduciary duty since 1994 and has since 2020 issued binding rules on the topic

(Muir, 2022[18]). The 2020 rule was in line with the narrow interpretation of fiduciary duty and discouraged the consideration of non-pecuniary factors. The 2022 rule broadened the interpretation and explicitly clarified that fiduciaries were allowed to consider climate risk and other sustainability risks in their investment selection. However, the Department of Labor has indicated that the rule no longer applies and that they will replace it with a new rule resembling the 2020 rule and prohibiting or discouraging the consideration of non-financial factors in investment decisions. Fear of legal liability is a significant barrier to the consideration of non-economic factors in the investment of pension plans in the United States. Barriers to prove that fiduciary duty was not breached in the consideration of non-financial factors are high, as fiduciaries must demonstrate that the risk-return profile was not compromised, and in the case of defined contribution plans, that offering any investment options explicitly considering sustainability factors did not come at the expense of more traditional investment options (PRI, 2020[19]). Such assessments cannot reflect the potential for investments that consider sustainability risks to outperform over the long term.

The most common interpretation of fiduciary duty takes a broader view of financial interest and requires fiduciaries to consider any factor that is likely to impact financial returns over a longer time horizon. As such, fiduciaries must also account for material non-financial factors that could impact the sustainable long-term value creation of the investment. Integration requirements that require pension or insurance investors to consider sustainability are often justified on these grounds, suggesting that proper due diligence and risk assessment of investment requires accounting for all material risks, including non-financial risks.

This interpretation of fiduciary duty focusses on the mitigation of material risk factors, which may prevent investors from having any other objective relating to sustainability or impact. Indeed, this is the general interpretation of fiduciary duty by pension funds in Chile, which are required to consider sustainability risks in their investment strategy. Pension funds approach sustainability factors as one of many other relevant factors they need to consider in their investment decisions to maximise financial returns. They do not have decarbonisation targets or social impact objectives, as they see this as conflicting with their mandate to focus solely on returns.

A broader interpretation of fiduciary duty considers members' interest as not only financial but also related to their standard of living. The definition of fiduciary duty in South Africa may be interpreted in this manner, as it states that fiduciaries should aim to achieve "adequate risk adjusted returns suitable for the fund's specific member profile, liquidity needs and liabilities", implying that member characteristics should be considered. In addition, Regulation 28, which requires pension funds to consider sustainability factors in their investment decisions, obliges fiduciaries to aim for "adequate risk adjusted returns" rather than requiring them to maximise profits (Muir, 2022[18]). Indeed, pension funds in South Africa do take their members' broader interests into account. For example, the plan for workers in the metal and engineering sectors is interested in financing job creation because it is in their members' best interests to be employed, and the sector has lost a lot of jobs over the last decade.

In Europe, the IORP II Directive states that Institutions for Occupational Retirement Provision (IORPs) should be allowed to account for the long-term impact of their investment decisions on sustainability factors, which in principle could include factors having an impact that may not be directly financial. This implicitly recognises that some of these impacts could be relevant for the plan members, though does not oblige the IORP to take them into account to fulfil its fiduciary duty. Some stakeholders in the United Kingdom are also promoting a broad interpretation of members' interest as including their standard of living. As such, investments that could contribute to a higher standard of living in the future – such as healthcare, education, and infrastructure – could also be considered in fulfilling fiduciary duties (Eversheds Sutherland, 2025[20]).

In some cases, member interest is viewed as including member preferences. The Law Commission of England and Wales offered this interpretation of fiduciary duties for pension fund investment, indicating that trustees should be able to consider factors that are not necessarily financially material for the

investment if there is reason to believe that members share that belief and that the consideration of the factor would not result in significant financial detriment (Financial Markets Law Committee, 2024[21]). The United Kingdom's Occupational Pension Schemes Investment and Disclosure regulations require trustees to disclose whether and how they consider the views of their members with respect to non-financial issues in their investment decisions. Nevertheless, in practice interpretations of fiduciary duty still vary widely across the United Kingdom, and many investors remain reluctant to apply this interpretation because the law does not explicitly allow for this.

In the Netherlands, the social partners, government and pension funds signed the Agreement on International Responsible Investment for the Pensions Sector that requires signatories to ensure their members' support with respect to any responsible investment strategy they may implement (Bauer and Smeets, 2021[22]). As such, pension funds commonly survey their social partners and/or members regarding their preferences towards sustainable investment and any non-financial objectives their investment strategies should target. However, while being supportive of sustainable investment strategies, member preferences largely indicate that their main priority remains financial returns, with the majority not willing to sacrifice returns for other objectives. For example, 59% of members of ABP in the Netherlands were supportive of sustainable investments as long as there was no negative impact on returns (Bauer and Smeets, 2021[22]). Another Dutch fund indicated that its members were more willing to sacrifice some return, while acknowledging that the member demographics were skewed towards higher-income individuals, highlighting the importance of also considering member characteristics.

Requirements to integrate sustainability factors into investment and risk management processes make explicit that the consideration of non-financial risks is aligned with the fiduciary duty of pension funds, thereby excluding the narrowest interpretation of fiduciary duty. However, such requirements usually do not go beyond requiring material risks that could impact long-term financial returns. Some jurisdictions have issued clarifications or guidance as to what extent pension funds are allowed to consider sustainability factors in their decisions. In Australia, for example, the regulator has clarified that superannuation trustees should consider material risks linked to ESG factors in their investment decisions and may pursue environmental or social objectives as long as they are consistent with the outcomes sought for members. Norway has required that the government pension fund exclude companies involved in severe environmental or social misconduct.

As a fiduciary duty is a legal concept, differences in legal structures may also explain to some extent the differences in interpretations across jurisdictions. For example, fiduciary duties of plan sponsors in the United States are grounded in trust law developed within the common law system, while in South Africa the legal system has origins in Dutch civil law. These two frameworks take a slightly different approach in how they see the fiduciary relationship. Under common law, fiduciary laws relate to property rights whereas under civil law they relate to contractual rights. The differences in legal structure do not seem to change much with respect to the ultimate goal of fiduciary laws, however, with both aiming to prioritise the best interest of members (Muir, 2022[18]). Nevertheless, companies in civil law countries score higher in their corporate social responsibility performance, meaning they are more likely to take action to improve social welfare. One study found legal origin to be a stronger predictor of corporate social responsibility than political institutions, regulations, social preferences, or a firm's financial performance (Liang and Renneboog, 2017[23]).

The returns generated for members are always fiduciaries' first priority, regardless of the interpretation of fiduciary duty that they apply to their investments. One survey of equity portfolio managers revealed that over two-thirds were not willing to sacrifice returns for environmental or social objectives, regardless of whether their investment fund was sustainable or traditional, primarily because of their fiduciary duties (Edmans, Gosling and Jenter, 2025[24]). Pension investors largely shared this sentiment, indicating that they strive to achieve the best returns regardless any sustainability-related objectives they may have.

3.2.2. Financial results and investment risk management

The view that incorporating risks to the sustainability of portfolios into investment decisions is good risk management and is likely to result in better returns over the long run is the main driver of integration after regulatory requirements. The 2024 survey of PRI signatories indicated that 44% believe taking action on sustainability is important for financial risk and returns. Furthermore, 20% highlighted due diligence as a reason they engage in responsible investment, 16% cited value creation, 16% their long-term horizon, and 14% risk management (PRI, 2025[4]). Another survey of selected investors in the United Kingdom indicated that financial risk was the second most important driver of integration after regulation (Barnett Waddingham LLP, 2025[5]).

Indeed, maximising financial returns over the long term is a key driver for integrating sustainability risks to investment for many pension and insurance investors, who see this as ensuring they are carrying out appropriate due diligence and risk management. As such, this practice is not new for many, who have already been considering sustainability risks in their investment strategies for decades. However, the regulatory requirements drove them to formalise their approach in their processes and governance framework. Additionally, as the sustainability topic became more mainstream, they started communicating more about their approach to their clients as a way to demonstrate the added value they could offer.

3.2.3. Image and reputation

Corporate image has been another strong driver for investors to adopt sustainable investment practices. The 2024 survey of PRI signatories indicated that 20% are motivated to protect their reputation and 14% want to enhance their social license to operate (PRI, 2025[4]). The survey of selected investors indicated that reputational risk was one of the three top drivers for integration (around a third of participants), along with comparison to peers (around 5%) (Barnett Waddingham LLP, 2025[5]).

Investors often link their motivation to their company's purpose and culture. This requires strong and proactive leadership from the executive level, particularly where the regulatory framework is less developed and not requiring change (Lachance and Stroehle, 2021[25]).

Investors are also driven to preserve their reputation, particularly for pension funds and insurers whose inherent purpose is to contribute to social well-being and provide financial protection to individuals. In the United Kingdom, public bodies, including pension schemes, have been more advanced in adopting sustainable investment practices in part because they are subject to the freedom of information act and their activities are more transparent to the public. Corporate disclosure requirements have driven companies to improve their practices to demonstrate that they were doing well and convey a positive image regarding their role in society. For one pension fund in Chile, the social unrest of 2019 was one driver in advancing its sustainable investment practices, as there was demand for increased transparency and pension funds were being severely criticised for not caring about their members or society.

3.2.4. Member and client preferences

Demand for more sustainable investment can also come from members, beneficiaries or shareholders. This has been a key driver for 14% of PRI signatories (PRI, 2025[4]).

When they are supportive of sustainable investment approaches, the preferences of clients and beneficiaries can help to drive the approach taken by the pension or insurance investor. The regulatory framework can also support this. In Europe, Solvency II requires insurers to take into account their client's sustainability preferences in their investment strategies, where relevant. Clients' input can inform the design products that people want to invest in. Shareholder pressure to adopt more sustainable investment practices may also influence investment priorities.

For pensions, member characteristics often influence investment targets, objectives, or exclusions. This is particularly the case when the pension fund is catering to specific professions, like teachers or doctors, who want to support the social causes they dedicate themselves professionally to. Member demographics can also shape objectives, as with Nest's focus on promoting living wages given a significant portion of their membership base is low income (Amundi, 2024[26]). Some funds rely on member surveys not only to gauge appetite for sustainable investments but also to highlight areas that members feel are most important, which can then influence the pension fund's targets and indicators. Nevertheless, the responses to such surveys are likely to reflect the views of the most engaged members, and may not fully reflect the views of all members.

3.2.5. Competition and market practices

The consideration of risks to the sustainability of portfolios in investment processes has become increasingly mainstream, leading to increased integration by investors to remain competitive and because this is becoming common market practice.

Competition with other market players has driven some pension and insurance investors to integrate sustainability considerations in their investment. This has been one driver of some of the more ambitious goals linked to decarbonisation, though these goals have recently become more realistic. Providers of defined contribution pension plans often consider that having a sustainable investment option for their members is a competitive positioning, and easy to do because members always have a choice to elect the option or not. Nevertheless, even when members may be positive regarding sustainable investment options, actual take-up of these options tends to be low, and consumers generally do not fully understand the underlying issues and implications.

In some markets, pension and insurance investors have increased their adoption of sustainable investment practices following the lead of the biggest market players. This is driven not only by the large pension funds setting an example in the market, but also by the asset managers and investment consultants that they work with. The market for external advisers to pension and insurance investors tends to be rather concentrated with a small number of firms dominating the market, so they can play a significant role in expanding sustainable investment practices to their clients who are slower to adapt (Fabian et al., 2023[27]).

Indeed, asset managers have played a large role in expanding sustainable investment practices. This occurred in Japan, for example, after the government Pension Investment Fund (GPIF) was required to consider all financially material factors, including those linked to sustainability, in its investment decisions. This requirement forced its external asset managers to integrate the consideration of these factors into their own processes and procedures, which they expanded to their corporate pension clients, increasing the magnitude of investment considering those factors by six times over 2016-2019 (PRI, 2021[28]). This also happened in South Africa after the government Employees Pension Fund (GEPF), the largest asset owner and pension fund in the country, began considering sustainability risks in its investment processes. Private sector investment managers then became PRI signatories, which ultimately led to a push for regulation to require pension funds to integrate sustainability risks in their investment processes, resulting in the promulgation of Regulation 28 which does just that (Muir, 2022[18]). Ultimately it was then the investment consultants driving pension funds to consider sustainability risks and make improvements in corporate disclosures. Similarly, once the Employees Provident Fund of Malaysia began considering sustainability risks, the asset managers they worked with began to change their own practices to incorporate sustainability considerations in their investment processes.

3.2.6. Structural differences

Structural differences may also influence the extent to which pension and insurance investors integrate risks affecting the sustainability of their portfolios into their investment decisions and processes. Such

factors include the nature of the pension plan or insurance contract for which assets are invested, organisational structures and market fragmentation.

The nature of the pension plan and its underlying investments can impact the ability for plan managers to integrate sustainability risks into their investment processes. Investments for defined benefit plans must aim to sustain adequate funding levels. The increased focus on funding levels has led many defined benefit plans to prioritise limiting the funding risk of plans rather than integrating sustainability risks into their investment decisions (PRI, 2020[19]). Additionally, because investments of defined benefit plans are backing guaranteed liabilities, they tend to have a high proportion of fixed income investments. There are generally fewer sustainable investment opportunities for fixed income investments compared to equity investments, and the opportunities for engagement with the issuers are more limited. For defined contribution plans, underlying investments tend to require more liquidity so they are less able to invest in private markets where there may be more opportunities to take advantage of sustainable investment opportunities (PRI, 2024[17]).

Sustainability risks impact insurance companies on both sides of the balance sheet and are generally less constrained in how they invest compared to pension funds, so the integration of sustainability considerations in their investment processes is more likely to be a priority. Their investment to limit global warming or biodiversity loss can have a direct impact on their future claims, thereby reducing future liabilities in addition to having a positive societal impact. Nevertheless, some insurers, notably in Latin America and Asia, indicated that their investment strategies do not necessarily aim to mitigate such risks on the liability side of their balance sheet. However, they may take other measures to mitigate these risks such as initiatives to educate the population and help them to be better prepared in the event of a natural catastrophe.

Organisational and governance structures may also influence the extent of integration. International financial groups tend to have an advantage in terms of resources available to develop effective integration of sustainability considerations in their investment and risk management processes. In addition, these entities are able to leverage their expertise and experience across the group, facilitating the development of local processes and practices.

Public pension entities that are accountable to the government may be limited in the issues they are able to prioritise in their investments. Such entities may face higher expectations to be aligned with political priorities, even if operating independently, which may also limit the extent to which their priorities in term of sustainability can be influenced by internal views or the preferences of their own beneficiaries.

The proximity of decision making and oversight with investment activities can also be a factor. In the United States, for example, the trustees of corporate pension plans tend not to have proximity to investment activities. These factors can create a lack of incentives to engage in stewardship activities (PRI, 2020[19]).

The extent to which retirement markets are fragmented can be an impediment to pension investors' abilities to integrate sustainability considerations in investment processes. One study relying on PRI membership as a proxy of the prevalence of sustainable investment practices found a positive correlation with the number of asset owners with scale and the overall consideration of sustainability factors across the retirement system, in particular when comparing the United States and the United Kingdom. Retirement systems demonstrating high fragmentation with many smaller funds also tend to face more challenges with respect to governance, resources and expertise (Fabian et al., 2023[27]). Private pension assets are also very fragmented in Japan, where defined benefit plans have been slow to adopt sustainable investment practices (PRI, 2021[28]).

3.2.7. Societal norms and values

Finally, societal norms and values, supported by legal frameworks that enshrine these values, can be an important factor in the adoption of sustainable investment practices. The Constitution in South Africa, for example, grants citizens the right to a healthy environment that will be protected for future generations, in addition to the rights of equality, dignity and freedom. Societal values and beliefs therefore include environmental protection and social equality, which has provided foundational support for sustainable investment and contributed to South Africa's broad interpretation of fiduciary duty. The first four of Sweden's AP funds are required by law to "manage fund assets in an exemplary way through responsible investments and responsible conduct".[5] To fulfil this requirement, the funds take sustainability risks into account in both their investments and their own operations. In France, the PACTE law passed in 2019 introduced the concepts of corporate purpose and mission-driven company. This has encouraged institutional investors to more clearly define their values beyond profit and their contribution to society. Several large investors have since adopted and communicated their values related to sustainability, which also extend to their investment approach.

3.3. Institutional and governance frameworks

Pension and insurance investors are increasingly adapting their institutional and governance frameworks to support the consideration of risk impacting the long-term sustainability of their portfolios and prioritise their integration across the organisation. Boards and senior management are usually involved in establishing priorities, with the development of sustainability policies delegated to supporting committees. The extent to which the organisation has staff dedicated to sustainability efforts also depends on its size, with larger organisations setting up teams dedicated to the integration of sustainability risks not only for investment but also in organisational practices. Organisations also collaborate both within their group and across the industry to share knowledge and best practices and take advantage of potential synergies.

3.3.1. Boards and senior management

Senior management generally defines the priorities related to sustainability. It is usually up to the board to establish the strategic direction and expectations regarding the approach to sustainability. Management must provide the reasoning and rationale behind the strategic decisions and then incorporate that vision into the investment policy and procedures, including any exclusions and the sustainability criteria used. The involvement of senior management is especially important where the investor has impact objectives that go beyond effective due diligence and risk management of their investment portfolio, because these objectives will determine the limits and guidelines around how the portfolio managers can make their investment selections. Their involvement can also speed up the integration process. Executive management can also be responsible for ensuring compliance with the company's policies and monitoring the progress towards any objectives or targets. Board or executives are formally accountable for and have oversight of their company's responsible investment strategy for 91% of PRI signatories (PRI, 2025[4]). This accountability, however, does not impede the delegation of deciding the investment strategy to investment teams, who then have the ability to execute the vision on sustainability in the way they see most appropriate to achieve the investment objectives.

Some entities have set up boards dedicated to sustainability. For example, Allianz has established a dedicated Group Sustainability Board to support the Management Board in its sustainability-related decisions. The dedicated board suggests sustainability-related targets, monitors progress towards those objectives and aims to integrate sustainability considerations in all areas of the business. It also oversees sustainability-related communication and reporting (Allianz, 2023[29]).

Board members may be required to have or to acquire adequate knowledge of issues relevant to sustainability risks. In the Netherlands, good practice is that one board member becomes an expert on the topic and develops their expertise through specialised training if needed. The Dutch Central Bank can refuse the appointment of board members who do not have knowledge about sustainability risks.

Executive-level management commonly oversees the implementation of the sustainability strategy. The Chief Investment Officer (CIO) normally directly oversees sustainable investment activities, though several institutions have also created a dedicated Chief Responsible Investment Officer or Chief Sustainability Officer that does so. A few insurance companies indicated that executive remuneration is linked to sustainability targets to provide incentives to ensure the effective implementation of the sustainability strategy and promote action to make progress towards those objectives and targets.

Senior-level commitment to sustainability is also important to ensure consistency with investment priorities. The opinions and views of the investment teams do not necessarily always align with the priorities and strategy defined by executive management, and the involvement of senior leaders in the organisation can ensure a consistent and coherent view on sustainability risks and opportunities.

3.3.2. Sustainability committees

The development of sustainability-related policies is often delegated to a sustainability committee who advises the decisions of the board. Such committees are more common in medium- to large-sized entities. These committees are usually responsible for developing sustainability-related policies, which can be related to investment and/or corporate policy more broadly. In some cases, the entity may have two separate committees, one for overseeing corporate sustainability initiatives and one for overseeing sustainable investment. These committees can be specialised or have representatives from other relevant teams (e.g. asset management, risk management) to discuss sustainability issues related to their specific areas of expertise. Some entities also have committees specifically focussed on climate and/or environmental risks, rather than covering all risks relating to sustainability. Some pension and insurance investors also have a stewardship committee.

Other entities have chosen to cover sustainability issues within existing committees. As such, the investment committee would also be responsible for overseeing the integration of sustainability risks into investment practices, and the risk committee would be responsible for overseeing risks related to sustainability. This can help to promote a deeper integration of sustainability issues across the organisation, as all areas would be responsible for incorporating sustainability considerations in their day-to-day activities. In Czechia and Ireland, audit committees are required to oversee issues relating to sustainability (OECD, 2025[2]).

3.3.3. Dedicated staff

Smaller entities may lack the resources to set up teams dedicated to sustainability. Instead, they may make certain individuals responsible for ensuring that the investment processes integrate sustainability considerations. Several pension funds in Latin America indicated that there are one or two people in each fund responsible for overseeing sustainable investment practices. Smaller local entities of international groups may also not have dedicated teams, even if the headquarters prioritises sustainability efforts of the group.

Large entities are more likely to have entire teams dedicated to sustainability-related issues. Such teams often sit within the investment department and frequently report directly to the CIO. The team's function is generally to support the investment team in their efforts to integrate sustainability risks and opportunities in investment decisions and align their processes with the strategic objectives of the organisation. Such teams are commonly responsible for co-ordinating across the different investment teams and portfolio managers to ensure a coherent approach across asset classes. These teams can assist the investment

experts to adopt a sustainability perspective for their strategies that is aligned with their investment principle and objectives. They may also be responsible for data analytics and research to inform the investment decisions of portfolio managers. Due diligence procedures for sustainable-focussed investments often go through internal screening with final approval from the CIO and investment committees.

Dedicated sustainability teams can also sit within the corporate affairs department if their activities and mandate are broader than only investment. These teams serve a strategic function that is also linked to the entity's reputation and image. They may work with functions across the organisation to ensure the implementation of the entity's sustainability strategy and can work with investment teams to agree on milestones or targets and monitor progress towards those objectives.

Large groups may have multiple teams dedicated to sustainability, each with a distinct mandate. These teams may oversee the overall corporate sustainability strategy, ensure regulatory compliance, focus on product development and commercial functions, manage external communications and/or collaboration with various coalitions and alliances or other industry-wide sustainability initiatives. Teams may also be responsible for stewardship and engagement activities, often working closely with or integrated into research teams.

Sustainability teams may also serve as internal consultants, working with other areas of the organisation to assist others to integrate sustainability considerations in their own activities. It is common for consulting firms to have specialist sustainability consultants to accompany regular consultants to assist with specific client needs, for example when the client wants to assess their own sustainability strategy. Internal sustainability consultants can also work closely with portfolio managers to develop their investment processes and strategy.

3.3.4. Intra-group collaboration

International groups typically have an advantage in terms of the integration of sustainable investment practices due to their size. The push to integrate sustainability considerations tends to come from the top, meaning that local entities of international groups operating in less advanced markets are often the first movers on sustainability initiatives. Affiliation with a large group also provides the advantage that they can share good practices across the other entities. Entities can leverage experience in the development of questionnaires, for example, or more advanced practices such as scenario analysis.

Nevertheless, it can be challenging to co-ordinate internationally across the group in an efficient manner, and local entities often still face their own resource constraints. Knowledge and methodologies developed at the group level can be shared with local entities, but it can still be difficult for them to replicate with limited resources and adapt the approach to account for local specificities. Additionally, exploiting synergies and avoiding the duplication of efforts across entities can be challenging.

Intra-group collaboration can be a combination of formal and ad hoc interactions, especially where local entities are less advanced in their integration efforts. While there may be formal reporting lines to the group sustainability teams or committees, local teams can also take the initiative to reach out to other entities to collaborate on specific issues.

3.3.5. Industry-wide collaboration

Pension and insurance investors are often members or signatories of standard setting bodies as well as industry alliances and coalitions that aim to advance sustainable investment practices and related objectives and targets. Such industry-wide collaboration can facilitate engagement and stewardship efforts and the sharing of best practices among participants.

Investors most often cite the increased efficiency and effectiveness of engagement and stewardship activities as a key benefit of being involved in collaborative efforts. PRI signatories reported that 48%

prioritise collaborative stewardship for their engagement activities (PRI, 2025[4]). Several pension and insurance investors highlighted that joining engagement efforts along with other investors increased the impact that they could have on their objectives related to sustainability and increased the pressure on companies to change their practices. This can be particularly true for fixed income investment, where individual investors may have less influence on the issuer. Others highlighted that collaboration on engagement helps them save time and resources, particularly on a local level. For example, the Colombian pension fund association Asofondos has set up a committee with its members to facilitate engagement activities at the industry level, saving time for both the pension funds and the issuers.

Many pension and insurance investors also highlight the benefits of collaboration in engagement with policymakers and regulators. Sixty-three per cent of PRI signatories reported engaging with policymakers (PRI, 2025[4]). Engagement as a collaborative effort has aided in getting policymakers to understand how regulations are impacting investors in practice and has helped to drive regulatory changes.

Another key benefit of industry-wide collaboration is the opportunity to share best practices among investors and build knowledge and competence. These initiatives can serve to monitor developments and define industry norms. Collaborative efforts can also allow for the co-financing of research initiatives that individual investors may not have the resources to finance themselves, increasing the expertise on sustainability topics across the industry. Collaborative efforts are often undertaken at a local level, with investors sharing their approaches within a specific field and/or region. Investors within a specific region may work together to adapt international models to the local context, for example, or to have a common interpretation of regulations. Collaboration can also be across public and private stakeholders, as with the Green Agreement (Acuerdo Verde) in Chile, organised with the Treasury, Central Bank, regulators and industry (Ministerio De Hacienda de Chile, 2026[30]). The Green Agreement aims to share views regarding climate risks and opportunities and identify common principles and areas where stakeholders can take action.

Additionally, alliances can serve to drive sustainable investment practices of investors. European pension funds who were members of a net zero coalition are six times more likely to have a climate target and five times more likely to take concrete actions around decarbonisation (Micale et al., 2024[31]). While it may be that those joining such alliances are more likely to be those willing to take action, the alliances themselves can also put pressure on members to do so. This occurred in South Africa, for example, when the PRI threatened to de-register South African signatories who had not met their commitments as signatories, which ultimately led to regulatory change that facilitated their compliance (Muir, 2022[18]). Nevertheless, some have felt that becoming a member of such alliances can sometimes be more for publicity and image rather than conviction, or something that investors feel obliged to do to demonstrate their credibility and commitment to sustainable investment.

3.4. The integration of risks impacting the long-term sustainability of portfolios

While pension and insurance investors vary in how they integrate sustainability risks in their investment policies and decisions, their policies involve similar processes. Processes generally include a) assessing the materiality of sustainability risks and opportunities; b) establishing objectives relating to sustainability and the approach to account for those objectives and identified risks in portfolio construction; c) assessing individual investments (asset selection) given the risks identified and chosen approach; and d) monitoring and managing the risk exposures of the portfolio. This is not necessarily a linear process and may be iterative as investors revise and review their investments and their overall strategy.

3.4.1. Materiality

Pension and insurance investors generally prioritise the inclusion of material risks in their investment processes and therefore must carry out an assessment to determine which risks are material. Financial materiality – or risks that are likely to have an impact on investment returns – is a key determinant of these investors' priorities and the main focus of materiality assessments. Indeed, one global institutional investor survey indicated that 77% prioritise sustainability issues that are financially material (Georgeson LLC, 2025[32]).

Determining materiality is nevertheless challenging for investors, as materiality can depend on many different factors and involves both quantitative analysis and qualitative judgement. Pension and insurance investors may also deem factors to be socially material, to the extent that certain issues may be aligned with their institutional values or the values of the society in which they operate. While these other factors may not necessarily have a direct impact on portfolio returns, they can still have a financial impact for the investor, for example if investing in certain activities would present a reputational risk.

Risks considered most material

Governance is one of the most common risks that pension and insurance investors prioritise, and one which many have long been considering in their portfolio decisions as financially material. Generally, nearly 60% of institutional investors surveyed in Europe, the United Kingdom and the United States indicated that governance was a top priority (McCahery, Pudschedl and Steindl, 2022[33]). Around two-thirds of global institutional investors rank governance issues as the most important sustainability-related consideration in their investment decisions, with the top risk factors being board structure, ownership structure, board diversity and the quality of financial reporting (Larcker, Tayan and Lee, 2024[34]).

Environmental and social issues have been gaining importance in more recent years. Pension and insurance investors indicated that environmental risks are now a key priority, with natural hazards viewed as a significantly material risk. Surveys show that around a quarter of institutional investors prioritise environmental considerations in their investment strategies, and one survey shows climate change as the single most important risk factor for 78% of investors (Larcker, Tayan and Lee, 2024[34]; McCahery, Pudschedl and Steindl, 2022[33]). Climate risk has also become more socially material, with pension funds in Europe facing increasing pressure to no longer invest in oil and gas, though risk from investing in these sectors may also be financially material in light of the potential for stranded assets (Amundi, 2024[26]).

Pension and insurance investors are also increasingly paying attention to biodiversity, which is now seen as a priority for 55% of global investors (BNP Paribas, 2025[35]). In France, it is standard practice for insurers to assess the impact of biodiversity risks on their portfolios. Deforestation is a key risk factor for biodiversity loss, and insurance companies and pension funds are beginning to develop related policies and strategies. One survey of 230 investors in Asia indicated that 21% have taken some action related to deforestation, with asset managers advancing more on this topic than asset owners (AIGCC, 2025[36]). Nevertheless, while investors view biodiversity as an important issue to take into account, several indicated that it is difficult to demonstrate its financial materiality.

While social issues are not the main focus of most pension and insurance investors, with few seeing it as the most important factor, over 70% of global investors still prioritise their consideration (Larcker, Tayan and Lee, 2024[34]; BNP Paribas, 2025[35]). Key social risk factors investors account for include data security, leadership and workforce diversity, employee health and safety, and employee pay practices (Larcker, Tayan and Lee, 2024[34]). Many social issues are also viewed as financially material. NOW pensions, for example, prioritises gender equality as it believes that companies with more gender equality have a competitive advantage and face less reputational and regulatory risks (UNPRI, 2024[37]). Where a social issue is not considered to be financially material, investors may require that its consideration would not present a risk of financial detriment.

Considerations and approaches to determine materiality

The materiality of any given risk factor can vary depending on many contextual elements, and pension and insurance investors adopt a wide range of approaches to determine which sustainability factors are significant enough to incorporate into their investment processes. Materiality assessments often involve a combination of external frameworks and internal tools, as well as both quantitative and qualitative analysis.

A starting point for many financial materiality assessments is the SASB Materiality Map, which identifies the most relevant sustainability risks by industry. The Materiality Map covers 77 industries across 11 sectors, and includes 26 sustainability factors relating to environment, social capital, human capital, business model and innovation, and leadership and governance (SASB, 2025[38]). The Materiality Map highlights where investors may want to focus their due diligence efforts when assessing a potential investment opportunity. While investors find the SASB Materiality Map to be very useful, they also stressed the need to adapt the framework to their specific context. The materiality of sustainability-related factors also depends on geographical and regional differences, the nature of the investment fund, time horizon, and client preferences.

Regional differences are another factor incorporated into materiality assessments. Some sustainability factors may carry a heavier weight in certain jurisdictions, for example in Japan where manufacturing is a large industry with electricity, steel and cement companies producing the most emissions. Some geographies may also be more exposed to certain natural hazard risks, which could have a more significant impact on certain industries than those located in less exposed areas. Local attitudes and priorities may also play a role. One European pension fund found the SASB framework to be too narrow and pointed out that cultural differences also impact their materiality assessment.

The nature of the investment portfolio is another factor to consider for materiality assessments. Defined benefit pension funds tend to be more focussed on financial materiality, whereas defined contribution funds are more likely to consider materiality also from a social perspective, particularly where members have a choice in their investments and the investor is catering more to member preferences. The nature of the pension fund also influences its asset allocation, and the materiality of sustainability risks can vary by asset class.

Time horizon is also important for materiality. Some sustainability risks can become more material over the long term, whereas they may be less material for investments of a short duration. As such, materiality assessments for longer-duration investments – such as those made by life insurers – can be very different from shorter duration investments made by general insurers. For pensions, the demographic profile of members will also influence the investment duration. Many sustainability risks are likely to be more material for younger members who have a much longer investment time horizon compared to members near or in retirement. Nevertheless, not all pension and insurance investors consider time horizon when assessing the materiality of sustainability risks for their investments. This may be in part due to the uncertainty of risk and how it could materialise over the longer term.

Client and member preferences will also influence materiality assessments, particularly from a values perspective. Even if a risk factor is financially material, clients may reject its consideration in investment decisions if it is not in line with their values. As such, one asset manager indicated that it has created a governance and risk monitoring process to ensure a structured framework to assess and report risks and ensure risk awareness, even if the consideration of those risks for investment decisions is not strictly required. Pension funds and insurance companies incorporating client or member preferences often send surveys for feedback from their members and beneficiaries to understand their preferences. A survey conducted by Nippon Life, for example, highlighted that its customers wanted them to prioritise climate risk (UNPRI, 2024[39]).

Pension and insurance investors tend to use a combination of quantitative assessment and qualitative judgement in their assessments of materiality. Many have developed matrices by industry, similar to the

SASB Materiality Map, but adapted to their own views of risks and opportunities. For example, one pension fund has developed a more granular scoring method that also considers country and asset class. Another indicated that it performed a strictly quantitative analysis to identify, via back testing, a specific data point related to sustainability that was correlated with positive returns to inform investment decisions for their global portfolio. Others indicated that they rely primarily on judgement without a sophisticated model, assessing materiality through exchanges across teams and learning from the bad and good practices they observe in each sector. Scenario testing can also be useful to highlight new factors that may not have been previously identified. One insurance company indicated that it considers dynamic materiality and how a risk factor may become more material over time. Box 3.1 illustrates in detail one pension fund's assessment and rationale for the sustainability risks it considers to be material.

Box 3.1. London Pensions Fund Authority's materiality assessment

Responsible Investment Strategy

The London Pensions Fund Authority (LPFA) adopts a responsible investment (RI) approach that recognises the importance of the long-term health and stability of financial markets. The primary objective of RI is to reduce investment risk and improve risk-adjusted returns. LPFA's RI approach is focussed on two key practices:

- incorporating material sustainability factors into investment analysis and decision making
- actively exercising ownership rights to promote sustainable value creation.

LPFA evaluates sustainability factors on a case-by-case basis to determine their materiality, considering global standards rather than applying blanket exclusions. Sustainability factors are considered over the time horizon within which specific investments are likely to be held to provide context for how risks and returns may develop and aid in assessing investment opportunities.

RI Framework

LPFA structures its RI strategy around four strategic pillars that set the fund's long-term priorities and define how sustainability factors are incorporated across asset classes. These pillars establish four areas of financial risk and opportunity that are considered most material to the fund and are then translated into six themes that guide the practical application of the RI approach.

RI Pillars

- ***Climate Change***: LPFA sees climate risk as a systemic and long-term financial risk with implications for all asset classes, affecting portfolio returns, valuations and allocation decisions.
- ***Natural Capital***: Declining biodiversity, ecosystem degradation and resource constraints create material financial risks by affecting production systems, supply reliability and operating costs. These factors can influence asset valuations, sector performance and long-term portfolio resilience.
- ***Just Transition***: Workforce adaptation, public health, equity, access to technologies and broader social cohesion are considered critical to ensuring transition is effective and supportive of long-term financial stability.
- ***Strong Governance***: Transparency, accountability and oversight help limit operational and regulatory exposures. Effective governance supports better risk management and resilience against governance failures and cyber threats.

RI Themes

The six themes translate these pillars into core focus areas, guiding capital allocation and engagement priorities towards sectors aligned with RI objectives and supporting the identification of material sustainability risks and investment opportunities. The themes are often inter-linked and may relate to multiple pillars. They include:

- Renewable Energy Solutions & Distribution
- Pollution and the Circular Economy
- Fair Pay
- Diversity, Equity and Inclusion
- Accountability and Oversight
- Cybersecurity and Responsible Technology Development.

Source: LPFA (2023[40]), Responsible Investment Policy 2023, https://www.lpfa.org.uk/download/LPFA%20Responsible%20Investment%20Policy%20Final%202023.pdf.

3.4.2. Objectives and approaches to portfolio construction

Pension and insurance investors can generally take either a top-down or bottom-up approach to integrating sustainability risks into their investments. Top-down approaches are normally driven by strategic considerations and high-level objectives, and are often linked to strategic asset allocation, such as targeting a specific percentage of fixed income investment in green bonds. Bottom-up integration, in contrast, is more about the analysis and selection of individual securities. Top-down approaches have the advantage of allowing for a more consistent approach across investment portfolios, but can be more disruptive to the investment process and existing asset allocations (Lee, 2023[41]). In practice, pension and insurance investors often combine both approaches, but seem to rely more on a bottom-up approach considering sustainability risks when selecting investments. Investors also employ a range of methodologies to account for material sustainability factors when constructing their portfolios, which can involve both top-down and bottom-up integration.

Investment objectives related to sustainability

Pension and insurance investors taking a top-down approach are often guided by specific goals or targets relating to sustainability. Targets linked to emissions reduction are one of the most common targets. Achieving net zero by 2050 is cited as a target by nearly a quarter of public pension and sovereign wealth funds (UNCTAD, 2023[42]). Another survey of pension plans indicated that 70% are adopting net zero targets (Amundi, 2023[43]). One reason that net zero targets are common is because emissions data are more readily available, facilitating the monitoring of progress towards the target. Some investors nevertheless criticise net zero targets as ignoring the ultimate objective of reducing emissions for the planet, rather than simply for the portfolio. Higher emissions from certain companies may not be negative to the extent that they are able to manage their activity more efficiently than others, and diverting financing away from companies contributing to the transition could be detrimental to the objective of reducing emissions for the planet.

Pension and insurance investors may also link their sustainability targets with other frameworks, the most common being the United Nation's Sustainable Development Goals (SDGs). Over half of PRI signatories reference the SDGs in their investment policies (UNPRI, 2025[44]). Similarly, nearly half of public pension and sovereign wealth funds consider at least one SDG in their investment selections, a proportion that has been increasing rapidly over recent years. Nevertheless, some funds treat the exercise of reporting on

SDGs as a mapping exercise rather than using the framework to guide their investment strategy (UNCTAD, 2023[42]). Other frameworks that investors commonly reference include the Paris Agreement, the UN Guiding Principles on Business and Human Rights, OECD standards (notably the OECD Guidelines for Multinational Enterprises on Responsible Business Conduct and Guidance on Responsible Business Conduct for Institutional Investors), and the EU Taxonomy (UNPRI, 2025[44]). Asset owners more commonly reference such frameworks in their investment policies than asset managers (UNPRI, 2025[44]).

For pension and insurance investors, the consideration of factors linked to sustainability tends to be primarily driven by their focus on optimising returns and risk management. As such, they do not necessarily have specific goals or targets linked to sustainability, and consider sustainability factors as an inherent part of their investment selection process. Some pension investors do not have targets linked to sustainability because they view such targets as a conflict with their obligations to achieve the best returns for their members since targets could limit their investable universe. While most investors are focussed on risk mitigation, they may still invest for a positive impact where it is also expected to enhance returns, for example, by investing in communities to allow businesses to continue operations over the long term.

Additionally, many investors do have climate commitments even if they may not have specific targets, which can allow them to have more flexibility regarding their investment selection. Among PRI signatories, 69% have a climate policy, even if they may not have specific climate-related targets (UNPRI, 2025[44]). The focus on climate is even higher among public pension and sovereign wealth funds, with over 80% having a strategy to manage climate risk or reduce emissions (UNCTAD, 2023[42]). Portfolio decarbonisation is a priority for nearly three-quarters of global investors, and 45% of investors surveyed in Asia have adopted investment policies to move away from fossil fuels (BNP Paribas, 2025[35]; AIGCC, 2025[36]).

Investment approaches to account for sustainability in portfolio construction

Pension and insurance investors take a variety of approaches to integrate risks affecting the sustainability of their portfolios when constructing them. Using criteria to exclude certain investments from consideration is a common first step in the process. Investors may also apply a positive screen to select investments, invest in certain sustainability-related themes, or integrate the analysis of sustainability risks and opportunities from the bottom up when carrying out due diligence on potential investments.

The investment approach taken can be linked to the nature of the particular risk and whether it is financially material or material from a societal or values perspective. Exclusions and screening tend to be more values-based, whereas broader integration is more focussed on risk and returns. Thematic and impact investment can relate to both, aiming for example to further certain sustainability-related objectives while also taking advantage of investment opportunities where innovative companies are looking to address certain problems in society.[6] Box 3.2 describes how one investor views and integrates these different approaches.

Pension and insurance investors increasingly employ exclusion criteria to account for broader sustainability considerations, in particular those relating to climate and emissions. The proportion of public pension funds and sovereign wealth funds relying on exclusion criteria or negative screening increased from 40% in 2020 to 63% in 2023 (UNCTAD, 2023[42]). Historically, exclusion criteria have been linked to international standards and norms or legal requirements, with common exclusions linked to child labour, controversial weapons or human rights violations. Tobacco has been another, commonly cited, values-based exclusion. Such criteria are often linked to perceived reputational risk. More recently, exclusion criteria more often include environmental factors such as coal or oil. Pension and insurance investors are also considering whether and how to adjust their exclusion policies as societal values evolve, for example with respect to nuclear or conventional weapons and defence.

Box 3.2. Aon's Global Responsible Investment Policy Framework

Aon applies a framework centred on a spectrum of responsible investment strategies that range from financially motivated to values motivated, or a combination of both, enabling investors to select and integrate approaches aligned with their specific objectives when constructing portfolios in line with client mandates.

Table 3.2. Aon's approaches to responsible investment

Motivation	Approach	Description
Financial	Integration	The systematic identification and analysis of financially-material sustainability risks and opportunities, including environmental, social and governance (ESG) factors, to inform both asset valuations and selection, and improve long-term risk adjusted returns. Integration is purely financially motivated, not a values-based activity.
Financial or values	Stewardship	Exercising ownership rights to preserve and enhance the long-term value of assets and, in some cases, to promote social or environmental outcomes, including supporting a well-functioning financial system.
	Thematic	Thematic investments target ideas or structural trends that do not fit squarely into existing industry classifications or asset classes. This may include actively managed investments in sustainable themes.
Values	Impact	Seeking positive social and/or environmental outcomes alongside financial returns. "Impact investing" involves some trade-offs between the financial and impact goals, and investors can choose the relative priorities of each. Sometimes impact investors classify themselves as "finance first" or "impact first" to articulate their preferences for tradeoffs, though this is a spectrum rather than binary preference.
	Screening	The exclusion of or divestment from assets or companies that may not be aligned to an investor's objectives, values or policies.

Source: AON (2023[45]), Global Responsible Investment Policy, https://www.aon.com/getmedia/b9490828-4267-4943-9526-1bbfc1ce8da1/global-responsible-investment-policy.pdf.

Not all pension and insurance investors rely on exclusions, and even those that do may use some discretion in their application. Some may not apply broad exclusions on principle, with the view that they can have a more positive impact by remaining invested and engaging with the company in question to improve their practices. Nevertheless, they may still be willing to apply exclusions on a case-by-case basis.

Positive screening is also prevalent. Among public pension funds and sovereign wealth funds, 40% rely on positive screening for investments (UNCTAD, 2023[42]). In the United Kingdom, 80% of pension funds operating as a defined contribution master trust have employed positive screens or tilts for most of their default investment strategies (Simon and Greenwood, 2024[46]). One common positive-screening approach is best in class, where investors select investments that are the best performers in their sector. One survey indicates that 46% of investors globally employ a best-in-class strategy, and investors in the EMEA region are more likely to rely on this strategy compared to investors in APAC or the Americas (BNP Paribas, 2025[35]).

Interest is also increasing in thematic investment to integrate sustainability considerations into investment portfolios. Around 50% of investors globally employ thematic investment strategies, with little variation across regions, and just under 40% use impact investment, with more investors using this strategy in the EMEA region (BNP Paribas, 2025[35]). Around 70% of public pension and sovereign wealth funds incorporated thematic or impact investment in 2022, though this proportion has decreased slightly since 2020 when this was the most common strategy employed (UNCTAD, 2023[42]). Defined contribution plan providers in the United Kingdom are also increasing the proportion of their investments in impact funds (Simon and Greenwood, 2024[46]).

A bottom-up approach of general integration of sustainability risks in asset selection remains quite common, as pension and insurance investors tend to be focussed on the risk and return characteristics of

investments. All interviewed investors indicated that they actively consider material risk factors in the selection of their investments, including those related to sustainability, though they may not do so to the same extent across all asset classes.

The integration approach may also depend on geography. For insurance companies and pension funds in small or concentrated markets, some exclusions may not be practical because it would eliminate a large proportion of local investment opportunities.

The inclusion of sustainability considerations for investment decisions may also lead to under- or over-weighting regions or sectors. Emerging markets tend to be more exposed to climate risk and underperform on ESG ratings. Bias in certain markets may also result from differences in company sizes and a lack of availability of standardised data. Fossil fuel exclusions can lead investors to be underweighted on energy, and investing in the transition can lead to increased investment in technology (Amundi, 2024[26]).

Such tilts can also lead to increased tracking risk where fund performance is compared to average benchmarks that do not account for sustainability factors. One pension fund in Australia indicated that it had to adjust its exclusion policy because the trustees did not want to take the additional benchmark risk given the government mandated performance test, particularly given the concentration of the market. Nevertheless, tracking risk does not always seem to be an issue. Another European pension fund indicated that it has little tracking error for its listed equity portfolio despite integrating sustainability goals.

3.4.3. Integration of risks to the sustainability of investments in asset selection

Most pension and insurance investors systematically integrate the consideration of material sustainability risks into their decisions to invest for both the selection of investments managed internally as well as the selection of external investment managers.

Integration for internally managed investments

The integration of risk to the sustainability of investments into the selection process for internally managed investments involves assessing the material risks and opportunities identified and using that information to inform investment decisions. This first requires the collection and analysis of relevant information and data to evaluate investment opportunities. Insurance companies and pension funds then need to adapt their investment processes and methodologies to account for that information and inform their investment decisions. The level of detail and extent of integration can differ across asset portfolios, and pension and insurance investors have tended to gradually develop and expand their processes as they gain experience and resources.

Information and data collection

Pension and insurance investors commonly rely upon external data and research as well as internal research and assessment in their analysis of sustainability risks to inform their investment decisions. Many insurance companies and pension funds begin integration by relying on external data providers who offer research and analysis on sustainability risk to investors for a fee. Providers offer numerous products and services to inform investment decisions (Table 3.3). These products include data, the screening and monitoring of companies against specific criteria, and the rating or ranking of companies based on sustainability criteria, among others.

Table 3.3. Data providers' products and services for investors

Product	Description
Data	Provides quantitative and/or qualitative information on sustainability-related indicators
Norms assessment	Assesses practices against international norms and frameworks, such as UN or OECD guidelines
Screening	Screens investees' involvement in specific activities, e.g. weapons, tobacco or coal
Controversy monitoring	Monitors involvement in controversies or other events that may present reputational risk or misalignment with investor policies
Ranking	Lists or classifications of companies or products based on a defined grading system
Ratings	Scores for investments (e.g. green bonds), companies or countries based on proprietary or customisable sustainability metrics and weightings
Impact assessment	Assesses impact of activities on sustainability-related goals or outcomes, such as the UN SDGs

Source: Adapted from the European Union (2021[47]).

Smaller insurance companies and pension funds and those who are at an earlier stage of integration tend to rely more heavily on ratings, which provide a score for companies based on a weighted calculation of sustainability metrics. The most common data providers identified by investors are MSCI (Box 3.3) and Sustainalytics. The choice may depend on coverage and specific issues observed in their market.

Box 3.3. MSCI ESG Ratings and Data

MSCI is a major provider of financial market indexes and analytics, including sustainability data and ESG ratings used by investors globally to assess sustainability-related risks and opportunities.

ESG Ratings

MSCI's ESG Ratings are designed to assess a company's resilience to long-term, industry-specific sustainability risks and opportunities. They focus on how well a company manages those risks relative to peers in the same industry.

Institutional investors use MSCI ESG Ratings to monitor and compare sustainability risk exposures across portfolios. For its ratings MSCI assigns a letter rating from AAA to CCC. This industry-relative scale enables comparisons of sustainability risk management among companies in the same sector.

Data and methodology

MSCI aggregates and standardises thousands of data points from multiple sources, including:

- public disclosures (company reports, regulatory filings)
- alternative data (government and non-governmental organisation sources, third-party content)
- controversies and governance outcomes
- governance structures (e.g. board composition).

MSCI provides its ESG ratings and related data through subscription services, offering tools and research that investors can use to analyse and compare sustainability risks across companies and funds.

Source: MSCI (2026[48]; 2024[49]), ESG Ratings, ESG Ratings Process Methodology Document, https://www.msci.com/data-and-analytics/sustainability-solutions/esg-ratings , https://www.msci.com/downloads/documents/access/sustainability-and-climate-resources-and-disclosures/msci-sustainability-and-climate-methodologies/esg-ratings/core-methodologies/esg-ratings-methodology.pdf

Insurance companies and pension funds are increasingly moving away from relying primarily on ratings and using them more as an input to their own analysis of sustainability risks and opportunities. This is partially in recognition of the well-documented shortcomings of ratings, including a lack of transparency and comparability in their methodology, their bias towards larger companies and regions with higher reporting requirements, as well as concerns around potential conflicts of interest and excessive focus on company policies rather than actual impact (OECD, 2025[50]; IOSCO, 2021[51]; Publications Office of the European Union, 2021[47]). Standardised ratings also do not necessarily account for local specificities, particularly around social and governance issues, because of geographical and cultural differences. Pension funds may still use ratings to have an indication on where the potential gaps are and where they need to focus their own analysis. Larger pension and insurance investors, in particular asset managers, rely very little on ratings, emphasising the importance of having their own view and narrative around sustainability issues to inform their investment decisions.

Pension and insurance investors also reported relying on other products from data providers. Screening services are used to ensure investments comply with international norms and conventions and to monitor controversies. However, the use of controversies also has its limitations, as these measures tend to focus on issues arising in a company's operations or supply chain rather than on the quality of their due diligence and risk management procedures (OECD, 2025[50]).

Many pension and insurance investors rely on data providers for the data they use in their own analysis of sustainability risks and opportunities. Asset managers commonly rely on multiple data providers, doing much of their data analysis and assessment in house. However, the number of providers has declined as the market has become more consolidated and mature. Criteria used for the selection of data providers include data reliability, the stability of the company and the coverage across sectors.

Data is reported as the largest barrier to the integration of sustainability risks to investment. Cost, poor quality and inconsistency across vendors are commonly reported challenges (BNP Paribas, 2025[35]; Russell Investments Research, 2024[52]). Pension and insurance investors noted that they have little power to negotiate with data providers because the market is so concentrated. Some providers may, however, offer some flexibility in their pricing depending on how they provide the data, for example if they just provide the cleaned data rather than prepared and aggregated data. Investors also expressed frustration that they have little flexibility to change providers. One reason for this is because it is expensive to do so, as they then have to adapt their own processes and data interface to accommodate the data format of the new provider. Another reason is because data coverage can be very limited in some geographies or sectors, with only one provider, if any, providing data for that area, so investors may not even have the option to select another provider. There can also be an issue with the duplication of cost and effort, with the same data coming from multiple sources including the investor's own research.

Pension and insurance investors also have concerns around the quality of data, noting inconsistencies and discrepancies across providers. In addition, it is hard for investors to assess and verify the quality of the data provided given the sheer volume of data. Having the resources to process and use the data, and not necessarily the cost of the data itself, can be the biggest challenge. The subscriber-fee model, where investors pay providers for their products, may also put pressure on providers to increase the quantity of data provided even if they cannot assure the robustness and quality of that data (IOSCO, 2021[51]). Nevertheless, investors interviewed remarked that data quality had significantly improved in recent years.

While data providers remain an important source of information for pension and insurance investors, they also rely on other sources of information to inform their analyses. This is similar for investors more broadly, with one survey reporting that the main source of qualitative data on sustainability for around one-quarter of investors is their own engagement with the companies they invest in. A slightly lower proportion rely mainly on company reports and external vendors (Russell Investments Research, 2024[52]).

Pension and insurance investors regularly engage with potential investee companies to collect company information that may not be publicly available. Companies generally seem to be open to sharing information

with investors, particularly given the weight that larger investors have in smaller markets. Indeed, companies may be more interested to engage with investors on sustainability issues than they are with data providers and may even proactively engage with some investors (Publications Office of the European Union, 2021[47]). Many investors indicated that they rely on questionnaires that they send to companies, which help them to identify potentially material risks.

Getting information from investees is especially important for investments in the private market where less information is publicly reported. These can include specific audits on social risks with lower visibility, such as supply chain governance or labour violations. Investors may not consider investing in a company that does not respond to their request for information. Nevertheless, completing separate questionnaires for each investor is burdensome and resource-intensive for companies. Some jurisdictions such as Mexico are therefore making efforts to co-ordinate and standardise the information required by the market.

Pension and insurance investors also engage with companies to encourage them to collect and provide more data in areas where it is less available or to identify risks they may not be accounting for. Several mentioned, for example, that they are engaging with companies on biodiversity to provide more data and inform the development of related metrics as a longer-term goal, even if they are not currently using this information to inform their investment decisions. Thematic research on certain issues, such as human rights, can help to identify data or metrics to use to assess those issues.

Data providers and pension and insurance investors are increasingly leveraging technology to facilitate the collection of data and expand the data sources and metrics that they rely upon to assess sustainability. Artificial intelligence can help to automate data collection processes and facilitate the collection of company data. Some investors are also using satellite imagery to inform their assessment of environmental risks, such as wildfires or deforestation. Artificial intelligence can also facilitate the collection and use of unstructured data from public sources, such as social media, to provide insights into company practices and culture.

Investment processes and decisions

Pension and insurance investors compile the information from external providers, companies and their own research to inform the investment decisions they take. They often do this by calculating a score for companies or developing other metrics or models to assess sustainability risks or the impact of a potential investment on sustainability-related objectives.

A common approach that investors use to assess a potential investment is to calculate a rating or scorecard for each company or investment. Such scores are often similar to the sustainability ratings calculated by external data providers but integrate additional data or insights the investor has collected and aim to better reflect the investor's priorities and investment philosophies. It is useful for the investment managers themselves to develop the metrics used to score investments rather than relying on third-party ratings because they can better ensure that the underlying metrics are reflective of the risks they want to focus on and their investment philosophy.

The factors considered in the score can reference specific themes reflective of those priorities, such as climate, corporate governance or human rights. The approach to calculate the rating often varies by sector and may also be used to rank companies' performance within their sector compared to their peers. The scores can also lead to less granular scores, for example grouping investments into three categories of good, average, and poor to provide an indication of the potential sustainability of an investment. While some pension and insurance investors have a separate sustainability score for their investments, others define a weight for sustainability factors and integrate that information with other risks to have an overall score for an investment that accounts for all risks.

Some pension and insurance investors develop more elaborate internal tools to assess investments against specific objectives or risks, such as emissions targets or limits. Such tools can be used to optimise

portfolio construction given sustainability and other risk and return criteria. Models can be strictly quantitative relying on criteria that are correlated with positive risk premia, but this can be more difficult for sustainability criteria where expected negative impacts on returns have not necessarily been observed in the past. More often, models involve some level of judgement about how sustainability risks or opportunities may affect future returns. Developing internal tools focussed on sustainability criteria can nevertheless be quite costly, so pension and insurance investors who do so tend to be those who have more resources or who aim to differentiate themselves in the market with their focus on sustainability.

Internal ratings and models are then used to inform the investment decisions of portfolio managers. Often investment managers use these outputs to inform their judgement rather than relying on them to determine their portfolio construction. For example, lower sustainability scores can lead to a lower weighting of certain sectors in the portfolio. Some pension and insurance investors use model outputs to indicate soft limits. For example, where an investment falls outside a certain threshold, the investment managers may need to justify further their decision to invest and get additional approvals, but they are not necessarily prevented from investing. Occasionally model outputs represent hard limits where investments that do not obtain a minimum rating cannot be considered.

Opportunities and challenges for integration across asset portfolios

Pension and insurance investors' approach to integrating sustainability risks to their investment often varies across their different investment portfolios (Box 3.4). Additionally, many indicated that they took a gradual approach to integration, beginning very simply with passive sustainability funds or specific asset classes such as listed equities where integration is easier. Indeed, investors most commonly integrate sustainability considerations into their equity portfolios (23% of assets in portfolio), followed by private equity (17%), fixed income (15%), infrastructure (15%) and real estate (14%) (BNP Paribas, 2023[53]).

Box 3.4. Provida's approach to the integration of sustainability risks by asset-class

Provida AFP in Chile applies a differentiated approach to the integration of sustainability risks across portfolios and asset classes. While it employs a top-down responsible investment policy and has PRI commitments providing the overarching framework, the specific tools and weighting schemes used vary by asset class, reflecting differences in data availability, risk profiles and investment processes. Provida has progressively expanded the incorporation of sustainability risks since 2019, and by 2024, 64% of total assets under management (34% equities, 27% fixed income, 3% alternatives) were invested using processes that explicitly integrate sustainability considerations.

Local equities

Integration is most advanced in Provida's internally managed equity portfolio. A dedicated *Manual for Equity Selection* defines a scoring system based on fundamentals, valuation, and sustainability risks. Analysis of these risks is embedded through monthly monitoring and includes metrics tied to sustainability issues, as well as transition and other climate-related risks. These factors form a distinct component of the overall equity evaluation process used by the investment team.

Mutual funds and ETFs

For indirect equity and fixed income exposure through mutual funds and ETFs, the fund selection model incorporates sustainability criteria differently than direct holdings. Sustainability factors contribute to the quartile ranking system used to set internal investment limits. Monitoring is conducted quarterly by the Financial Risk Management unit, and sustainability risk assessments rely primarily on data from external providers, with a focus on identifying climate related risks and opportunities at the fund level.

Local fixed income

Integration in fixed income follows a risk management-oriented approach. The "*Credit Risk System"* assigns scores to issuers based on qualitative and quantitative credit metrics that incorporate sustainability factors. Crisis simulations, issuer specific materiality, and climate risk considerations feed into the scoring and are reviewed quarterly by the Credit Risk Committee. Given the different informational environment relative to equities, sustainability risks represent a smaller but explicit component of the assessment framework.

Alternative assets and private markets

For alternative investments the emphasis is on information gathering and due diligence. Provida relies heavily on company or manager provided disclosures, including questionnaires and case specific risk analysis, to evaluate material sustainability risks and climate factors in contexts where public information is limited. These assessments are used to monitor risks and identify gaps in sustainability practices within the underlying assets.

Source: Provida AFP (2025[54]), Reporte Integrado 2024, https://www.provida.cl/content/dam/metlifecom/provida/images/newweb/pdf-new-page/memoria-anual/memorias-anuales/reporte-itegrado-proVida-afp-dise%C3%B1o.pdf .

The options to integrate sustainability considerations for passive investments are rather limited. Investors cannot do much more to integrate sustainability into their passive investment strategies beyond voting and stewardship efforts with the investee companies. However, investment funds or ETFs that have a sustainability-linked objective or follow a benchmark integrating sustainability factors, such as a climate transition benchmark, can also be a simple area for investors to begin integrating sustainability in their investment decisions in a passive manner.

Listed equities tend to be the easiest portfolio for integrating sustainability risks, as more data to assess sustainability-related risks and opportunities is publicly available. As such, it is another common starting point for investors to begin integration. Investors can also influence investees' business practices by voting in shareholder meetings.

Integration for fixed income portfolios is more difficult, which poses a particular challenge for pension and insurance investors who tend to have a larger proportion of their investments in fixed income. There is limited opportunity for investors to influence investee practices as they cannot vote in shareholder meetings, which also means that integration for fixed income portfolios is more focussed on mitigating risks than taking advantage of opportunities. Some investors indicate that they rely primarily on ratings for the integration of sustainability considerations into their fixed income portfolio, potentially combining a sustainability rating with the credit rating. This may also include reliance on sovereign ESG ratings for the decision to invest in sovereign bonds, though one pension fund reported that it does not rely on sovereign bond indices because it was not comfortable weighing climate issues against corruption issues.

Many pension and insurance investors have looked to green bonds to have more sustainable fixed income portfolios. Some evidence indicates that pension funds invest more in green bonds compared to other investors (6.9% compared to 4.3% for insurers and 1.9% for banks), and that they do not seem to be sensitive to price (Boermans, 2023[55]). Indeed, green bonds can be oversubscribed in some jurisdictions, with returns that are not competitive with government bonds, which may make it hard to rationalise their investment especially where governments' agendas prioritise addressing sustainability issues. In addition, it can require significant resources for investors to perform appropriate due diligence to ensure the proceeds from green bonds are actually going towards the promised outcomes (Fixsen, 2025[56]). However, some investors indicated that more stringent rules and criteria for green bonds have helped in this regard.

There is significant opportunity for integration of sustainability risks in alternative assets, such as private equity and real assets, though this should be done in line with the investment policy and mandate. Sustainability considerations for real assets such as real estate and infrastructure can be especially important given that they tend to be more susceptible to natural hazards. However, there can be challenges around liquidity and the lack of publicly available data to assess investment opportunities in private equity, which increases the resources required to ensure adequate due diligence for investments.

Many investors prioritise integration for their local assets where they are more familiar with the markets and potential risks and opportunities. It can also be easier for pension and insurance investors to engage with local companies to obtain information, and they often have a larger influence in their local markets due to the size of their investments. Nevertheless, for smaller markets this can also mean that investors cannot exclude any investment opportunities strictly based on sustainability considerations because local investment opportunities that meet investors' risk and return criteria can be more limited.

The nature of the pension or insurance business is also an important consideration for integration. Integration tends to be easier for portfolios with longer durations, not only because sustainability risks and opportunities can take longer to materialise but also because investors have fewer reasons and opportunities to engage the issuers of short-term assets. As such, integration is likely to be higher for life insurance compared to property insurance. Nevertheless, some sustainability-related risks, such as climate, are very relevant for even the short-term investments of property insurers because of the link to insurance losses. For pensions, the opportunities for integration for defined contribution plans may also be lower compared to defined benefit plans because of frequent valuation and liquidity needs.

Integration for externally managed investments

Pension and insurance investors often engage external managers to select and manage at least a portion of their investments. As such, the managers and the funds they select need to be aligned with the investment philosophies, priorities and objectives of the asset owners.

Most pension and insurance investors therefore have a formal selection process for external asset managers to ensure alignment (e.g. Box 3.5). Nearly all PRI signatories report that their assessment of external managers includes how the managers consider sustainability in their investment processes (UNPRI, 2025[44]). Assessment criteria can include the resources and expertise of managers, how they use research to inform their investment decisions and the decision-making process, the integration of sustainability issues prioritised by the asset owner, voting and engagement practices and the related investment and engagement outcomes. While it is more common to assess external asset managers at the time of selection, many pension and insurance investors also monitor their performance and practices relating to sustainability.

Box 3.5. Mercer's external asset manager selection process

A significant share of Mercer's clients invest through fiduciary arrangements in which Mercer Investment Solutions (Mercer IS) acts as the discretionary investment manager. Mercer IS does not directly select securities. Instead, it appoints specialist third-party investment managers to implement investment strategies designed to meet Mercer IS's policy and sustainability requirements. Under these delegated mandates, most clients' assets are invested in a suite of specialist multi-client funds managed by external investment managers appointed by Mercer IS. Clients accept that they may not have the ability to directly influence the approach taken by managers to integrate sustainability and stewardship considerations, however, they do expect Mercer IS to manage their assets in line with their best interests and agreed mandate. These third-party investment managers manage strategies tailored

to meet Mercer IS's specific policy requirements which are combined into Mercer Funds, and for certain clients, these funds are combined into portfolios.

Mercer incorporates sustainability considerations into its investment manager selection process primarily through its ESG ratings, which serve as a core input into manager research and selection. These ratings assess the extent to which investment managers integrate ESG factors and stewardship practices into their investment processes, including the robustness of governance structures, resourcing, and alignment with Mercer's sustainability priorities depending on the investment strategy (Table 3.4).

Table 3.4. Mercer's ESG Ratings for investment managers

	ESG1	ESG2	ESG3	ESG4
Active	Leading approach to integration, where ESG is embedded in investment philosophy, strong on stewardship which is a core part of the process.	Consistent and repeatable process to ESG integration (focus on risk management), well-developed evidence of stewardship.	Well-developed integration of governance factors, less consistency in environmental and social factors, stewardship process is ad hoc, but indications of progress.	Little or no integration of ESG factors or stewardship into core processes and no indication of future change.
Passive	Leaders in voting and engagement across ESG, stewardship activities and ESG initiatives undertaken consistently at a global level, clear link between engagement and voting actions.	Strong approach to voting and engagement across ESG topics and initiatives at a regional level, with progress made at a global level, working towards clear links between voting and engagement.	Focus of voting and engagement tends to be on governance topics only, or more regionally focussed with less evidence of environmental and social factors (in voting and engagement, as well as other internal ESG initiatives).	Little or no initiatives taken on developing a global voting and engagement capability, reactive engagements and little progress made on other ESG initiatives.

Source: Mercer, (2024[57]), Mercer Investment Solutions 2024 Sustainability and Stewardship Report, https://investment-solutions.mercer.com/content/dam/mercer-subdomains/delegated-solutions/responsible-investment/Mercer%20Sustainability%20and%20Stewardship%20Report.pdf

Mercer complements the ratings with systematic monitoring of managers' stewardship activities. Assessments consider how investment managers incorporate Mercer's global engagement priority themes – climate change, biodiversity and natural capital, labour practices and human rights, and diversity, equity and inclusion – into their investment processes and active ownership practices.

This analysis is supported by MercerInsight, Mercer's digital investment analysis platform which collects structured data from investment managers and provides tools to convert these data into charts, tables, and comparative analytics. The platform enables Mercer to holistically evaluate managers' approaches to sustainability integration, covering policies, governance, resourcing, investment decision-making, stewardship activities, and thematic issues such as climate risk, biodiversity impacts, and diversity and inclusion.

Source: Mercer (2024[57]), Mercer Investment Solutions 2024 Sustainability and Stewardship Report, https://investment-solutions.mercer.com/content/dam/mercer-subdomains/delegated-solutions/responsible-investment/Mercer%20Sustainability%20and%20Stewardship%20Report.pdf

Assessments of external managers vary to the extent to which they are standardised or adapt to different managers and approaches. The first step to assess external managers is often based on a questionnaire. Some assessments follow a more automatic approach based on a checklist. Procedures may also be more automatic for asset classes where more information is available, such as listed securities. However, more involved procedures aim to take a more principles-based approach to avoid ticking boxes and to better understand the manager's philosophy. Processes can also vary by asset class given the necessary

differences in integration approaches across portfolios. This can involve additional data collection and meetings with the manager to have a more holistic assessment. Such assessments can involve more judgement based on the engagement and interactions with the managers and the resulting understanding of how they incorporate sustainability frameworks into their investment processes.

The assessments of external managers often result in a rating or scorecard. These can be a ranking of managers or a classification grouping managers into one of three categories of integration (e.g. low, average, high). Some assessments result in a specific sustainability rating for managers, but may also include financial performance criteria to provide a more complete view of the quality of the manager. Consultants often perform their own assessments of external managers to develop ratings to share with their clients. Some investors rely more on interactions with the external manager to assess whether their practices are in line with investment policies rather than any scoring system. Others actively try to influence and improve the practices and procedures of the external managers they assess rather than just take the resulting rating as given. In these cases, the teams in charge of selection will engage with the external manager to indicate areas where they could improve and better align their practices with key sustainability priorities.

Investors may have hard limits for whether they can engage an external manager or not. Some hard limits include involvement in legal controversies, misalignment with sustainability philosophies and objectives such as decarbonisation, or failing to obtain a minimum rating or score from the assessment. Others have not defined a minimum performance that would preclude working with an external manager. However, even if the external manager is considered acceptable, several investors highlighted that it was rather challenging to then ensure the investments made by external managers are actually in line with internal policies and objectives.

3.4.4. Risk management

Pension and insurance investors are also active in monitoring the risks in their portfolio and taking action to manage and mitigate those risks. They rely on various metrics, tools and methodologies to assess risks, often with a focus on a specific theme such as climate. Stewardship and engagement activities are core to the management of sustainability risks, with investors using their financial power to influence companies to adopt more sustainable practices.

Risk monitoring and assessment

Many pension and insurance investors develop metrics and measures to monitor their risk exposures and progress towards sustainability objectives and targets. Over half of the largest public pension and sovereign wealth funds use KPIs to assess the sustainability of their portfolios, with the most common related to climate and emissions (UNCTAD, 2023[42]). Metrics may be standardised metrics or internally developed. Using metrics developed by portfolio managers themselves rather than third party metrics can ensure that the measures are aligned with reality and the investment philosophy being applied.

A few pension and insurance investors have developed dashboard tools that allow the calculation and analysis of numerous metrics to have a tailored and transparent view of the risk exposures of the portfolios. Such tools can consolidate information from external and internal data sources to calculate a variety of metrics by investment, at the portfolio level or by asset class or investment manager. Complementing quantitative data with a qualitative overlay can provide useful insights into exposures to natural hazards and options to mitigate them.

Pension and insurance investors also conduct more comprehensive assessments of portfolio risk on specific topics. Investors frequently review the risk of climate litigation against the companies they invest in, as litigation is not only costly in itself but can also pose a significant reputational risk which can impact long-term value (EY, 2024[58]). Blackrock’s Aladdin tool integrates climate-related risk metrics to support

clients' risk management and reporting (BlackRock, 2025[59]). The AP2 pension fund in Sweden has developed its own quantitative model to assess human rights risk in its equity portfolio, which identifies risks that often lead to violations of human rights (UNPRI, 2024[60]).

Pension and insurance investors frequently assess the performance of their portfolios against benchmarks to compare financial returns or progress towards certain sustainability goals. Some rely on benchmarks incorporating environmental or other sustainability considerations, with a starting point often being with their passive investments (Amundi, 2024[26]). One asset manager tracks its progress against climate aligned benchmarks to better manage stranded asset and transition risks, but tracks in parallel how the economy is decarbonising to limit its tracking error and make sure the benchmark remains relevant. Most, however, seem to rely on standard benchmarks to assess financial performance. One reason is that they do not trust the methodology behind the construction of benchmarks incorporating sustainability considerations (Amundi, 2024[26]). Other reasons may relate to regulatory requirements, as in Australia where performance benchmarks that do not adequately reflect sustainability risks are imposed for pension funds. Investors may also feel that their integration of sustainability considerations should not translate into sacrificed returns and therefore standard benchmarks remain suitable.

There is increased interest in using stress testing and climate scenarios to assess the resilience of portfolios to physical and transition risks. Many investors in Asia have conducted comprehensive physical risk assessments to assess weather and climate impacts given the importance of these risks in the region (AIGCC, 2025[36]). Some jurisdictions such as Mexico are developing models to assess scenarios of climate impacts on the real economy and financial markets for general use by impacted stakeholders. Several pension and insurance investors, however, remain sceptical about the external climate scenarios that have been developed and the methodology used, finding them overly simplistic or too opaque to be able to explain the outputs to regulators and supervisors. As such, some have developed their own scenarios or adapted existing scenarios to better reflect internal views and needs (Box 3.6). Such scenarios can account for factors such as technology, policy developments, market views and preferences in addition to the physical impacts of climate risks. However, for now, pension and insurance investors seem to use scenario analysis more as a tool to promote internal awareness and education rather than to inform their investment decisions.

Box 3.6. Illustration of how two pension investors integrate climate scenario analysis in their risk management processes

GPIF

The Government Pension Investment Fund (GPIF) in Japan uses the Climate Value-at-Risk (CVaR) model to assess the potential financial impact of climate-related risks and opportunities on its portfolio under eight different scenarios, including three scenarios in which global temperature rise reaches 3.0°C. CVaR quantifies expected losses in extreme cases and evaluates transition risks, physical risks, and opportunities from green technologies across assets such as equities and alternative assets.

Alecta

Alecta in Sweden conducts portfolio-wide stress tests against multiple climate scenarios, including 1.5 °C and 2 °C pathways, using carbon pricing assumptions and transition risk models. The analysis begins at the company level, incorporating Scope 1-3 emissions data, and is aggregated to assess portfolio exposure. In addition, Alecta monitors implied temperature alignment relative to Paris Agreement objectives.

Under a 1.5 °C scenario, the analysis indicates that equity valuations could decline significantly, highlighting the potential financial impact of transition risks. These insights inform Alecta's engagement

strategy: companies assessed as misaligned or presenting ESG concerns are prioritised for dialogue, with the aim of encouraging improved climate action and risk management.

Source: GPIF (2024[61]), Sustainability Investment Report, https://www.gpif.go.jp/en/investment/Sustainability_Investment_Report_2024_E_02.pdf, Alecta (2024[62]), Climate Reporting according to TCFD, https://www.alecta.se/media/xqrjr4ob/alecta-klimatredovisning-2024.pdf.

Supervisors are increasingly looking at how investors consider sustainability factors in their risk management processes. While strict requirements are not common, some supervisors are promoting a more consistent and harmonised approach across investors (Box 3.7).

Box 3.7. De Nederlandsche Bank (DNB)'s guide to managing climate and nature-related risks

The DNB's *Guide to managing climate and nature-related risks* sets out sector-specific practices intended to support financial institutions in managing climate- and nature-related risks. It functions as a supervisory reference that explains how these risks can be incorporated into core elements of institutions' risk management frameworks, including business models, governance arrangements, risk processes and disclosures. While the practices described are not legally binding, they interpret existing regulatory requirements and illustrate approaches that meet supervisory expectations. The guide also reflects recent regulatory developments and emerging analytical insights, providing institutions with an organised and up-to-date overview of expectations in this area.

In addition to outlining general principles, the guide offers methodological examples and identifies areas that supervisors consider particularly relevant for the effective integration of sustainability risks. These include the use of forward-looking scenario analysis, more granular assessments at sector and asset-class level, and the alignment of climate action plans with institutions' strategic planning processes. The guide is used as a part of supervisory dialogue and risk-based assessments, with the aim of promoting more consistent practices and supporting institutions in further developing their management of climate- and nature-related risks.

Source: DNB (2025[63]), Guide to managing climate and nature-related risks, https://www.dnb.nl/media/fbjjzf1o/guide-to-managing-climate-and-nature-related-risks-update-september-2025.pdf

Engagement and stewardship

Engagement and stewardship activities are increasingly important for the integration of risks to the sustainability of portfolios into investment processes. Engaging with companies on their business practices and encouraging them to focus on long-term sustainability are means for investors to mitigate the sustainability risks they have identified in their own portfolios and ensure alignment with their sustainability objectives and priorities. Nevertheless, engagement is a resource-intensive activity and ensuring its effectiveness can be challenging.

Approaches to engagement and stewardship

Voting in shareholder meetings is the first way for pension and insurance investors to influence the decisions and practices of the companies in their listed equity portfolios. Many rely on proxy voting services, though some also manage the voting process in-house. Among PRI signatories, around 60% have a proxy voting policy or guidelines, with half of those addressing sustainability risks (UNPRI, 2025[44]).

Around 45% of the largest public pension and sovereign wealth funds rely on proxy voting (UNCTAD, 2023[42]). Others choose to manage their voting in-house. ATP in Denmark manages their own voting based on the belief that combining stewardship and investment activities improves investment decisions (ATP, 2025[64]). Asset managers tend to be more likely to manage their engagement in-house, with many having teams dedicated to stewardship. The decision to outsource engagement activities may also be linked to the financial importance of a portfolio. Asset managers may outsource engagement for asset classes for which they do not have sufficient weight on their own.

Investors seem to take a practical approach to engagement, aiming to balance risk and return. Pension and insurance investors can file and vote on shareholder proposals for companies to take certain actions such as improve their decarbonisation trajectory or their labour practices. Nevertheless, support for such proposals has been decreasing, partly as a result of an increase in the number of prescriptive proposals put forward, which can be viewed as expensive and impractical to implement and which would have a negative impact on returns (EY, 2024[58]; ECGI, 2025[65]).

Many pension and insurance investors are also relying on collaborative stewardship with other investors in their region or industry. Among PRI signatories, 48% of asset owners now prefer collaborative stewardship, a higher proportion than investment managers (PRI, 2025[66]). Collective engagement can reduce the cost and resources required to engage, and collectively investors have more weight to influence the decisions and practices of companies.

Pension and insurance investors also bilaterally engage with the boards and management of companies on sustainability issues and practices. Such engagement is normally targeted at specific issues investors have identified as important. While such engagement can be used to improve company practices and disclosures, investors have expressed that it is also a means to exchange on topics that they would like to learn more about, such as biodiversity, and discuss together how to consider and move forward on those issues.

However, some investors may be reluctant to push for more sustainable practices if it could have a negative impact on short-term profits, even if changes would likely lead to higher returns over the long term. Reasons for this could be that investors feel that their portfolio is sufficiently diversified with respect to sustainability risks, or that they have difficulty quantitatively proving the financial materiality of a certain issue (EY, 2024[58]).

Prioritising stewardship activities

While important, stewardship activities can be resource intensive, and investors need to prioritise on which issues to engage and with whom. Criteria that pension and insurance investors use to prioritise their resources include financial materiality, the potential for impact, or more broadly alignment with investment practices with their own objectives relating to the integration of sustainability considerations. Financial materiality is a key driver of engagement with companies. One global survey indicated that 77% of investors prioritise issues that are likely to have financial impacts, including climate, human capital and cybersecurity (Georgeson LLC, 2025[32]). Several stakeholders prioritise engagement with companies presenting the highest carbon exposures to their portfolios or regions. Another pension fund targets companies that have been involved in an environmental controversy.

The sustainability priorities and objectives of pension and insurance investors may also guide the topics they focus on for engagement. Investors may have a short-list of companies to engage with and set their priorities in line with their own interests and objectives relating to decarbonisation, disclosure, governance, or their investment values and philosophy. Scorecards may be used to rate companies on priority issues to monitor their progress and the impact of engagement. AP2, which has prioritised the consideration of human rights in its investments, relies on its in-house model on human rights outcomes to identify which companies it should prioritise for engagement (UNPRI, 2024[60]).

Other pension and insurance investors prioritise engagement where they feel they will be most likely to have an impact. Indeed, one survey indicated that 65% of investors target companies where they are likely to have more influence (Georgeson LLC, 2025[32]). These investors may, for example, be more likely to engage with companies in which they have a larger stake or those that have been more responsive to engagement in the past. They may feel that they have better access to companies in their private equity portfolios to engage with them on sustainability issues (Amundi, 2024[26]). Internal risk assessment may also provide an indication of potential impact. One asset manager indicated that the internal sustainability ratings for its investments helps to prioritise who to engage with, as those at the lower end have a larger potential to improve.

For certain asset classes, engagement may be the main way for pension and insurance investors to integrate sustainability considerations. Investors in passive and index funds have little say in which companies are included, and the only means they have to influence their risk exposures is to engage with the companies to improve their practices. Investors also tend to engage with their fixed income investments given the limited sustainability criteria on which to base the selection of those investments. Among PRI signatories, 81% are conducting stewardship relating to their fixed income portfolios (UNPRI, 2025[44]). Investors may also prioritise engagement with issuers of illiquid investments to ensure they have the data they need to assess their risk exposures.

Making stewardship credible

Pension and insurance investors engage in stewardship activities to have an impact on business practices, and if they are not successful in having an impact, they need to take some action for their engagement to be credible. Divestment is the main option available, but many investors are reluctant to divest because they feel that they can be more effective at changing practices if they remain invested. Additionally, if they divest, other investors may not have the same priorities with respect to sustainability which could perpetuate unsustainable business practices. Nevertheless, some pension and insurance investors indicated that they would consider divesting if they do not see progress within two to three years.

Pension and insurance investors have other options to exert their influence further if their engagement with a company has not been successful in improving its practices. Rather than divesting, some may intensify their engagement activities with the problematic companies. This may involve escalating the dialogue with corporate debt issuers (UNPRI, 2025[44]). A more common escalation tool for fixed income, however, is a refusal to invest in future debt issuance (UNPRI, 2025[44]). Others may take a stronger stance against the issuer. One global survey indicated that 33% of investors would vote against management if they were not satisfied with the company's progress (Georgeson LLC, 2025[32]).

3.5. Looking forward

The understanding and consideration of risks that may affect the sustainability of portfolios in investment processes is evolving rapidly. Regulations that impede or promote the integration of sustainability risks into the investment and risk management processes of pension and insurance investors are a key driver of investors' considerations of these risks. However, as integration becomes more mainstream, many of the other drivers discussed in this chapter are likely to become more influential. The way in which investors are adapting their institutional frameworks and investment processes should also evolve as they obtain more experience in the assessment of these risks and as relevant data and information become more readily available.

The regulatory landscape will also continue to evolve. The OECD's *Database of measures to incorporate environmental, social and governance risk factors into insurance and pensions investments* will be regularly updated and should serve as a valuable reference to monitor global developments in this space.

References

AIGCC (2025), *The State of Investor Climate Transition in Asia*, https://aigcc.net/wp-content/uploads/2025/04/AIGCC-Climate-Transition-Report_April2025.pdf. [36]

Alecta (2024), *Climate Reporting according to TCFD*, https://www.alecta.se/media/xqrjr4ob/alecta-klimatredovisning-2024.pdf. [62]

Allianz (2023), *Susainability Report 2023*, https://www.allianz.com/content/dam/onemarketing/azcom/Allianz_com/sustainability/documents/Allianz_Group_Sustainability_Report_2023-web.pdf. [29]

Amundi (2024), *Institutional investors' approachesto responsible investing: insights from an investors' survey and academic research*, https://research-center.amundi.com/article/institutional-investors-approaches-responsible-investing. [26]

Amundi (2023), *Pension plans embracing ESG demand new investment approach*, https://research-center.amundi.com/article/pension-plans-embracing-esg-demand-new-investment-approach. [43]

AON (2023), *Global Responsible Investment Policy*, https://www.aon.com/getmedia/b9490828-4267-4943-9526-1bbfc1ce8da1/global-responsible-investment-policy.pdf. [45]

ATP (2025), *Sustainability*, https://www.atp.dk/en/sustainability. [64]

Australian Treasury (2026), *Improving the efficiency of climate-related financial disclosures*, https://consult.treasury.gov.au/c2026-778607. [7]

Barnett Waddingham LLP (2025), *Presentation for the OECD's ESG project*. [5]

Bauer, R. and P. Smeets (2021), "Eliciting Pension Beneficiaries' Sustainability Preferences: Why and How?", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3890879. [22]

BlackRock (2025), *2024 Climate Report*, https://www.blackrock.com/corporate/literature/continuous-disclosure-and-important-information/climate-report-blkinc.pdf. [59]

BNP Paribas (2025), *ESG Survey 2025*, https://securities.cib.bnpparibas/esg-survey-2025/. [35]

BNP Paribas (2023), *ESG Global Survey 2023*, https://securities.cib.bnpparibas/app/uploads/sites/3/2023/12/esg-global-survey-consolidated-report.pdf. [53]

Boermans, M. (2023), "Preferred habitat investors in the green bond market", *Journal of Cleaner Production*, Vol. 421, p. 138365, https://doi.org/10.1016/j.jclepro.2023.138365. [55]

Boni, L. and L. Scheitza (2025), "Analyzing the role of regulation in shaping private finance for sustainability in the European Union", *Finance Research Letters*, Vol. 71, https://doi.org/10.1016/j.frl.2024.106435. [12]

CFA Institute (2024), *Survey Report on the ESG Regulatory Framework in the EU*, https://rpc.cfainstitute.org/sites/default/files/-/media/documents/survey/esg-regulatory-framework-eu.pdf. [13]

Dhondt, N., A. Chadd and C. Rocha (2025), *Does antitrust law stand in the way of net zero alliances?*, https://sustainability.slaughterandmay.com/post/102jxv6/does-antitrust-law-stand-in-the-way-of-net-zero-alliances. [10]

DNB (2025), *Guide to managing climate and nature-related risks*, https://www.dnb.nl/media/fbjjzf1o/guide-to-managing-climate-and-nature-related-risks-update-september-2025.pdf. [63]

ECGI (2025), *The Rise (and Fall?) of Prescriptive ESG Proposals*, https://www.ecgi.global/publications/blog/the-rise-and-fall-of-prescriptive-esg-proposals. [65]

Edmans, A., T. Gosling and D. Jenter (2025), *Sustainable Investing in Practice: Objectives, Constraints, and Limits to Impact*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4963062. [24]

Empresa Global (2025), *El nuevo desorden de la sostenibilidad: entre la fragmentación regulatoria y la miopía estratégica*, https://www.empresaglobal.es/EGAFI/contenido/2487030/1601149/el-nuevo-desorden-de-la-sostenibilidad-entre-la-fragmentacion-regulatoria-y-la-miopia-estrategica.html?bol=1816694-202505011750. [16]

European Commission (2025), *Questions and answers on the Sustainable Finance Disclosure Regulation*, https://ec.europa.eu/commission/presscorner/detail/en/qanda_25_2737. [8]

Eversheds Sutherland (2025), *New legal interpretation of fiduciary duties could support pension scheme investment in the UK*. [20]

EY (2024), *EY Global Institutional Investor Survey 2024*, https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/climate-change-sustainability-services/documents/ey-gl-institutional-investor-survey-v2-12-2024.pdf. [6]

EY (2024), *How can investors balance short-term demands with long-term sustainability?*, https://www.ey.com/content/dam/ey-unified-site/ey-com/en-gl/insights/climate-change-sustainability-services/documents/ey-gl-institutional-investor-survey-v2-12-2024.pdf. [58]

Fabian, N. et al. (2023), "Private Retirement Systems and Sustainability", in *Pension Funds and Sustainable Investment*, Oxford University PressOxford, https://doi.org/10.1093/oso/9780192889195.003.0009. [27]

Financial Markets Law Committee (2024), *Pension Fund Trustees and Fiduciary Duties: Decision-making in the context of Sustainability and the subject of Climate Change*, https://fmlc.org/wp-content/uploads/2024/02/Paper-Pension-Fund-Trustees-and-Fiduciary-Duties-Decision-making-in-the-context-of-Sustainability-and-the-subject-of-Climate-Change-6-February-2024.pdf. [21]

Fixsen, R. (2025), "ATP limits tally of green bond issuers due to onerous due diligence", *IPE*, https://www.ipe.com/news/atp-limits-tally-of-green-bond-issuers-due-to-onerous-due-diligence/10129903.article. [56]

FSCA (2024), *FSCA SF Roadmap and Consumer Risk Report*, https://www.fsca.co.za/Documents/FSCA%20SF%20Roadmap%20and%20Consumer%20Risk%20Report.pdf. [14]

Georgeson LLC (2025), *Global Institutional Investor Survey 2024 Report*, https://www.georgeson.com/us/insights/global-institutional-investor-survey-2024-report#:~:text=Georgeson%E2%80%99s%20Global%20Institutional%20Investor%20Survey%202024%20report%20provides,of%20investor%20engagement%2C%20strategic%20activism%2C%20and%20ESG%. [32]

GPIF (2024), *Sustianability Invesment Report*, https://www.gpif.go.jp/en/investment/Sustainability_Investment_Report_2024_E_02.pdf. [61]

IFRS (2026), *Use of IFRS Sustainability Disclosure Standards by jurisdiction*, https://www.ifrs.org/ifrs-sustainability-disclosure-standards-around-the-world/use-by-jurisdiction/ (accessed on 14 September 2026). [3]

IOSCO (2021), *Environmental, Social and Governance (ESG) Ratings and Data Products Providers - Final Report*, https://www.iosco.org/library/pubdocs/pdf/IOSCOPD690.pdf. [51]

Lachance, S. and J. Stroehle (2021), *The Origins of ESG in Pensions: Strategies and Outcomes*, https://piacweb.org/uploaded/web/Webinar/The%20Origins%20of%20ESG%20in%20Pensions_%20Strategies%20and%20Outcomes.pdf. [25]

Larcker, D., B. Tayan and L. Lee (2024), *2024 Institutional Investor Survey on Sustainability*, https://www.gsb.stanford.edu/sites/default/files/publication/pdfs/cgri-survey-2024-institutional-investor-survey-sustainability_0.pdf. [34]

Lee, L. (2023), "ESG Investing: Financial Materiality and Social Objectives", in *Pension Funds and Sustainable Investment*, Oxford University PressOxford, https://doi.org/10.1093/oso/9780192889195.003.0004. [41]

Liang, H. and L. Renneboog (2017), "On the Foundations of Corporate Social Responsibility", *The Journal of Finance*, Vol. 72/2, pp. 853-910, https://doi.org/10.1111/jofi.12487. [23]

LPFA (2023), *Responsible Investment Policy 2023*, https://www.lpfa.org.uk/download/LPFA%20Responsible%20Investment%20Policy%20Final%202023.pdf. [40]

McCahery, J., P. Pudschedl and M. Steindl (2022), "Institutional Investors, Alternative Asset Managers, and ESG Preferences", *European Business Organization Law Review*, Vol. 23/4, pp. 821-868, https://doi.org/10.1007/s40804-022-00264-0. [33]

Mercer (2024), *Mercer Investment Solutions 2024 Sustainability and Stewardship Report*, https://investment-solutions.mercer.com/content/dam/mercer-subdomains/delegated-solutions/responsible-investment/Mercer%20IS%202024%20Sustainability%20and%20Stewardship%20Report_F.pdf. [57]

Micale, V. et al. (2024), *The State of European Pension Funds' Net-Zero Transition*. [31]

Ministerio De Hacienda de Chile (2026), *¿Qué es el Acuerdo Verde?*, https://www.hacienda.cl/areas-de-trabajo/finanzas-internacionales/finanzas-sostenibles/mesa-publico-privada-de-finanzas-verdes/preguntas-frecuentes/-que-es-el-acuerdo-verde-. [30]

MSCI (2026), *ESG Ratings*, https://www.msci.com/data-and-analytics/sustainability-solutions/esg-ratings. [48]

MSCI (2024), *ESG Ratings Process Methodology Document*, https://www.msci.com/documents/1296102/34424357/MSCI%2BESG%2BRatings%2BMethodology%2B-%2BProcess.pdf/820e4152-4804-fe33-0a67-8ee4c6a8fd7d?t=1666300410683&. [49]

Muir, D. (2022), "Sustainable Investing and Fiduciary Obligations in Pension Funds: The Need for Sustainable Regulation", *American Business Law Journal*, Vol. 59/4, pp. 621-677, https://doi.org/10.1111/ablj.12216. [18]

OECD (2026), *Database of measures to incorporate ESG risk factors into insurance and pensions investments*, https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/pensions-and-insurance/Database-of-Sustainable-Investment-Measures-for-Insurance-and-Pensions.xlsx. [1]

OECD (2025), *Behind ESG ratings: Unpacking sustainability metrics*, OECD Publishing, Paris, https://doi.org/10.1787/3f055f0c-en. [50]

OECD (2025), *OECD Corporate Governance Factbook 2025*, OECD Publishing, Paris, https://doi.org/10.1787/f4f43735-en. [2]

PRI (2025), *Global Responsible Investment Trends*. [66]

PRI (2025), *Global responsible investment trends 2025: inside PRI reporting data*, https://www.unpri.org/investment-tools/global-responsible-investment-trends-2025-inside-pri-reporting-data/13079.article. [4]

PRI (2024), *Progress and Priorities: Reviewing sustainability in key pension systems*. [17]

PRI (2021), *Pension systems and sustainability: Japan*. [28]

PRI (2020), *Private retirement systems in Australia, the United Kingdom, and the United States*. [19]

Provida AFP (2025), *Memoria Integrada 2024*, https://www.provida.cl/content/dam/metlifecom/provida/images/newweb/pdf-new-page/memoria-anual/memorias-anuales/reporte-itegrado-proVida-afp-dise%C3%B1o.pdf. [54]

Publications Office of the European Union (2021), *Study on sustainability-related ratings, data and research*, https://data.europa.eu/doi/10.2874/14850. [47]

Robinson-Tillett, S. (2025), *Canada's largest pension fund drops net-zero promise in face of anti-greenwashing rule*, https://www.ipe.com/news/canadas-largest-pension-fund-drops-net-zero-promise/10130676.article?utm_campaign=2005567_22.5.25%20ipe%20daily%20news&utm_medium=email&utm_source=IPE&dm_i=5KVE,16ZI7,C5E85,5L9ZI,1. [11]

Robinson-Tillett, S. (2025), *European Commission consults on SFDR redesign*, https://www.ipe.com/news/european-commission-consults-on-sfdr-redesign/10130342.article. [9]

Russell Investments Research (2024), *2024 Annual Manager ESG Survey*, https://russellinvestments.com/content/dam/ri/files/au/en-br/insights/2024%20Annual%20Manager%20ESG%20Survey%20Final%20AUS.pdf. [52]

SASB (2025), *Exploring materiality*, https://sasb.ifrs.org/standards/materiality-map/. [38]

SEC (2026), *Exchange Act Sections 13(d) and 13(g) and Regulation 13D-G Beneficial Ownership Reporting*, https://www.sec.gov/rules-regulations/staff-guidance/corporation-finance-interpretations/exchange-act-sections-13d-13g-regulation-13d-g-beneficial-ownership-reporting#:~:text=Question%20103.12,Feb.%2011%2C%202025%5D. [15]

Simon, E. and J. Greenwood (2024), *ESG in DC Pensions*, Corporate Adviser Intelligence. [46]

UNCTAD (2023), *Sustainability integration by public pension and sovereign wealth funds, 2022*, https://unctad.org/publication/sustainability-integration-public-pension-and-sovereign-wealth-funds-2022. [42]

UNPRI (2025), *Global Responsible Investment Trends*. [44]

UNPRI (2024), *A Legal Framework for Impact case study - Andra AP-fonden (AP2)*. [60]

UNPRI (2024), *A Legal Framework for Impact case study - Nippon Life*. [39]

UNPRI (2024), *A Legal Framework for Impact case study - NOW Pensions*. [37]

Notes

[1] The interviews were carried out between April and June 2025. The stakeholders interviewed are 50% from Europe (including the United Kingdom), 19% from Latin America, 15% from Asia-Pacific, 12% from North America and 4% from Africa. Their institutional distribution is 42% pension funds, 25% asset managers, 13% consultants, 12% life insurance and 8% associations.

[2] See the *OECD Database of measures to incorporate environmental, social and governance risk factors into insurance and pensions investments* (OECD, 2026[1]).

[3] The 41 jurisdictions include 14 non-EU jurisdictions and the 27 EU member states.

[4] Article 8 products were those promoting environmental or social characteristics, while Article 9 products were intended for investments with a sustainable objective.

[5] The funds have since been consolidated, with the third and fourth fund absorbing the assets of the first fund at the beginning of 2026.

[6] Impact can also be pursued via engagement and stewardship activities with investees. This topic is addressed in Section 3.4.4, as it does not necessarily relate to investment approach and selection.

4 Balancing the trade-offs in the regulation of financial advice for retirement

This chapter discusses the trade-offs involved in implementing policies to improve the quality of financial advice and how countries have tried to balance the potential impact on access to advice and its affordability given the benefits and the barriers for individuals to seek advice. It also highlights other measures that can support and protect those who do not receive financial advice. The chapter concludes with policy implications for how regulators can balance these trade-offs and promote good financial outcomes in retirement for all.

Financial decisions for retirement are complex, and financial advice can be a valuable resource to help individuals plan for retirement and choose appropriate investments and financial products. Indeed, retirement planning is one of the main reasons that individuals seek financial advice. However, the benefits of financial advice are more likely to be realised when advisers appropriately manage any conflicts of interest and provide advice in the consumer's best interest.

The regulatory framework should include measures to ensure that conflicts are managed and to promote the quality of financial advice.[1] However, these measures may also have unintended consequences impacting the access to and affordability of advice. To understand the potential trade-offs, it is important to understand the benefits of financial advice and under what conditions those benefits are likely to materialise to ensure that policies are designed to maximise those benefits. Measures such as qualification requirements, duty of care standards, disclosure requirements, and remuneration restrictions can have a positive impact on the quality of advice, but there are numerous challenges to ensure their effectiveness and avoid negative spillover effects. To gauge to what extent these negative impacts may present barriers to access to advice, it is also necessary to understand the reasons people do not seek advice. While implementation should strive to minimise negative consequences, there will always be individuals who will not access advice, so measures are also needed to offer support and protections to those individuals.

This chapter discusses how policymakers can balance the trade-offs involved in ensuring the quality of financial advice for retirement while minimising the barriers for individuals to access advice. The first section looks at the benefits of financial advice. The second section considers how adviser bias can undermine those benefits and lead advisers to provide recommendations that may not be in the best interest of consumers. The third section describes the measures that jurisdictions are taking to promote the benefits of financial advice and mitigate conflicts of interest, as well as the effectiveness of those measures and the challenges relating to their implementation. The fourth section examines the barriers for individuals to seek financial advice. The fifth section highlights complementary measures to support individuals not receiving advice. The final section discusses policy implications given the evidence and experiences presented.

4.1. Financial advice can provide numerous benefits to consumers

Retirement planning is one of the most common reasons for individuals to seek financial advice, and advisers can significantly contribute to improving financial outcomes in retirement. Advisers can help individuals plan for retirement by encouraging savings for retirement and designing a decumulation plan. They can improve investment returns over the long-term by encouraging appropriate levels of investment risks. They can also contribute to improved financial behaviours and well-being by mitigating emotional reactions and reducing the financial stress of their clients.

4.1.1. Better financial planning for retirement

Advisers play a role in helping individuals to better plan for retirement by increasing savings and helping individuals to stick to a long-term financial plan. Advisers encourage individuals to open retirement savings accounts and take advantage of tax benefits and other financial incentives. At retirement, advisers can promote the use of annuities for longevity protection and optimise drawdown strategies considering an individual's overall financial situation.

Financial advice seems to be particularly beneficial for retirement by helping to raise awareness of retirement preparedness and encourage individuals to develop a financial plan for retirement. Evidence indicates that individuals consulting a financial adviser are more likely to evaluate how much they will need for retirement and to establish specific financial objectives for their retirement, resulting in higher replacement rates (Martin and Finke, 2012[1]; Harlow, Brown and Jenks, 2019[2]). Such benefits are,

however, contingent on individuals consulting an adviser early enough in their career to effectively plan (Invesco, 2024[3]).

Financial advisers encourage their clients to save more and save more regularly. Advised clients tend to save more, and are generally more likely to have emergency savings and to be more financially resilient (Schmeiser and Hogarth, 2013[4]; Liu et al., 2018[5]) Advisers can also influence savings behaviours by encouraging the use of automatic savings plans (Foerster et al., 2014[6]). The impact of advice on savings can be higher for individuals that have lower levels of self-control and who are less likely to have a regular savings habit (Liu et al., 2018[5]).

The benefits from increased savings, however, are more likely realised when advisers provide comprehensive advice on an ongoing basis rather than for clients receiving one-off advice to invest in a particular product or fund. This observation is consistent with advisers helping clients to develop and stick to a long-term financial plan and is particularly relevant for planning for retirement (Martin and Finke, 2012[1]; Montmarquette and Viennot-Briot, 2015[7]).

Advisers may also help improve the tax efficiency of clients' investments and ensure they take advantage of financial incentives available to them. This is especially relevant for retirement, as retirement savings accounts are often tax-advantaged or otherwise incentivised. Studies in New Zealand, Switzerland and the United States have found a positive link between receiving financial advice and saving in a retirement plan (Fang, Hao and Reyers, 2022[8]; Hoechle et al., 2023[9]; Martin and Finke, 2012[1]).

Furthermore, there is significant potential for financial advisers to add value at retirement and help individuals to optimise their withdrawal and payout strategies in retirement. Advised retirees are more likely to account for more variables in their drawdown strategy, such as investment risks and tax implications (Invesco, 2024[3]). Indeed, taking a more comprehensive approach to financial planning in retirement can have a material impact on retirement incomes. A large US financial services firm has outlined five key areas where financial advisers can have significant added value at and during retirement: 1) allocating assets in a tax-efficient manner; 2) considering total wealth in asset allocations; 3) ensuring protection against longevity risk; 4) allowing for a dynamic withdrawal strategy; and 5) optimising the portfolio for the retirement objective by accounting for risks like inflation and currency. It estimates that improving withdrawal decisions across these areas could increase retirement income by over 20% compared to a static drawdown strategy (Blanchett and Kaplan, 2013[10]).

Another added value of using financial advisers for retirement can be an increased awareness and use of annuity products that protect retirees from longevity risk. Clients of financial advisers in the United Kingdom were more likely to have some knowledge of annuities, with around two-thirds indicating they knew at least a little about annuities compared to around 40% of unadvised clients. Furthermore, advised clients were more likely to consider an annuity at retirement (iPipeline & Standard Life, 2025[11]). Among mass affluent clients in Brazil, Japan, Mexico and the United States, advised clients are two times more likely to incorporate annuities in their retirement strategy and are generally less sceptical of the value that annuities offer compared to non-advised clients (Prudential, 2025[12]).

4.1.2. More appropriate risk taking

Advised consumers tend to have more appropriate risk exposures in their portfolios, with advisers often promoting lower levels of cash reserves and higher allocations to equity, increasing the wealth they can accumulate over the long run. Advised investors in Germany and in New Zealand have higher equity allocations (Zhang, 2014[13]; Liu et al., 2018[5]). More generally, advice may help investors to invest with an appropriate level of risk (Pagliaro and Utkus, 2019[14]).

A longer-term relationship with an adviser is positively correlated with increased risk taking. Advised investors in Canada have higher equity allocations and lower cash holding than unadvised investors, and those having worked with their adviser for the longest period have the highest allocations (Foerster et al.,

2017[15]). US investors using a financial adviser over a decade have higher net worth than unadvised investors due to a greater portfolio allocation to equities (Cummings and James, 2014[16]).

However, advisers seem to have less influence on improving risk-taking for clients with lower levels of financial literacy. Financial advice seemed to have less of an impact on asset allocation for KiwiSaver members in New Zealand when controlling for financial literacy (Fang, Hao and Reyers, 2022[8]). Similarly, financial advice for investors in China only increased the stock market participation of households with higher levels of financial literacy who had a preference for asset diversification (Pan, Wu and Zhang, 2020[17]).

Gender dynamics may also influence the extent to which advisers overcome the risk aversion of their clients. Wealthy women in the United Kingdom working with male advisers report more risk aversion and have higher allocations to risk-free assets, whereas women working with female advisers have higher risk tolerance and lower allocations to risk-free assets than men do (Baeckström, Marsh and Silvester, 2021[18]).

4.1.3. Emotional benefits

Investors with a financial adviser are also less likely to succumb to emotional reactions in market downturns and stay invested. Advised consumers are also generally less stressed about their finances and experience higher levels of well-being.

Financial advisers can help clients to remain calm during periods of market turmoil and encourage them to stay invested rather than sell their assets in panic. Analysis of data of defined contribution plan members in the United States during the market turmoil caused by the COVID-19 pandemic showed that investors with access to an adviser were significantly less likely to trade than investors who did not have access to an adviser (Blanchett, Finke and Liu, 2022[19]). Evidence of investors in Canada showed that households who kept their adviser between 2010 and 2014, during the market turmoil following the global financial crisis, managed to grow their assets by 16.4% during the period, compared to only 1.7% for households who dropped their adviser during the same period (Montmarquette and Prud'Homme, 2020[20]). Furthermore, as with savings, a longer-term relationship with an adviser may be more effective at encouraging beneficial financial behaviours. Another study of Canadian investors showed that clients who changed advisers during the 2008 global financial crisis were less likely to remain invested in the stock market during the crisis than those who retained the same adviser over the period (Foerster et al., 2017[15]).

Studies form the United States indicate that advised clients experience lower levels of stress related to their finances and emphasise this emotional component the most when assessing the value of advice (Pagliaro and Utkus, 2019[14]). One analysis estimated that emotional outcomes represent 45% of total perceived value from advice, with self-directed investors nearly twice as likely to report high levels of financial stress compared to advised investors, who report having more peace of mind (Costa, Martino and de la Fuente, 2025[21]). While investors do not necessarily prioritise such benefits in selecting their adviser, they do seem to value them in hindsight. When individuals are asked to think about what value they received from their adviser they are more likely to highlight their sense of security and peace of mind (Murphy, Lamas and Sin, 2020[22]). When asked to think about perceived value in the relationship with their adviser, the highest ranked statements included an emotional component such as trust, connection, or reassurance (Pagliaro and Utkus, 2019[14]).

Clients using professional financial advisers also tend to experience higher levels of well-being. Those who receive advice from financial professionals have higher levels of financial well-being as measured by their ability to meet financial obligations, feeling of financially security and life enjoyment (Stebbins, Kim and Seay, 2022[23]). They can also have higher levels of subjective well-being, especially those who consider themselves to be less knowledgeable about finances (Schepen and Burger, 2022[24]). Advised clients also

feel more confident about their retirement planning and preparations (Adfiz, 2025[25]; Blanchett, 2025[26]; BNY Investments, 2024[27]; Aegon, NextWealth & Richard Parkin Consulting, 2023[28]).

4.2. Biases can undermine the benefits of advice

Financial advice does not always result in objectively better financial outcomes. Adviser-recommended products may fail to deliver higher net risk-adjusted returns. Additionally, advisers may fail to counter the biases of their clients, demonstrating biases such as return chasing and loss aversion themselves. Conflicts of interest can exacerbate these tendencies and result in worse financial outcomes for consumers.

4.2.1. Failure to improve returns

While advisers may be expected to contribute to higher returns on investment by recommending products offering higher risk-adjusted returns, much evidence globally indicates that financial advice does not always result in objectively better net returns than comparable self-selected investments. Rather, advised investments tend to perform worse than benchmark investments, earn lower net risk-adjusted returns, and increase portfolio variance (Hoechle et al., 2016[29]; Hackethal, Haliassos and Jappelli, 2011[30]; Foerster et al., 2014[6]; Hoechle et al., 2018[31]). Advised clients tend to also trade more frequently (Hoechle et al., 2016[29]; Allie, West and Willows, 2016[32]).

The observation that advised trades do not result in higher net investment returns is largely attributed to the existence of conflicts of interest leading advisers to recommend products or investments that may also benefit them financially. Studies have shown that advisers more often recommend in-house products generating the highest profits for the provider or products providing the adviser with higher commissions (Hoechle et al., 2018[31]; Battiston et al., 2025[33]).

The negative impact of conflicts of interest may be more harmful for women and those with lower financial literacy. A study of German bank clients revealed that advisers more often recommend expensive in-house funds to female and less-educated clients (Bucher-Koenen and Koenen, 2023[34]).

4.2.2. Failure to counter investor biases

While advisers can aid in helping investors to stay invested during a crisis, they are not necessarily effective at countering other investor biases that may lead to harmful trading behaviours. Canadian financial advisers demonstrated that they tended to invest with the same biases as their clients. Their investment strategies often chased returns, invested in expensive funds, and did not sufficiently diversify their portfolio (Linnainmaa, Melzer and Previtero, 2021[35]). Another study revealed that advisers tended to more frequently recommend that clients realise gains rather than cut losses (Andries, Bonelli and Sraer, 2024[36]).

The conflicts of interest of advisers can exacerbate their failure to de-bias clients. One study in the United States found that advisers encouraged chasing returns rather than adequate diversification and recommended more expensive funds when it was in their financial interest to do so (Mullainathan, Noeth and Schoar, 2012[37]).

In addition, advisers are not always helping clients to overcome their reluctance to purchase an annuity. In the United Kingdom, 11% of advisers never recommend annuities (BNY Investments, 2024[27]). In Canada, three-quarters of advisers do not often recommend them, though advisers also indicate they are now recommending them more often as pricing improves (Aegon, NextWealth & Richard Parkin Consulting, 2023[28]).

4.3. Measures to address adviser bias and improve the quality of advice can be effective but come with challenges

The benefits of financial advice are less likely to be realised if advisers are not qualified or face unmanageable conflicts of interest. As such, regulatory frameworks generally impose requirements on financial advisers to ensure the quality and appropriateness of advice (Figure 4.1).[2]

Figure 4.1. Common policy measures to address adviser bias and improve the quality of financial advice



Licensing and qualification requirements are important to aid in the effective oversight of advisers and to ensure that advisers have sufficient knowledge and skills to provide quality financial advice. Licensing requirements for financial advisers often depend on the type of activity carried out. Registration requirements allow consumers to search for a financial adviser and ensure that the adviser is licensed and appropriately qualified. Most jurisdictions have minimum qualification or education requirements for financial advisers, and requirements for specific certifications are common. Continued professional development is sometimes required to ensure that advisers keep their knowledge up to date, and several jurisdictions include ethics as part of their qualification criteria.

Financial advisers are also normally subject to duty of care standards that require the adviser to provide advice in a manner that intends to improve financial outcomes for the recipient of advice. Duty of care standards typically require the adviser to act honestly, treat the consumer fairly, and provide advice that is suitable for the consumer's financial situation. Advisers can also be subject to more stringent requirements to act in the best interest of their client and put the client's interests above their own, which is commonly referred to as fiduciary duty, though the specific legal requirements to carry out those duties can vary. In addition, advisers are often subject to requirements to avoid, manage or mitigate any conflicts of interest that could potentially impair their ability to act in the best interests of their client. Requirements often define factors that advisers need to consider, in order to ensure the suitability of their recommendations to clients, which can vary depending on the context and scope of advice provided.

Disclosure requirements relating to the provision of financial advice aim to ensure that consumers have adequate information to assess whether the advice provided is appropriate for them as well to provide transparency around what they are paying for to promote fair competition. Many disclosure requirements aim to highlight any potential conflicts of interest in the advice provided, particularly as they relate to adviser remuneration. Disclosures also aim to ensure transparency around the cost that consumers will pay for the product or service and advice received. Other requirements such as standardised formats for disclosures aim to help consumers better understand the information and advice provided.

Regulatory requirements have increasingly targeted the remuneration formulas for financial advisers as a complementary measure to duty of care and disclosure requirements. Such measures aim to explicitly limit remuneration models that can represent an unmanageable conflict of interest for advisers to act in the best interests of their clients. They may require that the remuneration provided avoid a risk of a conflict of interest that could lead the adviser to neglect the best interest of the consumer. Measures to restrict the allowed remuneration formulas often target commission payments that product manufacturers pay to financial advisers for the successful distribution of the product, either with restrictions on specific compensation structures or caps or bans on commissions.

Each of these measures has demonstrated some effectiveness at improving outcomes for those taking financial advice. However, each also presents challenges to ensure their effective implementation while minimising negative impacts on access to advice. Automated advice platforms have significant potential to improve access to advice, but developments related to the use of artificial intelligence for financial advice may challenge existing regulatory frameworks (Box 4.1).

Box 4.1. Automated financial advice

The emergence of robo-advice platforms, which provide and implement investment recommendations based on user-provided information about their personal characteristics and investment objectives, provide a more accessible and cost-effective alternative to traditional financial advice. However, they also present challenges for the application of existing regulatory frameworks, which need to ensure the risks these platforms present are managed (OECD, 2017[38]). Automated financial advice is now evolving further with the use of artificial intelligence, particularly large language models (LLMs), to provide financial advice and recommendations to consumers. However, the lack of consistency and explainability of the outputs of these models may present significant risks to consumers. In addition, such models challenge the advice boundary and the application of existing regulatory frameworks. The OECD's Working Party on Insurance and Pensions will be investigating these issues in more detail.

4.3.1. Effectiveness of licensing and qualification requirements and implementation challenges

Licensing and qualification requirements have notably improved the competence of financial advisers. Nevertheless, challenges remain to ensure consistency in requirements and the continued supply of advice.

Licensing and qualification requirements have transformed financial advice into a profession rather than a sales role, increasing the competence of advisers and contributing to improved trust in financial services. There is evidence that the introduction of higher qualification standards has led to improved quality of advice in the United Kingdom. Nearly all advisers have complied with the new standard, and both satisfaction and trust in advice have risen, though the other measures taken have likely also contributed to this trend (FCA, 2020[39]). Membership in professional bodies also increased (FCA, 2014[40]). In Australia,

advisers feel that qualification requirements have made financial advice services a profession, leading to higher quality of advice.[3]

Registration requirements for licensed advisers can also facilitate finding a qualified adviser and verifying their credentials. For example, in Canada consumers can see what products or services advisers can offer based on their registration, and the United Kingdom's Retirement Adviser Directory allows people to find advisers to help them specifically for retirement planning. The Financial Advisers Register in Australia allows consumers to verify advisers' authorisation and check their qualifications, membership of professional bodies and regulatory disciplinary actions.

However, licensing and qualification requirements that vary depending on the adviser's activity can result in an uneven playing field. In Belgium, for example, the regulatory framework for financial planners who are defined as providing independent advice services to non-professional clients is more restrictive than the standards applying to banks that offer the same services to their clients, with a specific code of conduct applying to financial planners. There have been few applications for the specialised licenses (European Commission, 2016[41]). Having consistent licensing requirements for providers can promote a more even playing field and facilitate enforcement and sanctions where the advice has resulted in harm (Levy, 2023[42]). New Zealand harmonised its licensing requirements in 2019 following such concerns, however, individuals providing advice only to wholesale clients are still not required to operate with a license.

A lack of regulation regarding the titles and allowed certifications that financial advisers use to describe their activities can lead to consumer confusion about the adviser's qualifications and services provided. Prior to the introduction of Regulation Best Interest in the United States, there was no real constraint for broker-dealers to call themselves financial advisers. Now, broker-dealers may no longer use the term adviser in their titles unless they are dual-registered as an investment adviser.[4] Canada has also moved to regulate titles, with the 2019 reforms restricting the use of non-regulated titles based on sales activities, though they are still working to further define appropriate titles. Ireland explicitly bans commissions for anyone describing their activities as independent, in line with the MIFID II remuneration restrictions for independent advisers (Central Bank of Ireland, 2019[43]). South Africa has distinguished between registered financial advisers who operate independently and product supplier agents who are tied to specific providers (FCSA, 2019[44]). The use of non-regulated certifications can also be a concern. In the United States, registered advisers can hold over 250 different certifications, and no specific certification is required by regulation. Evidence suggests that some certifications are associated with higher levels of misconduct and therefore serve no purpose in signalling adviser quality to consumers (Egan, Matvos and Seru, 2024[45]).

Stricter qualification requirements can, however, lead to a reduction in the number of advisers, as those unwilling or unable to meet the requirements exit the market. The number of advisers in Australia decreased by over 40% over 2018-2022 following the introduction of the new educational requirements (The Treasury, 2023[46]). While there were initial concerns that the increased requirements in the United Kingdom would similarly lead to a reduction in the number of advisers, the number of retail investment advisers increased by nearly 8% over the period of 2016-2023 (FCA, 2024[47]).

A potential decline in adviser numbers resulting from increased qualification requirements is positive to the extent that advisers without adequate knowledge and skills exit the market. However, it can be challenging to ensure an adequate supply of advice. Following the observed decline in Australia, the government modified the requirements to better recognise knowledge gained through experience. Specifically, they removed tertiary education requirements for advisers with 10 years of experience and no record of misconduct (The Treasury, 2023[46]). The Australian Government has also recently consulted on proposals to further streamline the education requirements which would require the study of financial advice subjects rather than a dedicated financial advice degree (Australian Treasury, 2026[48]).

4.3.2. Effectiveness of duty of care standards and implementation challenges

Duty of care standards have led to improvements in the appropriateness and quality of the financial advice provided. Nevertheless, advisers are sometimes ineffective at identifying conflicts and assessing suitability, and are reluctant to provide advice or guidance in some contexts.

Imposing duty of care requirements can have a material impact on the quality of advice provided. Evidence in the United States leading up to and following the introduction of Regulation Best Interest, which raised the duty of care standards for broker-dealers to a best interest standard, indicates that there was an increased focus on the cost and value of products and investment flows into more expensive investments or products reduced (Sethi, Spiegel and Szapiro, 2019[49]; Egan, Ge and Tang, 2020[50]; Barbu, 2022[51]). The increased focus on cost also changed product offerings, with brokers eliminating some higher cost or proprietary products (Crabb, 2017[52]). Other providers modified their remuneration structures to mitigate conflicts of interest (Deloitte, SIFMA, 2020[53]).

Although duty of care standards can improve the quality of advice on average, advisers may still have a hard time identifying and managing conflicts of interest that could impede their ability to act in the best interests of their clients. The Client Focused Reforms passed in 2019 in Canada introduced an explicit requirement to resolve material conflicts of interest. However, many advisers failed to identify material conflicts or had inadequate policies in place to address conflicts (CSA and CIRO, 2023[54]). In Australia conflicts of interest continued to negatively impact the quality of advice despite the introduction of a best interest duty for advisers providing personal advice, though the situation improved with time (ASIC, 2018[55]; Levy, 2023[42]).

Advisers may also fail to adequately assess suitability. Well-developed internal processes can help, particularly for more complex questions. In the United Kingdom, advisory firms were more likely to provide a suitable recommendation when following internal processes to help them provide more consistent advice to different client profiles for complex issues such as retirement. These approaches include having a Centralised Retirement Proposition, which guides advisors through some of the complex questions that need to be addressed in advising on retirement, or a Centralised Investment Proposition which is similar but focussed on investment-based solutions rather than insurance options like annuities (FCA, 2024[56]).

Many jurisdictions have struggled to find a balance between ensuring that duty of care standards provide adequate consumer protections and allowing advisers to follow efficient procedures in carrying out their duties to minimise compliance costs. Australia introduced safe harbour rules that are one of the ways that advisers can take to prove that they have acted in their client's best interests when providing advice.[5] However, the Quality of Advice Review published in 2023 found that these requirements encouraged advisers to approach the fulfilment of their duty of care as a checklist rather than focussing on making sure they were truly acting in the client's best interest, and thereby rendered the standard less effective in promoting quality financial advice (Levy, 2023[42]).

Duty of care requirements often vary across different distribution channels or products, meaning that individuals do not necessarily have the same levels of protections in different advice contexts. Until the passage of Regulation Best Interest in the United States, broker-dealers were subject only to a suitability standard and were not required to consider the best interest of their client or put those interests above their own interest, despite providing similar services as registered advisers (Egan, Matvos and Seru, 2024[45]). Additionally, the same individual could be registered as both a broker-dealer and adviser, meaning that they could be held to different standards in providing personal advice to the same client for different topics or in different contexts.

Similarly, while the US Employee Retirement Income Security Act (ERISA) imposes fiduciary duties on anyone providing advice for a retirement plan in the United States, there are exceptions to this requirement. In particular, one-off advice is not covered by ERISA, so advice for individuals to roll over their occupational 401(k) plan to a personal individual retirement account (IRA) account would not be subject to fiduciary

duty. When the Department of Labor issued its Fiduciary Rule that intended to address this loophole, 19% of surveyed firms limited or eliminated advice for 401k rollovers (Deloitte, 2017[57]).[6]

In the United States, there is also a difference in the requirements between advice relating to securities, which are regulated at a federal level, and insurance products which are regulated at a state level. The best interest standard relating to the distribution of annuities excludes employer-provided pension plans and does not consider compensation to be a material conflict of interest. Such fragmentation in requirements provides a loophole for financial advisers to provide advisory services for insurance and avoid the more stringent federal requirements relating to securities advice (Honigsberg, Hu and Jackson, Jr., 2021[58]). The situation in Canada is similar, with securities and insurance separately regulated at a provincial level. To promote consistency and co-ordination across the country for securities, the Canadian Securities Administrators (CSA) was established as a council of provincial and territorial securities regulators in Canada to harmonise and co-ordinate the regulation of capital markets. Insurance legislation varies more across provinces, but provinces and territories are nevertheless working towards aligning the requirements for insurance more with those for securities, particularly with respect to segregated funds.[7]

There may also be fragmentation in requirements depending on the client's profile. In Australia, individuals having a certain level of income or assets can be treated as wholesale clients rather than retail clients, and therefore forgo their right to have advice held to a best interest standard. As such, the Quality of Advice Review recommended that treating an individual client as a wholesale client should require their informed consent and disclosure of the implications (Levy, 2023[42]). Canada took this approach, and high-net worth clients must provide explicit consent to waive their rights to a best interest standard for advice.

More stringent duty of care requirements across the board can, however, result in a lack of access to advice or guidance. While harmonised requirements are beneficial from a consumer protection standpoint, the interpretation of duty of care requirements and requirements to ensure product suitability can be a barrier for firms to provide simplified advice or guidance to their clients for fear of legal liability. In response to increased duty of care standards, over half of US firms either limited or eliminated their advised broker service, moving many of their consumers to self-directed accounts (Deloitte, 2017[57]). In Australia, all advice that considers personal information about the recipient can be considered personal advice and thus is subject to a best interest standard. This led many providers to remove digital tools and calculators that allowed individuals to input their information and receive personalised retirement calculations because providers were worried this would be treated as personal advice. The regulator therefore had to issue limited relief from these obligations for generic retirement income calculators and superannuation projections (Levy, 2023[42]). In response to similar concerns, South Africa amended its existing Code of Conduct to clarify that suitability assessments are flexible and can be scaled according to the specific advice need (FCSA, 2019[59]).

Several jurisdictions are considering how to allow for proportionality considerations for duty of care standards to facilitate these activities and promote access to advice for questions of limited scope. The Delivering Better Financial Outcomes (DBFO) Reforms in Australia have proposed to introduce a new type of adviser that can be employed by superannuation funds and life insurers to give advice on more simple matters while still being held to a best interest standard, and to clarify requirements relating to superannuation funds to provide financial advice for their members and when they can collectively charge for that advice. To facilitate this, they also plan to remove the catch-all safe harbour steps that require providers to take any additional step that would reasonably be considered to be in the client's best interests, which is a barrier to advice of a limited scope (Mulino, 2026[60]).

The United Kingdom has also been considering how to improve access to advice for specific needs. The regulator provided guidance for firms wishing to provide simplified advice that considers only certain details of an individual's financial situation, however firms have remained reluctant to serve this market in part due to legal uncertainty. They are now proposing to formalise the guidance with a regulatory framework around simplified advice. It plans to limit the investment amount, scope of products and topics on which such

advice could be provided in order to remain proportionate in terms of consumer protections (FCA, HM Treasury, 2023[61]). The EU Retail Investment Strategy intends to enable the provision of simplified advice for standardised financial products. Canada has issued guidance to provide dealers with more flexibility to inform clients that certain transactions could be harmful. The guidance comes in light of the recent trends towards execution-only transactions following general recommendations found on social media or provided by financial influencers. It intends to overcome challenges relating to the Recommendation Prohibition, which presented an obstacle for brokers to provide information intending to influence the client (CIRO, 2026[62]).

4.3.3. Effectiveness of disclosure requirements and implementation challenges

Disclosure requirements have improved cost awareness, leading to lower costs and fees. However, challenges remain to ensure that consumers read and understand the disclosures and to limit advisers' compliance costs.

There is some evidence that disclosures around fees and the resulting increase in transparency can lead to cost reductions. In Canada, the average management expense ratios of mutual funds and ETFs declined following the implementation of the CRM2 disclosure requirements as a result of a shift to funds with lower fees as well as a reduction in management fee rates. Risk-adjusted investment returns also improved (CSA, 2024[63]). The requirement under MIFID II in Europe to unbundle costs like investment research resulted in a reduction in fees charged to consumers, with more firms taking on those costs themselves rather than passing them on to clients (Morningstar, 2019[64]). The EU Listing Act has subsequently relaxed this requirement to facilitate research and increase its coverage.

However, even where disclosure requirements are in place, financial providers and advisers do not always comply with those requirements or provide effective disclosures. The nature of advice, amount of inducements and fees are not always clearly disclosed under MIFID II. Further, while the Key Information Document is supposed to be provided "in good time", it is not always provided at the beginning of the advice process, with advisers sometimes waiting until just before the client signs the contract and would be less likely to make use of the document (Uličná et al., 2023[65]).

Disclosure also seems to be less effective in getting consumers themselves to use the information. The Quality of Advice Review in Australia concluded that the required Statement of Advice was ineffective and recommended eliminating it, and that consumers misunderstand general advice warnings to mean that the advice considers their personal situation (Levy, 2023[42]). Furthermore, the requirement for informed consent to renew ongoing fee arrangements was sometimes ineffective at getting superannuation members to realise what they were paying for, and some providers continued to charge fees even if the member was not able to use the service (The Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry, 2019[66]). In the Netherlands, the Ministry of Finance concluded that the required service provision document (DVD) was not used by consumers and was ineffective at getting them to shop around, so it replaced this document with a comparison map which it hopes will be better understood (Minister van Financiën, 2018[67]).

Additionally, financial providers may use documentation to protect themselves from legal liability, providing too much information and further contributing to the lack of effectiveness of disclosures. In Australia, providers sometimes rely on general advice warnings to avoid having to comply with requirements for personal advice. Providers in Australia and Europe also tend to use disclosures as a compliance exercise, including too much information and offsetting any benefits of having a short and simple document for consumers to read (Levy, 2023[42]; Uličná et al., 2023[65]).

Disclosure requirements increase compliance costs for providers and advisers, which can impact access to financial advice. As a result, some countries are trying to reduce compliance costs relating to disclosure. In Australia, the Delivering Better Financial Outcomes Package removed requirements to provide a fee

disclosure statement and provides more flexibility for providers with respect to the timing of providing consent documents for ongoing fee arrangements. It also allows providers to post the required Financial Service Guide that provides information on the services offered on their website rather than issue the document directly to each consumer. In the Netherlands, providers can automatically generate the required comparison map through an online portal.

4.3.4. Effectiveness of restrictions on remuneration and implementation challenges

Remuneration restrictions aim to complement duty of care and disclosure requirements by obliging advisers to mitigate or eliminate conflicts of interest relating to their compensation, thereby reducing the potential for biased advice and opaque costs. Nevertheless, challenges remain to ensure a level playing field among different types of advisers and access for consumers with lower levels of assets.

Hard limits or bans on certain remuneration structures have led to increased flows to lower cost and less complex products. In the Netherlands, the commission ban seems to have been effective at reducing recommendations for certain harmful products (Minister van Financiën, 2018[67]). Following commission bans, Australia, the Netherlands and the United Kingdom have all observed a more rapid decrease in fees than elsewhere (Morningstar, 2019[64]).The Netherlands and the United Kingdom now have some of the least expensive investment funds in Europe, and have observed increased flows to lower cost products, including passively managed funds (Better Finance, 2022[68]; BEUC, 2019[69]; Oxera, 2023[70]; Morningstar, 2019[64]). In Canada, where deferred sales charges were banned, investors also shifted to lower cost funds (Cutts, 2023[71]). In Israel, a reduction in the commission cap for mutual funds appeared to be fully passed on to investors through lower expense ratios and resulted in increased net fund flows (Sokolinski, 2022[72]).

Requirements to explicitly consider potential conflicts of interest coming from remuneration structures, as with MIFID II and IDD in Europe, have also resulted in lower embedded fees for some products and a move towards more transparent direct distribution fees. In Belgium, some product providers have reduced management fees paid to distributors that provide independent advice to the benefit of their clients (Uličná et al., 2023[65]). In Germany, products without embedded distribution fees are becoming more common for independent advisers, allowing distributors to charge directly for the advice provided (Uličná et al., 2023[65]). In Norway, 70% of firms have shifted from inducements to charging direct fees to their consumers (Uličná et al., 2023[65]). Commissions on structured products in Sweden have also come down significantly, though this decrease has come with higher direct fees charged to the consumer (Finansinpektione, 2021[73]). The shift towards charging direct distribution fees rather than embedded fees seems to be beneficial overall, as products having direct distribution fees tend to be less expensive than those with indirect fees (Uličná et al., 2023[65]).

Even if they have maintained the payment of inducements, some providers have introduced innovative remuneration structures as a result of rules requiring distributors to account for potential conflicts in the remuneration they receive. In France, there are examples where providers link it to product suitability, and in Spain to the quality of service based on internal indicators. In Austria and Finland, there are examples where inducements are collected at the firm level and then distributed to advisers in a way to make advisers more product-neutral (Uličná et al., 2023[65]).

A requirement to manage conflicts of interest alongside limitations on remuneration is important, as where this is not the case intermediaries may turn to alternative remuneration structures that may not lead to optimal outcomes for the consumers. In Finland, for example, insurance brokers introduced a success fee following the ban on commissions where they agreed to reduce a client's premiums if they chose their product over one offered by another broker (Mäkynen, 2015[74]).

However, advisers do not always effectively identify and mitigate the conflicts they face. EIOPA found that many firms failed to appropriately address conflicts of interest that could cause potential harm for the detrimental impact test under the EU's Insurance Distribution Directive (IDD). This was due to a lack of

awareness of conflicts of interest or because the assessments of detrimental impact were too standardised or ignored qualitative criteria (EIOPA, 2023[75]).

Limits on remuneration structures have not always led to reduced costs even when they resulted in a shift in compensation structures. In Australia, many advisers shifted from taking commissions to charging upfront and ongoing advice fees to their clients, but consumers often did not receive any benefit from the ongoing charges resulting in significant remediation programmes to address consumer harm. In Germany, evidence in the health insurance market indicates that the commission clawback provision helped to reduce churning, but the cap on commissions was less effective in reducing acquisition costs for consumers (Braegelmann and Schiller, 2023[76]). In addition, upfront commissions increased while deferred commissions decreased, reversing the decrease observed immediately following the introduction of the cap (BaFin, 2020[77]). Despite the expectation that inducements be exceptional under MIFID II, 40% of investment funds in one sample included embedded inducements, and the level of those inducements has not necessarily declined (Uličná et al., 2023[65]).

The fragmentation of requirements across distribution channels can also impede the effectiveness of limits on remuneration to improve advice. Following the commission ban for insurance brokers in Finland, some brokers changed their status to agents while others established offices in other EU countries in order to continue operating with commissions, even when serving the Finnish market (Mäkynen, 2015[74]). However, Sweden did not observe a shift in distribution channels following the commission ban for insurance products. It observed no change in the proportion of commissions received for distributing insurance products among companies licensed to provide both investment advice and insurance distribution (Finansinpektione, 2021[73]).

A major challenge regarding limits on remuneration models, and in particular restrictions on commissions, is the potential reduction in access to advice. In the Netherlands, there has been an increase in execution-only transactions with no advice provided. This seems to be in part due to a reluctance of advisers to provide additional information to consumers inquiring about a particular product out of uncertainty whether doing so would imply that they would be providing advice. This is reinforced by consumers' tendency to not shop around for fear of paying a fee for advice. This has also led to a reduction in ongoing services relating to the product, with providers not even offering such services to their clients (Minister van Financiën, 2018[67]; Oxera, 2023[70]).

The shift to fee-based advice has made it more difficult in particular for individuals with smaller accounts to access advice (Uličná et al., 2023[65]). In the Netherlands, independent advisers were only willing to provide advice for minimum investment amounts of EUR 250 000 to 500 000, and for lower amounts they proposed discretionary portfolio management. Banks and insurers referred the clients with under EUR 100 000 to their websites to invest execution-only (European Commission, 2018[78]). Access problems are also evident in the United Kingdom, though to a lesser extent. Banks accepted clients with GBP 100 000 to invest and referred those with lower amounts to an independent adviser who was often willing to provide advice (European Commission, 2018[78]). However, the proportion of advisers requiring at least GBP 100 000 to invest increased from 13% to 32% from 2013 to 2015 (Oxera, 2023[70]).

The rules around how people can pay for advice may help or hinder access to advice. Rules are stricter in the Netherlands than in the United Kingdom, and advisers cannot recoup their fees via the premium paid for the product. They also do not commonly offer consumers to pay for advice in instalments, which could reduce the upfront cost of advice for the consumer (Minister van Financiën, 2018[67]; Oxera, 2023[70]). This has, in part, led to a reduction in the uptake of life insurance products that are not associated with taking out a mortgage, such as long-term investment products. The United Kingdom also allows people to withdraw up to GBP 500 from their retirement savings accounts without a tax charge to pay for financial advice for retirement. As part of tranche one of the Delivering Better Financial Outcomes reforms, Australia has enacted measures to clarify the legal basis allowing consumers to pay for advice from their superannuation account. Members of superannuation funds can use their retirement savings to pay for

financial advice from a third party as it relates to retirement. As part of tranche two of the reforms, the government also intends to provide certainty to superannuation trustees on the financial advice topics they can charge member accounts collectively, including topics relating to retirement, and the circumstances that can be considered as part of providing this advice.

Given the challenges relating to access with a fee-based model, however, full commission bans may not be ideal in certain contexts. South Africa reconsidered the recommendation of its Retail Distribution Review to move away from commissions following concerns that the resulting cost of advice would threaten the viability of the provision of advice or access to certain products, particularly for low-income groups. As such, they are instead requiring that providers justify the fees or commissions charged to ensure they are not disproportionate to the product and service provided, particularly for products serving less sophisticated or low-income consumers such as funeral products.

Restrictions on commission payments can also present a challenge to achieve a level playing field for different types of advisers and channels. Independent advisers may be at a disadvantage compared to tied advisers operating in a vertically integrated business that can draw revenues from other products and sources. In many jurisdictions, the market for independent financial advice remains very small. The main reasons for a lack of independent advice seems to be a reluctance for consumers to pay upfront for advice, the tendency for independent advisers to require a minimum investment threshold for advice, and difficulty to penetrate a market crowded with other types of advisers (Uličná et al., 2023[65]). Indeed, Swedish authorities noted that independent advice is not common because it is hard for them to compete, even as business models are becoming more fee-based rather than commission-based (Finansinpektione, 2021[73]). While the overall market for independent advice in the Netherlands remains small, the independent advice market is more established there than elsewhere in Europe. Independent advisers serve around half of the market for certain complex products for which advice is required (Oxera, 2023[70]). The fact that commissions are banned for all channels helps from a demand perspective because consumers will have to pay upfront regardless of the type of adviser used. When introducing the commission ban, the Dutch authorities also equalised the tax regimes for independent and tied advisers to promote a level playing field.

An additional measure to promote a level playing field between independent advisers and vertically integrated firms in the absence of commissions is a requirement for advisers to justify the fee charged to clients for advice. Both the Netherlands and the United Kingdom have implemented this measure. It aims to limit the potential for vertically integrated firms to cross-subsidise their advice and offer it at a lower cost than independent advisers would be able to. Advisers must perform a value-for-money assessment to demonstrate that the charge is representative of the actual cost incurred for advice and distribution.

4.4. The regulatory framework can impact structural barriers to seeking advice, but consumer barriers are just as significant

Policymakers need to understand the reasons why individuals do not seek financial advice in order to gauge to what extent measures taken to improve the quality of financial advice are likely to impact demand and what could be done to reduce these barriers. The regulatory framework and measures discussed in the previous section to improve the quality of advice can impact the structural barriers to seek financial advice, both real and perceived. The regulatory framework is less likely to impact other consumer barriers, which would require additional policy interventions to address.

4.4.1. Real and perceived structural barriers

The regulatory framework can create real and perceived structural barriers to seeking financial advice. These structural barriers mainly relate to the cost of advice and the trust that consumer have in advisers.

Many of the measures to promote the quality and transparency of advice can increase the cost of providing it, leading to reduced demand. The cost of advice is a main focus of consumers considering whether to engage a financial adviser, and a key barrier for them to do so. Consumers often focus on cost when choosing an adviser, and many view advice as too expensive or choose to not take advice because of the fees involved (FCA, 2025[79]; ASIC, 2019[80]; Fidelity, 2024[81]; Chikova, Freddi and Pethe, 2025[82]; Schmeiser and Hogarth, 2013[4]; Adfiz, 2025[25]).

Disclosure requirements and the shift towards more transparent fee structures are likely to increase the visibility of costs. Many consumers currently have a poor understanding of what financial advice actually costs, even those receiving advice (FCA, 2025[79]; Aegon, NextWealth & Richard Parkin Consulting, 2023[28]). Improved understanding of the cost may therefore negatively impact demand even if actual costs do not increase.

However, perceived value is likely to be more important than cost in the decision to engage an adviser (Centerdata, 2023[83]). While a proportion of advised individuals may agree that financial advice is expensive, many also feel that advice is worth the cost. Numerous surveys indicate that advised clients often feel the advice they get is good value (FCA, 2025[79]; Aegon, NextWealth & Richard Parkin Consulting, 2023[28]; BNY Investments, 2024[27]; Centerdata, 2023[83]).

A failure of the regulatory framework to ensure competent advisers and quality financial advice can undermine trust, another significant barrier to seeking financial advice. A lack of adequate qualifications, duty of care standards and transparency would exacerbate this barrier. Many consumers indicate that they do not take advice because they lack confidence in advisers and do not trust them to act in their best interest (FCA, 2025[79]; ASIC, 2019[80]; Financial Consumer Agency of Canada, 2025[84]; age UK & Aviva, 2025[85]) While those receiving financial advice tend to have more positive opinions of financial advisers, trust of advisers remains an issue even for consumers receiving financial advice (Schmeiser and Hogarth, 2013[4]; ASIC, 2019[80]; Burke and Hung, 2019[86]; FCA, 2025[79]; Adfiz, 2025[25]).

4.4.2. Consumer barriers

Consumer barriers related to the perceived willingness or need to seek financial advice are less impacted by the regulatory framework and will remain an obstacle to the demand for advice regardless of the measures taken to improve its quality. These barriers include a lack of awareness or engagement with one's finances, a lack of perceived value of advice, and financial anxiety.

A lack of awareness or engagement with the management of one's finances can be a barrier for consumers to seek financial advice. Many consumers fail to consider financial advice as an option because they simply are not thinking about their finances (Invesco, 2024[3]; FMA & Colmar Brunton, 2016[87]; FCA, 2025[79]; ASIC, 2019[80]). Others may not be actively engaged with their retirement planning enough to seek financial advice, particularly those who have been defaulted into an investment or drawdown strategy (FCA, 2025[79]; Reuter and Richardson, 2022[88]; age UK & Aviva, 2025[85]). A lack of engagement with financial planning and tendency to procrastinate financial decisions may also prevent individuals from making the effort to find a financial adviser (FCA, 2025[79]; age UK & Aviva, 2025[85]).

A significant proportion of the population does not seek financial advice because they feel capable of making decisions on their own and do not see the added value of a financial adviser (FCA, 2025[79]; ASIC, 2019[80]; Chikova, Freddi and Pethe, 2025[82]) Paradoxically, the overconfidence in one's own financial abilities is significantly and negatively related to actual financial knowledge, competence, and pension literacy, which may contribute to low advice take-up by those with lower financial literacy (Gentile, Linciano and Soccorso, 2016[89]; Gallery, Gallery and Irving, 2011[90]; Seay, Kim and Heckman, 2023[91]; Dick and Harvey, 2025[92]). Overconfidence is also an explanation as to why men tend to be less likely to seek financial advice (Clark, Fiaschetti and Gerrans, 2018[93]; Zhang, 2014[13]; Montmarquette and Prud'Homme,

2020[20]). Men tend to demonstrate higher levels of overconfidence, leading them to rely more on their own judgement for investment decisions (Gentile, Linciano and Soccorso, 2016[89]).

Others not taking professional advice believe that they are able to access sufficient information to inform their financial decisions elsewhere, either from free information and guidance or non-regulated sources of advice. These sources include official websites, the financial provider, family and friends, employers, official news sources, television, and social media (FCA, 2025[79]; iPipeline & Standard Life, 2025[11]; Reyers, 2019[94]; Financial Consumer Agency of Canada, 2025[84]; ASIC, 2019[80]; Gentile, Linciano and Soccorso, 2016[89]).

Another reason why consumers may not seek financial advice is that they do not see the value of advice for their particular financial situation. This is especially true among consumers with lower levels of investable assets or household income (ASIC, 2019[80]; FCA, 2025[79]). Older individuals who are likely to see advice for retirement as more valuable are also more likely to seek it, with age and income important predictors of the likelihood of receiving financial advice (ASIC, 2019[80]; Financial Consumer Agency of Canada, 2025[84]; Harlow, Brown and Jenks, 2019[2]; Montmarquette and Prud'Homme, 2020[20]; Clark, Fiaschetti and Gerrans, 2018[93]; FCA, 2025[79]).

Finally, anxiety about discussing finances and the worry of seeming financially unprepared, uneducated or incapable may also make consumers reluctant to seek financial advice. They may feel discomfort with sharing personal financial information or fear looking stupid (Centerdata, 2023[83]; ASIC, 2019[80]). Consumers with lower levels of education or income or higher levels of financial stress may be more likely to have higher levels of anxiety (Van Dalen, Henkens and Hershey, 2016[95]; Liu, 2023[96]) Indeed, financial anxiety may be one explanation why those with lower financial literacy are less likely to seek financial advice, and that advice appears to serve more as a complement to financial knowledge rather than a replacement. Generally, individuals with lower levels of education or financial literacy tend to be less likely to use financial advice, even if they would be the most likely to benefit from it (Harlow, Brown and Jenks, 2019[2]; Calcagno and Monticone, 2015[97]; Montmarquette and Prud'Homme, 2020[20]).

4.5. Other measures can promote suitable products and good outcomes for those not able or willing to access financial advice

Policymakers should strive to minimise negative impacts on the accessibility of advice. However, barriers to seeking advice will always exist, and not all individuals will be able to benefit from receiving advice. As such, many jurisdictions have taken additional measures to promote good outcomes for those not taking personalised financial advice. Some have developed frameworks or services to provide guidance to individuals who would nevertheless want help with retirement planning, and others have taken measures to avoid harm from financial products for all consumers.

4.5.1. Measures to provide guidance or assistance for those who want support

Many jurisdictions are making efforts to ensure that individuals not taking advice can still access assistance to help them make suitable financial decisions for their retirement. These include personalised guidance and other sources of more general guidance and information.

Personalised guidance is one approach to nudge consumers towards choosing financial products that are likely to be suitable. Providers of occupational pensions in the Netherlands are now required to provide guidance to their members about their options at payout and inform them of the implications of the different options given their personal circumstances. The United Kingdom has introduced a framework for targeted support that allows firms to recommend specific products to consumers so long as they identify the target market for those products in advance and provide the same product advice to everyone matching that profile. Firms should make the recommendations on the belief that consumers are likely to be better off if

taking the recommendation. The intention is that firms will have more liberty to provide somewhat tailored assistance to their consumers without being subject to the more resource-intensive compliance requirements for providing regulated financial advice. The FCA will work closely with the Ombudsman to provide comfort to both providers and consumers that the Ombudsman will be able to handle complaints fairly and in line with the expectations of the targeted support framework. With a similar objective, Australia is proposing to introduce Targeted Superannuation Prompts that superannuation funds can send to defined target groups to encourage them to engage with their retirement savings.

Governments have also taken steps to ensure more general guidance and the availability of information that people need to make informed financial decisions, in particular for their retirement. Such services often complement individual pension dashboards that show individuals how much retirement income they can expect to have in retirement (OECD, 2024[98]). Australia has launched a range of free and independent tools and resources on its Moneysmart website to help people plan for their retirement (ASIC, 2026[99]). It also offers a Financial Information Service whose officers provide information and tools relevant to an individual's situation to help them to make financial decisions. The PensionWise service in the United Kingdom offers free and impartial guidance to individuals regarding their defined contribution pension by helping them to understand the options available and their implications. Individuals can engage in a self-guided session via a web tool or make an appointment for a consultation with an officer over the phone. However, it has been a challenge to mainstream the usage of this service, with only a small proportion of individuals using it (FCA, 2025[79]).

Other semi-public organisations often provide financial guidance. In France, L'Union Retraite, an association of the complementary pension funds, provides a free personalised interview to help individuals understand their pension rights, expected future benefits, and options available to them to improve their situation. Money Wise in the Netherlands is an initiative of the Ministry of Finance that partners with the private sector to maintain a website where individuals can access information on a variety of topics, including how the pension system works, what individuals can expect from their retirement and some of the options available to them (European Commission, 2016[41]).

Nevertheless, such services are likely to be effective only if the individual is actively seeking assistance. Evidence indicates that the mere availability of guidance or recommendations does not necessarily get people to follow the suggestions made. A German brokerage firm making free, independent advice available to its retail clients found that those who most needed help were the least likely to use the service, and those who received the advice did not use it to improve their portfolio (Bhattacharya et al., 2011[100]). Similarly, providing recommendations automatically does not necessarily improve outcomes. In another study, US investors who chose to receive a recommendation did better than those who received it by default (Hung and Yoong, 2010[101]). Another German study showed that the majority of households receiving a standardised recommendation ignored it, and those who did listen did not follow the recommendation to its full extent (Stolper, 2018[102]).

4.5.2. Measures to avoid harm for individuals not taking advice

Other measures can prevent harm for those not willing or able to seek assistance for their retirement planning. Regulatory measures are increasingly holding product providers themselves responsible for ensuring that their products are not likely to cause harm to consumers. Such measures include requirements for product providers to identify the target market for their products or more general requirements to ensure that products are providing good value to consumers, restricting under what conditions consumers can access certain financial products, and the clarification of responsibilities of those promoting products outside traditional channels.

One approach to promote the design of products beneficial to individuals has been to require the product manufacturers themselves to consider the target market that their product would be most suited to. MIFID II in Europe requires providers to define the target market for products and to monitor that the product is

distributed to that market. Distributors must take this information into account and should also identify markets for which the product is unlikely to be suitable. Similarly, the product governance and oversight requirements of the Insurance and Distribution Directive require insurers to identify the target market for their products during the product approval process and take reasonable steps to ensure the product is distributed to that market. In Germany, BaFin considers the lapse rates of long-term life insurance products as an indicator of suitability. Insurers are expected to ensure that their products offer value to customers not lapsing early, and if they have to raise reasonable lapse assumptions, this is an indication that the product is not suitable for the target market (BaFin, 2024[103]). The Design and Distribution Obligations in Australia also require issuers to define a target market for their products, and distributors must take reasonable steps to distribute the product in a way consistent with the target market. Insurance companies in France must define a target market and the associated distribution strategy, which should consider factors such as age, household, profession, pension sources, risk appetite, financial circumstances, objectives and investment horizon. The supervisor's expectation is that the more complex the product is, the more granular the target market should be (ACPR, 2024[104]). In Canada, the Canadian Council of Insurance Regulators (CCIR) has proposed targeted guidance for segregated funds that indicates that providers should consider the target market for these products (CCIR/CISRO, 2025[105]).

Other measures require product providers to take steps to ensure that their products and services more generally are providing good value to consumers. South Africa has a Treating Customers Fairly approach for regulation and supervision that lays out expectations for financial institutions to ensure fair outcomes for consumers throughout the product lifecycle, from design to distribution through to servicing and complaints. Similarly, the United Kingdom introduced the Consumer Duty in 2022, which prescribes a set of principles that go beyond a duty of care standard and requires firms to have procedures and policies in place to ensure good outcomes for retail consumers. Firms need to ensure that their products and services meet the needs of consumers, that they provide good value, that they provide information in a way that consumers can understand, and that they provide adequate customer support to help consumers effectively use the products.

Other measures can limit access to products without advice to avoid potential harm. Under MIFID II, consumers can only access non-complex products without advice or suitability checks, and under IDD consumers must consent if accessing certain insurance-based investment products without advice. The Netherlands also requires a knowledge test for consumers who would like to invest in certain products without advice.

A few jurisdictions limit the sale of financial products in certain contexts to limit the potential for misselling. The hawking of financial products is prohibited in Australia meaning that products cannot be sold a consumer following unsolicited contact. In Germany and the United Kingdom, intermediaries cannot sell payment protection insurance within seven days of a credit sale. In the United Kingdom, this restriction followed a mis-selling scandal for the product as the authorities found that consumers were being pressured into purchasing it, which was very profitable for providers and not providing value for consumers (Oxera, 2023[70]).

The use of social media to provide general financial advice and promote financial products is a growing concern in many jurisdictions, as such channels are not always well-covered by existing regulations. Ireland has addressed this directly in its Guidance on the Consumer Protection Code, stating explicitly that "finfluencers" are subject to the requirements of the Code if they benefit from the promotion of certain financial products on social media. The firm whose services or products are promoted is held responsible for ensuring that the social media posts comply with the Code (Central Bank of Ireland, 2025[106]). The FCA in the United Kingdom also issued guidance relating to financial promotions on social media (FCA, 2024[107]). Firms remain responsible for any communication relating to their products, and certain high-risk products are not allowed to be promoted to retail consumers, including via social media. Finfluencers must comply with restrictions around financial promotions regardless of their financial relationship with the firm

supplying the products. Communications on social media can also be subject to the Consumer Duty requirements to deliver good outcomes for consumers and support their understanding. To help provide clarity on the obligations applicable to influencers communicating about financial products, the FCA developed a useful infographic with the Advertising Standards Authority (FCA, 2023[108]).

4.6. Policy implications

Regulators should take measures to improve the quality of advice while being mindful of the potential negative impacts on access to advice. All consumers have the right to know how much they are paying for advice and to trust that the advice they receive is in their best interests. Nevertheless, the design and implementation of such measures need to find a balance between ensuring the quality of advice and promoting affordable access to advice, as these two objectives can conflict with one another.

Each measure discussed in this chapter has demonstrated some effectiveness at improving outcomes for those taking financial advice. Registration and qualification requirements have transformed financial advice into a profession rather than a sales role, increasing the competence of advisers and contributing to improved trust in financial services. Duty of care standards have improved the quality of financial advice, leading to recommendations for lower cost products, and have raised the bar in terms of assessing the suitability of products for consumers. Disclosure requirements have raised awareness of the costs involved in financial products, at times leading not only to recommendations for lower cost products but also a reduction in charges passed along to individuals. Restrictions on remuneration structures target the most prevalent and potentially harmful conflicts of interest at their source, improving the effectiveness of duty of care requirements to identify and manage conflicts.

However, each of these measures presents challenges to ensure their effective implementation while minimising negative impacts on access to advice. Stricter qualification requirements can lead to a reduction in the number of advisers, as those unwilling or unable to meet the requirements exit the market. Intermediaries are not always effective at identifying and mitigating potentially harmful conflicts of interest, even if duty of care standards require them to do so. Requirements to ensure the suitability of products and make recommendations in the best interest of consumers can lead to a fear of legal liability, reducing the willingness of intermediaries to serve certain markets. Consumers often ignore disclosures, which are commonly used to mitigate the liability risk of providers rather than provide useful and understandable information to clients. Limits on the ability of intermediaries to receive commission payments and the increase of fee-based advice can lead to reduced access to advice for those with lower amounts to invest and result in an increase in execution-only investment.

Regulators should therefore focus on how they can minimise any negative impacts and promote good outcomes for all consumers regardless of the channel through which they access a financial product, even if they do not receive financial advice.

4.6.1. Careful design and implementation of measures to improve adviser competence and the quality of advice is necessary to ensure their effectiveness

Careful design and implementation can improve the effectiveness of measures taken to improve the quality of advice. Qualification and licensing requirements, duty of care standards, disclosure requirements and remuneration restrictions have all had a positive impact on outcomes for those taking financial advice. However, each also presents challenges to ensure their effectiveness.

Qualification requirements have improved the level of competence of financial advisers. However, the allowed credentials and titles should be limited to avoid consumer confusion. Credentials approved by the supervisor can ensure that a minimum standard is met. Restricting the titles that financial advisers may use to describe their activities can avoid misleading consumer expectations regarding the services

provided. Registration databases aid in ensuring quality by providing consumers with a resource to verify the adviser's legitimacy and conduct.

Regulators could harmonise requirements relating to the level of care that advisers must provide to their clients in considering their best interests. A lack of harmonisation of requirements across distribution channels and markets can lead advisers to avoid serving certain markets or products, or lead consumers to receive lower quality advice in certain contexts. Nevertheless, allowing for some variation in the suitability assessment depending on the context can allow for providing simplified advice for specific issues.

Principle-based approaches aiming to ensure that adequate processes and procedures are in place to determine suitability may help to achieve better outcomes. Checklist-type approaches using inflexible criteria are less able to adapt to changing contexts or focus on the actual needs of the client, leading to ineffective suitability assessments focussed on compliance with rules rather than consumer outcomes.

Disclosures should contain only the most important information for consumers and be presented in a simple and comprehensible way to improve their effectiveness. Relevant additional information should nevertheless still be publicly available, for example on the provider's website.

Any remuneration limits, where appropriate, should consider the specific problems observed in a given market, as the effectiveness of such limits also depends on local context as well as design. Full commission bans have tended to be for markets that have experienced severe mis-selling scandals and that already have an established independent adviser profession. Even when commissions are not fully banned, specific remuneration structures representing unmanageable conflicts of interest, such as those linked to sales targets, are commonly prohibited and advisers are generally required to mitigate conflicts relating to their compensation. Innovative remuneration structures, such as those linking compensation to the quality of advice or the distribution of commissions at a firm level to avoid product bias at the adviser level, can help to minimise potential conflicts of interest.

Additional measures may also be needed to avoid unfair competitive advantages for certain players when bans on commissions are imposed. Independent advisers who cannot charge commissions may be at a disadvantage compared to commission-based advisers because the upfront cost of the advice is higher. Even when commission bans apply across the market, vertically integrated firms may have a competitive advantage compared to independent advisers because they are able to cross-subsidise their activities across lines of business. To avoid this, advisers can be required to justify the fees charged and demonstrate that they are sufficient to cover the services provided. Intermediaries may also need to ensure that consumers are aware of the services they are entitled to based on the fees charged, such as ongoing advice.

4.6.2. Implementation should also consider how to minimise any impact on access and affordability

Measures to improve the quality of advice can also have a negative impact on access to advice. Advisers not willing or able to meet additional requirements may fail to serve certain markets, and higher compliance costs can be passed on to consumers, increasing the cost of advice. Making the costs of advice more transparent can also negatively impact demand, as consumers may be less willing to pay upfront for advice.

Qualification requirements should be proportional to the context and problem for which advice is given. A reduction in the number of advisers following increased qualification requirements is not necessarily negative to the extent that those who are less competent exit the market. However, requirements can also recognise professional experience in addition to formal education to avoid forcing experienced advisers out of the market. Lighter requirements may also be justified for specific, simple situations.

The definition of advice needs to be clearly defined to provide comfort to intermediaries that they are complying with rules. Duty of care standards can negatively impact the advice gap due to a fear of legal liability, which can result in a reluctance for intermediaries to either serve certain markets or to provide helpful information to their clients that could potentially be interpreted as advice. Regulatory boundaries for advice should distinguish between information and advice, making explicit that providing useful information to consumers – such as online tools or personalised information on expected retirement incomes – will not be a breach of conduct.

The advice boundary needs to be clear to allow for simplified advice for financial issues of limited scope. Potential ways to delineate the boundary can relate to the recommended product (e.g. a simple product below a certain amount invested) or advice or guidance relating to a specific context (e.g. questions around retirement savings or the payout options available at retirement). The enforcement of suitability requirements should nevertheless recognise that simplified advice would not necessarily be the best advice if considering an individual's overall financial situation but should be reasonably suitable given the personal information provided.

Disclosure requirements should strive to minimise compliance costs. Those that have proven to be ineffective should be adapted or removed. Regulators and supervisors can also take measures to facilitate the preparation of required disclosures.

More flexibility in the way consumers can pay for advice can mitigate any reduction in demand resulting from making the cost of advice more transparent. This can be done, for example, by including the cost in the insurance premium or allowing consumers to pay for retirement advice from their retirement savings account.

Certain products may warrant an exception from restrictions on remuneration structures, when implemented. Commission bans may not be necessary for products having a lower potential for harm, such as those in very competitive markets or that are easily understood by consumers. Exceptions can also be made for products targeted at underserved or vulnerable markets, such as some insurance products. For the latter, a more common approach is to have targeted limits on the allowed commissions for those products to avoid a reduction in market penetration.

4.6.3. Regulators should carefully weigh trade-offs and consider whether a potential reduction in quality to promote access is justified

Measures to avoid an impact on access or to reduce the cost of providing advice need to be carefully assessed to ensure the expected benefits outweigh the potential reduction in advice quality, particularly given that value is often more important than cost for consumers. While some measures to improve advice quality may have a negative impact on the accessibility of advice, addressing conflicts of interest, transparency and adviser competence is necessary to ensure that the advice is ultimately beneficial to consumers. Such measures can also improve trust, which is a key factor for individuals not only to seek advice but to follow it. Furthermore, there are many reasons as to why individuals do not seek financial advice, therefore increasing access is not guaranteed to increase uptake.

Solutions focussed on reducing the barriers to provide and access simplified advice for specific issues should be carefully considered given the more limited benefits of such advice for retirement. The benefits of one-off advice and non-comprehensive advice for retirement seem to be more limited, as many benefits from advice are realised when having a longer-term relationship with the adviser or for more complex issues. The length of an individual's relationship with an adviser matters for increasing savings and riding out market turmoil, as advisers can help individuals stick to their long-term financial plan and a longer relationship with an adviser helps to build trust. At retirement, the added value of advisers is not just encouraging lifetime income, but also helping individuals to adopt a payout strategy that considers their total wealth, is tax efficient, and can respond to market dynamics and changing needs over retirement.

All consumers do not necessarily benefit equally from financial advice, and increasing their access to advice will not necessarily improve outcomes. Advice is less effective at improving risk-taking for individuals with lower levels of financial literacy. Women more often receive poor advice due to conflicts of interest or adviser bias than men.

Alternatives to advice may be more effective at achieving similar benefits where access to or demand for advice may be limited, or for groups who tend to benefit less. Well-selected default investment strategies for retirement savings can be broadly effective to achieve higher net returns, encourage appropriate levels of risk-taking, and avoid panic-selling. Personalised guidance could be an alternative to simplified advice for questions of limited scope. Such a service could also be valuable for those with lower levels of assets who may not be able to access financial advice, or for those with lower financial literacy who are less likely to seek advice but more likely to benefit from some assistance.

4.6.4. Other policy interventions could help to reduce barriers to access financial advice

Other measures not specifically focussed on financial advice could contribute to improving the uptake of advice. For example, improvements in financial literacy, and more specifically pension literacy, could increase demand for financial advice for retirement. Individuals with low financial knowledge are less likely to consult a financial adviser. Furthermore, those with low pension knowledge are also more likely to be overconfident in their own abilities to invest for retirement, and overconfidence is one of the main reasons that individuals believe they do not need advice.

More generally, communication or awareness campaigns could help to overcome individuals' lack of awareness or engagement with their retirement planning. The reluctance to think about one's finances and procrastinate financial decision making is another reason why individuals do not seek financial advice or guidance, even if they think it could be useful. Reminding the public of the importance of planning for retirement and doing so earlier rather than later may help to spur some people into being more proactive and seeking help if they need it.

4.6.5. Measures should be in place to support and protect those not taking advice

While certain actions can be taken to reduce the negative impact of regulation on the advice gap, not everyone will receive financial advice, and complementary measures are needed to reduce the risk that financial consumers not taking advice will be harmed from an inappropriate investment. Requirements around the distribution of products can help to minimise the potential for harm even for those not considering advice. Information and guidance services can provide help for consumers who would still like some assistance but may not be willing or able to access advice.

Putting more onus on the product manufacturers to ensure that their products will benefit their target market can mitigate the potential for harm to consumers. Such requirements oblige product providers to clearly define the target market for each product and take actions to ensure that the product is distributed primarily to that market. Holding firms accountable for the distribution of their products also provides an additional layer of protection against the dissemination of inappropriate advice by "finfluencers". Other measures go even further, focussing on consumer outcomes and requiring as a matter of principle that firms take steps to ensure their products and services provide good value and treat consumers fairly at every point of the distribution cycle.

Governments need to ensure that information about retirement planning and options is easily available and accurate, as some individuals prefer to obtain information and advice from sources other than a financial adviser. Furthermore, as society and especially young people rely more on social media for financial information, regulators need to ensure that there are no regulatory gaps and that the distributors of such information are aware of their legal obligations to consumers.

Regulators should consider how to facilitate providers and intermediaries in assisting consumers to make better decisions and provide personalised guidance without running afoul of regulatory requirements relating to financial advice. Such options could allow providers or intermediaries to highlight actions that are likely to be appropriate – or risky – given the known information about the individual. For example, they may allow providers to suggest a certain product that is likely to be appropriate given the individual's characteristics, to provide a prompt to individuals who are likely to be better off by taking a certain action, or to provide a warning when a certain decision may not be the best course of action.

However, efforts to address the advice gap at the advice boundary need to also address the liability concerns of providers and intermediaries for them to engage with this type of solution. Having general requirements to treat customers fairly can provide the regulators with some comfort that a provider will not provide a suggestion that is inappropriate for the consumer. However, providers also need to have some certainty that they will not face sanctions if the suggested course of action was not the best solution for the consumer when reasonable expectations would indicate otherwise. For such solutions to be practicable, regulators will need to set clear expectations and make sure the rules and requirements in place are aligned with that expectation. Regular engagement with stakeholders to ensure a common understanding of regulatory expectations can be helpful in this regard.

A key challenge, however, is getting people to use the advice, tools and information available to them. Indeed, while solutions such as pension dashboards and guidance services are a valuable resource to help with retirement planning, only a portion of the population accesses them. Furthermore, simply providing advice does not mean that people will follow it, and individuals need to voluntarily want the advice to benefit from it. Bridging the engagement gap will therefore be just as challenging as addressing the advice gap.

References

ACPR (2024), *Recommandation 2024-R-01 du 28 juin 2024 sur la mise en œuvre de certaines dispositions issues de la directive (UE) 2016/97 sur la distribution d'assurances*, https://acpr.banque-france.fr/system/files/import/acpr/media/2024/06/28/20241906_2024-r-01.pdf. [104]

Adfiz (2025), *Advies in Cijfers*, https://www.adfiz.nl/media/7056/advies-in-cijfers-2025_digitaal-1.pdf. [25]

Aegon, NextWealth & Richard Parkin Consulting (2023), *Managing Lifetime Wealth: retirement planning in the UK*, https://nextwealth.co.uk/wp-content/uploads/2023/02/Aegon-Managing-Lifetime-Wealth-Report-2023.pdf. [28]

age UK & Aviva (2025), *Retirement reality: Managing money in mid-retirement*. [85]

Allie, J., D. West and G. Willows (2016), "The value of financial advice: An analysis of the investment performance of advised and non-advised individual investors", *Investment Analysts Journal*, Vol. 45, https://doi.org/10.1080/10293523.2016.1201292. [32]

Andries, M., M. Bonelli and D. Sraer (2024), "Financial Advisors and Investors' Bias", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4691695. [36]

ASIC (2026), *From anxiety to action: Helping Australians to plan for their financial future*, https://www.asic.gov.au/about-asic/news-centre/find-a-media-release/2026-releases/26-074mr-from-anxiety-to-action-helping-australians-to-plan-for-their-financial-future. [99]

ASIC (2019), *Financial advice: What consumers really think*, https://download.asic.gov.au/media/5243978/rep627-published-26-august-2019.pdf. [80]

ASIC (2018), *Financial advice: Vertically integrated insititutions and conflicts of interest*, https://download.asic.gov.au/media/4632718/rep-562-published-24-january-2018.pdf. [55]

Australian Treasury (2026), *Education reform for financial advisers*, https://consult.treasury.gov.au/c2026-700540. [48]

Baeckström, Y., I. Marsh and J. Silvester (2021), "Financial advice and gender: Wealthy individual investors in the UK", *Journal of Corporate Finance*, Vol. 71, p. 101882, https://doi.org/10.1016/j.jcorpfin.2021.101882. [18]

BaFin (2024), "Taking a closer look at value for money", https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Fachartikel/2024/bafin_fachartikel_wohlverhalten_en.html. [103]

BaFin (2020), *Acquisition commissions: BaFin conducts survey on payments to insurance intermediaries*, https://www.bafin.de/SharedDocs/Veroeffentlichungen/EN/Meldung/2019/meldung_191211_abschlussprovision_abfrage_en.html. [77]

Barbu, A. (2022), "Ex-Post Loss Sharing in Consumer Financial Markets", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4079524. [51]

Battiston, D. et al. (2025), "The Effect of Advisors' Incentives on Clients' Investments", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.5378537. [33]

Better Finance (2022), *Evidence & arguements for banning inducements in retail investment services*, https://betterfinance.eu/wp-content/uploads/BETTER-FINANCE-Evidence-Paper-on-Detrimental-Effects-of-Inducements-03022022.pdf. [68]

BEUC (2019), *The case for banning commissions in financial advice*, https://www.beuc.eu/sites/default/files/publications/beuc-x-2019-046_the_case_for_banning_commissions.pdf. [69]

Bhattacharya, U. et al. (2011), "Is Unbiased Financial Advice To Retail Investors Sufficient? Answers from a Large Field Study", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.1669015. [100]

Blanchett, D. (2025), *Financial Advice and Retirement Confidence: What's Wealth Got to Do With It?*, https://www.kiplinger.com/retirement/retirement-planning/financial-advice-and-retirement-confidence-by-wealth-level. [26]

Blanchett, D., M. Finke and Z. Liu (2022), "The Value of Professional Financial Advice on Investor Behavior During the COVID-19 Pandemic", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4289043. [19]

Blanchett, D. and P. Kaplan (2013), *Alpha, Beta, and Now…Gamma*, https://www.morningstar.com/content/dam/marketing/shared/research/foundational/677796-AlphaBetaGamma.pdf. [10]

BNY Investments (2024), *Retirement advice in the UK: Time for change?*. [27]

Braegelmann, K. and J. Schiller (2023), "Lowering acquisition costs with a commission cap? Evidence from the German private health insurance market", *The Geneva Risk and Insurance Review*, https://doi.org/10.1057/s10713-023-00091-4. [76]

Bucher-Koenen, T. and J. Koenen (2023), "Do Seemingly Smarter Consumers Get Better Advice?", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2572961. [34]

Burke, J. and A. Hung (2019), "Trust and financial advice", *Journal of Pension Economics and Finance*, Vol. 20/1, pp. 9-26, https://doi.org/10.1017/s147474721900026x. [86]

Calcagno, R. and C. Monticone (2015), "Financial literacy and the demand for financial advice", *Journal of Banking & Finance*, Vol. 50, pp. 363-380, https://doi.org/10.1016/j.jbankfin.2014.03.013. [97]

CCIR/CISRO (2025), *Public Consultation Draft of CCIR/CISRO Consolidated Segregated Funds Guidance*, https://www.ccir-ccrra.org/Documents/View/3952. [105]

Centerdata (2023), *De vraag naar financieel advies: Consumentenonderzoek in opdracht van het minsterie van Financien*, https://open.overheid.nl/documenten/29ed7ba4-8c12-4dad-8e75-f434171b861c/file. [83]

Central Bank of Ireland (2025), *General Guidance on the Consumer Protection Code*, https://www.centralbank.ie/docs/default-source/regulation/consumer-protection/other-codes-of-conduct/consumer-protection-code-review/general-guidance-on-the-consumer-protection-code.pdf?sfvrsn=917f6a1a_6. [106]

Central Bank of Ireland (2019), *Addendum to the Consumer Protection Code 2012*, https://www.centralbank.ie/docs/default-source/regulation/consumer-protection/other-codes-of-conduct/addendum-to-the-consumer-protection-code-2012---september-2019.pdf?sfvrsn=9435bd1d_6. [43]

Chikova, D., R. Freddi and S. Pethe (2025), *European Retail Banking Radar 2025: Investing in the future: perspectives on retirement and financial stability*, https://www.kearney.com/industry/financial-services/european-retail-banking-radar/article/investing-in-the-future-perspectives-on-retirement-and-financial-stability. [82]

CIRO (2026), *New guidance on order execution only account services and activities*, https://www.ciro.ca/newsroom/publications/new-guidance-order-execution-only-account-services-and-activities. [62]

Clark, G., M. Fiaschetti and P. Gerrans (2018), "Determinants of seeking advice within defined contribution retirement savings schemes", *Accounting & Finance*, Vol. 59/S1, pp. 563-591, https://doi.org/10.1111/acfi.12397. [93]

Costa, P., M. Martino and M. de la Fuente (2025), *The emotional and time value of advice*. [21]

Crabb, J. (2017), *The Fiduciary Rule Poll*, https://assets.contentstack.io/v3/assets/blt5775cc69c999c255/bltad3080464c181a4c/171000-fiduciary-rule-poll.pdf. [52]

CSA (2024), *A Post-Implementation Review of The Impacts of The CRM2 Annual Costs and Performance Reports on Investment Fund Fees and Performance*, https://www.autorites-valeurs-mobilieres.ca/wp-content/uploads/2024/04/CRM2-Executive-Summary.pdf. [63]

CSA and CIRO (2023), *Joint Canadian Securities Administrators / Canadian Investment Regulatory Organization Staff Notice 31 – 363 Client Focused Reforms: Review of Registrants' Conflicts of Interest Practices and Additional Guidance*, https://www.ciro.ca/newsroom/publications/joint-canadian-securities-administrators-canadian-investment-regulatory-organization-staff-notice-31. [54]

Cummings, B. and R. James (2014), "The Impact of Financial Advisors on the Subsequent Wealth of Older Adults", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2434267. [16]

Cutts, A. (2023), *Balancing Act: Enhancing regulation without compromising financial access in Canada*, https://www.primericacanada.ca/public/canada/Primerica_Canada_White-Paper.pdf. [71]

Deloitte (2017), *The DOL Fiduciary Rule: A Study in How Financial Institutions Have Responded and the Resulting Impacts on Retirement Investors*, https://www.sifma.org/wp-content/uploads/2017/08/Deloitte-White-Paper-on-the-DOL-Fiduciary-Rule-August-2017.pdf. [57]

Deloitte, SIFMA (2020), *Regulation Best Interest: How wealth management firms are implementing the Rule Package*, https://www.sifma.org/wp-content/uploads/2020/03/Regulation-Best-Interest-Survey-Report2020.pdf. [53]

Dick, J. and J. Harvey (2025), "The Importance of Financial and Pension Literacy in Closing the Financial Advice Gap in the U.K.", *Social Policy and Society*, pp. 1-26, https://doi.org/10.1017/s1474746425000272. [92]

Egan, M., S. Ge and J. Tang (2020), "Conflicting Interests and the Effect of Fiduciary Duty — Evidence from Variable Annuities", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3652115. [50]

Egan, M., G. Matvos and A. Seru (2024), "The Problem of Good Conduct among Financial Advisers", *Journal of Economic Perspectives*, Vol. 38/4, pp. 193-210, https://doi.org/10.1257/jep.38.4.193. [45]

EIOPA (2023), *2nd Report on the application of the Insurance Distribution Directive (IDD)*, https://www.eiopa.europa.eu/document/download/726b51bc-e8a0-4b1e-baef-f8d2bc93d018_en?filename=EIOPA-BoS-23-477_2nd%20Report%20on%20the%20application%20of%20the%20IDD.pdf. [75]

European Commission (2018), *Study on the distribution systems of retail investment products*, https://finance.ec.europa.eu/publications/study-distribution-systems-retail-investment-products_en. [78]

European Commission (2016), *Study on access to comprehensive financial guidance for consumers*, https://finance.ec.europa.eu/document/download/81e7d309-a29d-4d9d-97ad-1e7b6366b197_en?filename=1611-study-financial-guidance_en.pdf. [41]

Fang, J., W. Hao and M. Reyers (2022), "Financial advice, financial literacy and social interaction: what matters to retirement saving decisions?", *Applied Economics*, Vol. 54/50, pp. 5827-5850, https://doi.org/10.1080/00036846.2022.2053654. [8]

FCA (2025), *Financial Lives 2024*, https://www.fca.org.uk/financial-lives/financial-lives-2024. [79]

FCA (2024), *Finalised guidance on financial promotions on social media*, https://www.fca.org.uk/publication/finalised-guidance/fg24-1.pdf. [107]

FCA (2024), *Information on advisor numbers - November 2024*, https://www.fca.org.uk/freedom-information/information-advisor-numbers-november-2024. [47]

FCA (2024), *Retirement income advice thematic review*, https://www.fca.org.uk/publication/thematic-reviews/tr24-1.pdf. [56]

FCA (2023), *FCA and ASA team up to warn finfluencers of risks of promoting illegal 'get rich quick' schemes*, https://www.fca.org.uk/multimedia/fca-and-asa-team-warn-finfluencers-risks-promoting-illegal-get-rich-quick-schemes. [108]

FCA (2020), *Evaluation of the impact of the Retail Distribution Review and the Financial Advice Market Review*, https://www.fca.org.uk/publication/corporate/evaluation-of-the-impact-of-the-rdr-and-famr.pdf. [39]

FCA (2014), *Post-implementation review of the Retail Distribution Review – Phase 1*, https://www.fca.org.uk/publication/research/post-implementation-review-rdr-phase-1.pdf. [40]

FCA, HM Treasury (2023), *Advice Guidance Boundary Review - proposals for closing the advice gap*, https://www.fca.org.uk/publication/discussion/dp23-5.pdf. [61]

FCSA (2019), *Retail Distribution Review: Discussion Document on Categorisation of Financial Advisers and Related Matters*, https://www.moonstone.co.za/wp-content/uploads/library/Moonstone%20Library/MS%20Industry%20News/1.%20Retail%20Distribution%20Review%20Adviser%20Categorisation%20Discussion%20Document%20December%202019.pdf. [44]

FCSA (2019), *Retail Distribution Review: General Status Update as at December 2019*, https://www.fsca.co.za/Regulatory%20Frameworks/Regulatory%20Frameworks%20Documents/RDR%20General%20Status%20Update%20December%202019.pdf. [59]

Fidelity (2024), *Next generation: Rewriting the rules of engagemnet*, https://www.fidelity.com.au/sites/fidelity/assets/Final_Next_Gen_Report.pdf. [81]

Financial Consumer Agency of Canada (2025), *Spotlight on Canadians' use of financial advice*, https://www.canada.ca/en/financial-consumer-agency/programs/research/financial-advice.html. [84]

Finansinpektione (2021), *Uppföljning av de nya reglerna om provision och oberoende rådgivning*, https://www.finansinspektionen.se/contentassets/37025dc3221343258b6b39b0c32859f4/rapport-mifid-2-20-dec-2021.pdf. [73]

FMA & Colmar Brunton (2016), *Point of retirement research*, https://ndhadeliver.natlib.govt.nz/delivery/DeliveryManagerServlet?dps_pid=IE65248771. [87]

Foerster, S. et al. (2017), *Financial Advisors and Risk-Taking*, https://gattonweb.uky.edu/faculty/hankins/conf2018/FinancialAdviceRiskTaking_20171120.pdf. [15]

Foerster, S. et al. (2014), *The Costs and Benefits of Financial Advice*, https://www.semanticscholar.org/paper/The-Costs-and-Benefits-of-Financial-Advice-Foerster-Linnainmaa/5a7bb1c3dfc7499d211a9d1441fde9afe249d266. [6]

Gallery, N., G. Gallery and K. Irving (2011), "Superannuation Fund Members and Financial Planning Advice", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.1927647. [90]

Gentile, M., N. Linciano and P. Soccorso (2016), *Financial advice seeking, financial knowledge and overconfidence*, https://www.consob.it/documents/1912911/2006254/wp83.pdf/111fe7a0-a078-56d6-0a8c-e537478ec081. [89]

Hackethal, A., M. Haliassos and T. Jappelli (2011), "Financial Advisors: A Case of Babysitters?", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.1360440. [30]

Harlow, W., K. Brown and S. Jenks (2019), "The Use and Value of Financial Advice for Retirement Planning", *The Journal of Retirement*, Vol. 7/3, pp. 46-79, https://doi.org/10.3905/jor.2019.1.060. [2]

Hoechle, D. et al. (2023), "Financial Advice and Retirement Savings", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.4339769. [9]

Hoechle, D. et al. (2018), "Financial Advice and Bank Profits", *The Review of Financial Studies*, Vol. 31/11, pp. 4447-4492, https://doi.org/10.1093/rfs/hhy046. [31]

Hoechle, D. et al. (2016), "Don't Answer the Phone - Financial Advice and Individual Investors Performance", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2537368. [29]

Honigsberg, C., E. Hu and R. Jackson, Jr. (2021), "Wandering Financial Advisors", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3769653. [58]

Hung, A. and J. Yoong (2010), *Asking for Help: Survey And Experimental Evidence On Financial Advice And Behavior Change*. [101]

Invesco (2024), *Invesco UK Retirement Study: Better retirement outcomes in the DC era*, https://www.invesco.com/content/dam/invesco/uk/en/pdf/Invesco_UK_Retirement_study_2024.pdf. [3]

iPipeline & Standard Life (2025), *Pensions and retirement at a crossroads: Research, views and analysis of the UK pension, retirement and investing landscape*. [11]

Levy, M. (2023), *Quality of Advice Review - Final Report*, https://treasury.gov.au/publication/p2023-358632. [42]

Linnainmaa, J., B. Melzer and A. Previtero (2021), "The Misguided Beliefs of Financial Advisors", *Journal of Finance*, https://doi.org/10.2139/ssrn.3101426. [35]

Liu, F. (2023), "Who Seeks Financial Advice from a Financial Planner?", *International Journal of Economics and Finance*, Vol. 15/7, p. 1, https://doi.org/10.5539/ijef.v15n7p1. [96]

Liu, F. et al. (2018), "Professional financial advice, self-control and saving behavior", *International Journal of Consumer Studies*, Vol. 43/1, pp. 23-34, https://doi.org/10.1111/ijcs.12480. [5]

Mäkynen, T. (2015), *Negative Effects of the Prohibition of Commission in Finland*, https://www.wko.at/oe/information-consulting/versicherungsmakler-berater-versicherungsangelegenheiten/maekynen-aus-laendern-mit-provisionsverbot.pdf. [74]

Martin, T. and M. Finke (2012), "Planning for Retirement", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2195138. [1]

Minister van Financiën (2018), *Wet- en regelgeving financiële markten*, https://zoek.officielebekendmakingen.nl/kst-32545-74.html#ID-830316-d36e76. [67]

Montmarquette, C. and A. Prud'Homme (2020), *More on the value of financial advisors*, https://cirano.qc.ca/files/publications/2020RP-04.pdf. [20]

Montmarquette, C. and N. Viennot-Briot (2015), "The Value of Financial Advice", *Annals of Economics and Finance*, Vol. 16/1, pp. 69-94. [7]

Morningstar (2019), *Global Investor Experience Study: Fees and Expenses*, https://www.morningstar.com/content/dam/marketing/shared/pdfs/Research/GIE_2019_v4.5.pdf?utm_source=eloqua&utm_medium=email&utm_campaign=&utm_content=18780. [64]

Mulino, D. (2026), *Protecting Consumers and the Promise of Superannuation in an Evolving Financial Ecosystem*, https://ministers.treasury.gov.au/ministers/daniel-mulino-2025/media-releases/protecting-consumers-and-promise-superannuation. [60]

Mullainathan, S., M. Noeth and A. Schoar (2012), *The Market for Financial Advice: An Audit Study*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w17929. [37]

Murphy, R., S. Lamas and R. Sin (2020), "Identifying What Investors Value in a Financial Adviser: Uncovering Opportunities and Pitfalls", *Journal of Financial Planning*, Vol. 33/7, pp. 44-52. [22]

OECD (2024), *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [98]

OECD (2022), *G20/OECD High-Level Principles on Financial Consumer Protection*, https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/financial-consumer-protection/G20-OECD-FCP-Principles.pdf. [109]

OECD (2017), *Robo-Advice for Pensions*, OECD Publishing, Paris, https://doi.org/10.1787/8519321f-en. [38]

Oxera (2023), *An economic analysis of remuneration systems: effective distribution of financial products*, https://www.gdv.de/resource/blob/151878/fe55261c9e8cabf8cbe65252eab8b7db/en-studie-download-data.pdf. [70]

Pagliaro, C. and S. Utkus (2019), *Assessing the value of advice*, https://institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/assessing-the-value-of-advice.pdf. [14]

Pan, X., W. Wu and X. Zhang (2020), "Is financial advice a cure-all or the icing on the cake for financial literacy? Evidence from financial market participation in China", *International Review of Financial Analysis*, Vol. 69, p. 101473, https://doi.org/10.1016/j.irfa.2020.101473. [17]

Prudential (2025), *2025 Global Retirement Pulse Survey*, https://prudential.scene7.com/is/content/prudential/2025_Global_Retirement_Pulse_Report. [12]

Reuter, J. and D. Richardson (2022), *New Evidence on the Demand for Advice within Retirement Plans*, National Bureau of Economic Research, Cambridge, MA, https://doi.org/10.3386/w30261. [88]

Reyers, M. (2019), "The role of financial literacy and advice in financial decision making", *Southern African Business Review*, Vol. 20, pp. 388-413, https://doi.org/10.25159/1998-8125/6057. [94]

Schepen, A. and M. Burger (2022), "Professional Financial Advice and Subjective Well-Being", *Applied Research in Quality of Life*, Vol. 17/5, pp. 2967-3004, https://doi.org/10.1007/s11482-022-10049-9. [24]

Schmeiser, M. and J. Hogarth (2013), "Good Advice, Good Outcomes? How Financial Advice-Seeking Relates to Self-Perceived Financial Well-Being", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.2261707. [4]

Seay, M., K. Kim and S. Heckman (2023), "Exploring the demand for retirement planning advice:", *Financial Services Review*, Vol. 25/4, pp. 331-350, https://doi.org/10.61190/fsr.v25i4.3226. [91]

Sethi, J., J. Spiegel and A. Szapiro (2019), "Conflicts of Interest in Mutual Fund Sales: What Do the Data Tell Us?", *The Journal of Retirement*, Vol. 6/3, pp. 46-59, https://doi.org/10.3905/jor.2019.1.044. [49]

Sokolinski, S. (2022), "Regulating Commission-Based Financial Advice: Evidence from a Natural Experiment", *Journal of Financial and Quantitative Analysis*, Vol. 58/3, pp. 1359-1389, https://doi.org/10.1017/s0022109022000898. [72]

Stebbins, R., K. Kim and M. Seay (2022), "Financial professionals and financial well-being", *Financial Services Review*, Vol. 30/3, pp. 191-204, https://doi.org/10.61190/fsr.v30i3.3485. [23]

Stolper, O. (2018), "It takes two to Tango: Households' response to financial advice and the role of financial literacy", *Journal of Banking & Finance*, Vol. 92, pp. 295-310, https://doi.org/10.1016/j.jbankfin.2017.04.014. [102]

The Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry (2019), *Final Report Volume 1*, https://www.royalcommission.gov.au/banking/final-report. [66]

The Treasury (2023), *Regulation Impact Statement: Education Standards for Experienced for Experienced Financial Advisers*, https://oia.pmc.gov.au/sites/default/files/posts/2023/06/Impact%20Analysis%20-%20Education%20Standards%20for%20Experienced%20Financial%20Advisers%20-%20fixed%20typo.pdf. [46]

Uličná, D. et al. (2023), *Disclosure, inducements, and suitability rules for retail investors study – Final report*, European Commission, https://data.europa.eu/doi/10.2874/459190. [65]

Van Dalen, H., K. Henkens and D. Hershey (2016), "Why do older adults avoid seeking financial advice? Adviser anxiety in the Netherlands", *Ageing and Society*, Vol. 37/6, pp. 1268-1290, https://doi.org/10.1017/s0144686x16000222. [95]

Zhang, A. (2014), "Financial advice and asset allocation of individual investors", *Pacific Accounting Review*, Vol. 26/3, pp. 226-247, https://doi.org/10.1108/par-04-2013-0030. [13]

Notes

[1] The topic of financial advice is relevant to the OECD's work on financial markets. The Recommendation for the Good Design of Defined Contribution Pension Plans [OECD/LEGAL/0467] states that financial advice should be accessible, accurate and unbiased. Principle 9 of the OECD/G20 High-Level Principles on Financial Consumer Protection (OECD, 2022[109]) addresses *Responsible Business Conduct and Culture of Financial Services Providers* and stresses the importance of suitable and objective advice that is in the best interest of consumers, as well as the appropriate management of conflicts of interest.

[2] The regulation and supervision of financial advice is complex because it traverses many fields and often involves multiple oversight authorities and sets of rules. Although the focus of this chapter is financial advice for retirement, it is important to understand how advice for retirement fits within the regulatory framework for financial advice more broadly to better understand any potential gaps in regulation and to learn from the approaches taken for other financial products. Additionally, advice for retirement can relate to both investments and insurance products, which are often regulated separately, so it is necessary to look at both distribution channels.

[3] This chapter has benefited from conversations with experts in both the public and private sectors, whose knowledge and views are also incorporated.

[4] This restriction excludes state-registered broker-dealers who may continue to use the title adviser.

[5] Safe harbour rules required advisers to 1) identify the client's objectives, financial situation and needs; 2) identify the subject on which they will provide advice; 3) identify the client information relevant to the advice; 4) take reasonable steps to obtain any missing information; 5) assess whether the adviser has the expertise necessary to provide the advice, otherwise decline to do so; 6) assess the products that could meet the client's needs; 7) base judgement and the final recommendation on all relevant circumstances; and 8) take any other steps that could be considered to be in the client's best interest given the circumstances.

[6] The rule was ultimately blocked by the courts.

[7] Segregated funds are equivalent to the variable annuities sold in the United States, where they are regulated as securities.

5 Asset-backed pensions and the taxation of death-related payments

This chapter compares the tax treatment of death-related payments from asset-backed pension plans across OECD countries. It identifies different forms of death-related payments and documents where and why their tax treatment diverges across countries. The chapter also discusses the main policy considerations and trade-offs for taxing each form of payment.

Although asset-backed pensions are primarily designed to provide income during retirement, they can also provide benefits to survivors upon the death of plan members. These death-related payments may be taxed following the same rules as the pension benefits plan members were receiving or would have received at retirement, typically under personal income tax. Alternatively, when survivors inherit any remaining pension assets, inheritance or estate taxes may apply depending on the jurisdiction. The choice of tax regime matters, as it can influence whether individuals opt to withdraw their pension wealth during their lifetime or leave it as a bequest. It also has equity implications for beneficiaries who receive comparable sums from different sources.

Policymakers need to ensure that asset-backed pension plans serve their intended purpose, to improve retirement income, rather than being used to pass wealth on in a fiscally advantageous way. This is even more important considering there is a fiscal cost from the tax incentives provided to encourage individuals to save for retirement (OECD, 2018[1]). Therefore, how death-related payments are treated in the tax system becomes key to ensuring that the right framework is in place to encourage people to spend their money for their retirement.

This chapter examines how OECD countries tax death-related payments from asset-backed pension plans and discusses the main policy considerations when designing these rules.[1] It identifies patterns in current practice, explains where and why tax treatments diverge, and discusses the merits and limitations of taxing each type of payment. The analysis uses the tax rules applicable as of July 2025 and compiled in the OECD Annual survey of financial incentives for retirement savings (OECD, 2025[2]).

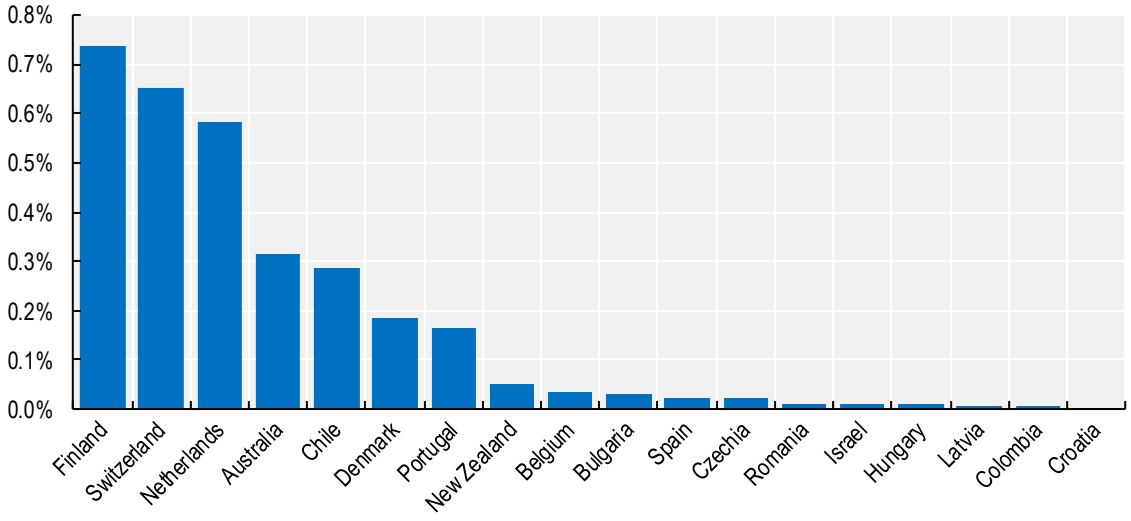
The purpose of the different types of death-related payments, the potential behavioural responses of savers and equity considerations should shape how countries tax such payments. Death-related payments can take the form of survivor pensions, lump-sum death benefits, or refunds of remaining account balances from defined contribution pension plans. In most OECD countries, death-related payments are taxable where pension benefits are taxable and tax-free where pension benefits are tax-free. Yet, tax regimes and rates may differ according to the form of payment, the type of beneficiary, the situation of the plan member at the time of death and the type of plan.

The chapter first defines the main forms of death-related payments and shows how they arise across plan types in different OECD countries. Section 5.2 compares tax treatments across countries and documents the main sources of variation. Section 5.3 discusses policy considerations and trade-offs for taxing each form of payment, and Section 5.4 concludes by providing high-level principles to guide policy.

5.1. Forms of death-related payments

Death-related payments from asset-backed pensions represent a small share of GDP in the OECD countries with available data. Their annual volume is lower than 10 basis point of GDP in most countries and are close to or exceed 20 basis points of GDP in Australia, Chile, Denmark, Finland, the Netherlands and Switzerland, where asset-backed pensions are mandatory (Figure 5.1).

Figure 5.1. Size of annual death-related payments in selected OECD countries, percentage of GDP



Note: The data refer to the year 2025 except for Australia (year ending June 2025), Belgium (2024), New Zealand (year ending March 2025), Spain (2024) and Switzerland (2024).
Source: OECD based on OECD Global Pensions Statistics and national data sources (Australia: APRA; Bulgaria: FSC; Chile: Superintendencia de Pensiones; Colombia: Superintendencia Financiera; Denmark: F&P; Latvia: Bank of Lavia; Switzerland: FSO), and OECD GDP data (Annual GDP and components – expenditure approach).

Death-related payments from asset-backed pension plans can take three forms (Table 5.1):

- **Survivor pensions**: these are direct periodic payments from the pension plan to the beneficiaries designated by the plan member, by plan rules or by regulation.
- **Lump-sum death benefits**: these are direct one-off payments from the pension plan to beneficiaries or heirs.
- **Refunds of remaining account balances** in occupational defined contribution pension plans and personal pension plans, collectively designated as defined contribution (DC) pension plans thereafter: these involve the transfer of accumulated assets in the form of one-off payments, periodic payments or transfers to a qualifying pension plan of the beneficiaries or heirs.

Table 5.1. Forms of death-related payments by type of plan

	Type of plan	Survivor pensions (beneficiaries or type of annuity product)	Lump-sum death benefits (beneficiaries)	Refunds of account balances (form of payment)
Australia	MO DC			Lump sum, income stream
Austria	VO DB	Spouse, children		
Belgium	VO DB/DC / VP	Spouse, children, beneficiaries	Spouse, children, beneficiaries	Lump sum
Bulgaria	MP / VP			Lump sum
Canada	VO DB/DC	Spouse	Designated beneficiary	Transfer (spouse)
	VP	Spouse, children, grandchildren		Lump sum, transfer (spouse)
Chile	MP	Spouse, children, parents		Lump sum (heirs)
Colombia	MP	Spouse, children, parents, siblings		Lump sum
	VP			Lump sum
Costa Rica	MP	Spouse, children, parents, siblings		Lump sum (beneficiaries)
Croatia	MP	Spouse, children		Lump sum (heirs)

	Type of plan	Survivor pensions (beneficiaries or type of annuity product)	Lump-sum death benefits (beneficiaries)	Refunds of account balances (form of payment)
	VP			Lump sum
Czechia	VP			Lump sum, income stream (insurance schemes)
Denmark	MP		Spouse, children	
	QMO DC	Spouse, children	Spouse, children	
Estonia	MP	Annuity with guaranteed period		Lump sum, transfer
Finland	MO DB	Spouse, children		
	VP	Beneficiaries		
France	VO DC / VP	Joint annuity, annuity with guaranteed period		Lump sum, income stream
Germany	VO DB/DC	Spouse, children, joint annuity, annuity with guaranteed period	Spouse, children	Lump sum
	VP (Riester)	Joint annuity, annuity with guaranteed period		Lump sum, transfer (spouse)
	VP (Basis)	Spouse, children		
Greece	MO DC / MP	Spouse, children		
	VO DC			Lump sum, income stream
Hungary	VP			Lump sum, transfer
Iceland	MO DC	Spouse, children		
	VP			Lump sum
Ireland	VO DB/DC / VP	Joint annuity	Heirs (VO)	Lump sum, transfer (spouse)
Israel	MP	Spouse, children		
Italy	VO DB/DC / VP	Joint annuity		Lump sum, income stream
Japan	VO DC / VP			Lump sum
Latvia	MP	Annuity with guaranteed period		Lump sum, transfer
Lithuania	VP			Lump sum, transfer
Luxembourg	VO DB/DC	Designated beneficiaries		
	VP			Lump sum
Mexico	MP	Spouse, children, parents		Lump sum
Netherlands	QMO DB	Designated beneficiaries		
New Zealand	MO DC			Lump sum
Norway	MO DC / VP	Spouse, children		Lump sum (heirs)
Poland	MO DC / VO DC / VP			Lump sum, transfer
Portugal	VO DB/DC / VP	Spouse, children	Designated beneficiaries	Lump sum, income stream
Romania	MP / VP			Lump sum, income stream, transfer (MP)
Slovak Republic	VP	Annuity with guaranteed period (pillar 2 only)		Lump sum, transfer
Slovenia	VO DC / VP			Lump sum
Spain	VO DB/DC / VP	Designated beneficiaries	Designated beneficiaries	Lump sum, income stream
Sweden	QMO DC / MP	Spouse		
Switzerland	MO DB	Spouse, children	Spouse, children	
	VP			Lump sum
Türkiye	VP			Lump sum
United Kingdom	VO DB	Spouse, children	Designated beneficiary	
	MO DC	Joint annuity, annuity with guaranteed period		Lump sum, income stream
United States	VO DB	Spouse		
	VO DC / VP			Lump sum, income stream

Note: MO = mandatory occupational; QMO = quasi-mandatory occupational; VO = voluntary occupational; MP = mandatory personal; VP = voluntary personal; DB = defined benefit; DC = defined contribution. Plans with an automatic enrolment mechanism where employers are obliged by law to enrol eligible employees are considered here as mandatory occupational (New Zealand, Poland, the United Kingdom).

Survivor pensions are usually restricted to eligible beneficiaries that were financially dependent on the deceased. Survivor pensions are common in the case of defined benefit (DB) pension plans and some mandatory personal pension plans. Eligible beneficiaries usually include the spouse or partner and children up to an age that varies from 16 to 21 years old depending on the country. Children pursuing education may be eligible up to older ages, such as 24 or 25 (e.g. Chile, Colombia, Costa Rica, Mexico, Switzerland), while children with disabilities may be eligible for longer, sometimes without any age limit (e.g. Costa Rica). Parents may also be eligible for survivor pensions if they were financially dependent on the deceased (e.g. Australia, Chile, Colombia, Costa Rica, Mexico).

Survivor pensions may be paid for the remaining lifetime of the beneficiaries or for a fixed period. Survivor pensions tend to be calculated as a percentage of the deceased member's actual or projected pension benefit. The provision and length of survivor pensions for spouses may depend on different factors, such as the marital status (spouse or common-law partner), the age of the youngest child, the age of the spouse or the length of marriage. For example, in Finland, the survivor pension paid to a married spouse is paid for 10 years or until the youngest child turns 18, whichever is higher, while a survivor pension paid to a common-law partner is paid until the youngest child turns 18. In Switzerland, a surviving spouse receives a survivor pension if they support one or more children, or if they are aged 45 or more and the marriage lasted for at least five years, and the payment of the survivor pension ceases on remarriage. The surviving spouse may also have a choice between different forms of payments for the survivor pension, such as between programmed withdrawals, fixed-term annuities and life annuities in Chile. In general, the payment of survivor pensions for children stops when beneficiaries reach the age limit. Finally, if the plan member was already receiving an annuity at the time of death, the beneficiary only receives survivor payments if the annuity has a survivor option, joint life annuity, or a guaranteed period option. With a joint life annuity, the annuity payments continue for the remaining lifetime of the surviving spouse, while with a guaranteed period option, the annuity payments stop at the end of the period specified in the contract.

Lump-sum death benefits are only available in nine OECD countries. They may be equal to a pre-defined fixed amount or calculated according to a formula. For example, in Germany, if a member of an occupational pension plan had no dependant entitled to a survivor pension, a death grant is paid to the heirs or to the beneficiary named in the application, up to a maximum of EUR 7 669 or EUR 8 000 depending on the type of financing vehicle for the pension plan (e.g. pension fund, pension insurance contract or book reserve). In Ireland, if a member of an occupational pension plan dies in-service, the maximum amount the pension scheme is permitted to pay out is four times the member's final salary plus a refund of the additional voluntary contributions paid by the member. In Portugal, lump-sum death benefits usually take the form of a death allowance.

In the case of DC pension plans, beneficiaries or heirs may be entitled to a refund of the remaining account balance provided the plan member died before claiming benefits or was in a programmed withdrawal or drawdown arrangement at the time of death. Several options may be available. The beneficiary or heir may become the successor member of the plan of the deceased (e.g. Canada, Ireland) or may transfer the account balance to a qualifying pension plan of their own (e.g. Canada, Estonia, Germany, Ireland, Latvia, Poland, Romania). Alternatively, beneficiaries or heirs may receive the refund as a lump sum or as periodic payments.

The type of death-related payments may depend on the situation of the plan member at the time of death. The provision of survivor pensions may be conditioned by the fulfilment of a minimum number of years of contributions by the plan member at the time of death (e.g. Colombia, Costa Rica, Croatia, Iceland, Mexico). For example, in Colombia, beneficiaries receive a refund of the remaining account balance instead of a survivor pension if the plan member died without fulfilling the qualifying conditions. The type of payment to beneficiaries or heirs may also depend on whether the plan member had already retired at the time of death. For example, in Germany, beneficiaries may receive a refund of the remaining account balance if the member of a Riester plan died during the accumulation phase, while they may receive a

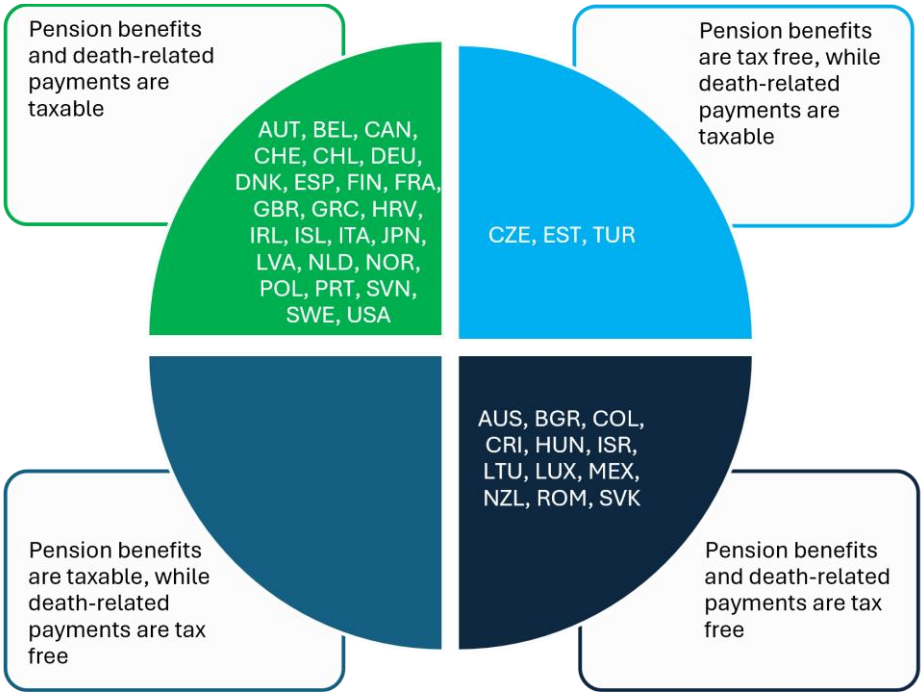
survivor pension if the plan member was receiving an annuity with a survivor or guaranteed period option. In the United Kingdom, if a DB plan member died while receiving a pension, a survivor pension is paid to eligible survivors, while if the member's death happened before reaching pension age, nominated beneficiaries receive a lump-sum death benefit.

The type of death-related payments may also depend on the type of beneficiaries. In Australia, non-dependant beneficiaries can only receive a refund of the remaining account balance as a lump sum, while dependant beneficiaries can choose between a lump sum and an income stream. In Canada, the surviving spouse or common-law partner of a member of a registered retirement savings plan already receiving pension benefits at the time of death may transfer the remaining funds to their own plan, while children may receive the refund as a lump sum or use it to purchase a fixed-term annuity. In Chile, if the relatives of the deceased member do not meet the requirements to receive a survivor pension, the legal heirs receive a refund of the remaining account balance. In Ireland, if the plan member was withdrawing funds from an approved retirement fund, the surviving spouse may transfer the remaining account balance to their own fund, while the surviving children may only get a refund as a lump sum. In Norway, in the case of DC savings schemes, if there are no surviving spouse or children or if there is excess capital available after providing survivor pensions to these beneficiaries, the remaining account balance is paid as a lump sum to the deceased's estate to be distributed to heirs.

5.2. Tax treatment of death-related payments

The taxable status of death-related payments usually depends on whether pension benefits are taxable. In most OECD countries, death-related payments and pension benefits are both either taxable or tax free (Figure 5.2). The only exceptions are Czechia, Estonia and Türkiye, where pension benefits are usually tax free while death-related payments are taxable.

Figure 5.2. Taxable status of pension benefits and death-related payments: General case



Note: The general case refers to the main asset-backed pension plan in each country. When different tax treatments exist, the Figure assumes the tax treatment applicable to an annuity or survivor pension and the beneficiary is the spouse of the deceased member aged at least 60.

However, even when both pension benefits and death-related payments are taxable, the tax regime applicable may be different. For example, in Ireland, pension benefits above any tax-free lump sum are taxable for the plan member under the personal income tax regime. By contrast, if the plan member dies in-service, death-related payments are taxable for the beneficiaries under the inheritance tax regime. Similarly, in Japan, pension income from individual DC pension plans is taxed as miscellaneous income together with public and occupational pensions, while death lump-sum payments to surviving family members are often subject to inheritance tax.[2] In Norway, pension income from occupational pension plans is taxed both as personal income (progressive tax rates) and ordinary income (fixed 22% tax rate), while survivor pensions to children are taxed only as ordinary income.

Moreover, the tax treatment of death-related payments may vary according to various parameters, such as the form of payment, the type of beneficiary, the situation of the plan member at the time of death and the type of plan. In only five countries covered, death-related payments are never taxed, Bulgaria, Costa Rica, Hungary, New Zealand and the Slovak Republic.

5.2.1. Differences across different forms of payments

The tax treatment of death-related payments depends on the form of payment in half of OECD countries. Death-related payments can only take one form in Austria, Bulgaria, Finland, Israel, Japan, the Netherlands, New Zealand, Slovenia, Sweden and Türkiye (Table 5.1). In addition, death-related payments can take different forms with the same tax treatment in Colombia, Costa Rica, Hungary, Iceland, Italy, Lithuania, Mexico, the Slovak Republic and Spain (Table 5.2). In all the other countries (20 out of 40), the tax rates or applicable tax regimes vary according to the form of payment, at least for one type of pension plan.

Table 5.2. Tax treatment of death-related payments according to the form of payment

Tax rate or applicable tax regime

	Survivor pensions	Lump-sum death benefits	Refunds: Lump sum	Refunds: Income stream	Refunds: Transfer
Australia			**Tax free**	Tax free or PIT (tax offsets may apply)	
Austria	PIT				
Belgium	PIT	10% + **IHT**	10% + **IHT**		
Bulgaria			Tax free		
Canada	PIT	PIT	PIT (member)		Tax deferred
Chile	PIT		IHT		
Colombia	Tax free (cap)		Tax free (cap)		
Costa Rica	Tax free		Tax free		
Croatia	**PIT**		**IHT**		
Czechia			**15% (returns and employer contributions)**	Tax free	
Denmark	PIT	40%			
Estonia	PIT		PIT		Tax deferred
Finland	PIT or capital income				
France	PIT		**IHT**	**IHT**	
Germany	PIT	PIT	PIT		Tax deferred
Greece	PIT		5%-20%	2.5%-10%	
Hungary			Tax free		Tax free
Iceland	PIT		PIT		
Ireland	PIT	IHT	**IHT**		Tax deferred

	Survivor pensions	Lump-sum death benefits	Refunds: Lump sum	Refunds: Income stream	Refunds: Transfer
Israel	Tax free (cap)				
Italy	9%-15%		9%-15%	9%-15%	
Japan[1]			IHT or PIT		
Latvia	PIT		25.5%		Tax deferred
Lithuania			**IHT**		**IHT**
Luxembourg	**IHT**		Extraordinary income		
Mexico	Tax free (cap)		Tax free (cap)		
Netherlands	PIT				
New Zealand			Tax free		
Norway	**PIT + 22%**		45% or 22%		
Poland			19%, 10% or tax free		Tax deferred
Portugal	PIT	**Varies with kinship link**	8%-20%	8%-28% or PIT	
Romania			Tax free (cap)	Tax free (cap)	Tax deferred
Slovak Republic	Tax free		Tax free		Tax free
Slovenia			**PIT**		
Spain	PIT	PIT	PIT	PIT	
Sweden	PIT				
Switzerland	PIT	PIT	Capital income		
Türkiye			IHT		
United Kingdom[2]	PIT	PIT	PIT + **IHT**	PIT + **IHT**	
United States	PIT		PIT+ **IHT** + **GSTT**	PIT+ **IHT** + **GSTT**	

Notes: PIT = personal income tax, IHT = inheritance tax, GSTT = generation-skipping transfer tax. **In bold** means the tax treatment depends on the type of beneficiary. "Tax free (cap)" means the payment is tax free up to a threshold. "PIT (member)" means the payment is taxed at the marginal rate of the deceased member.

1. Inheritance tax applies if the payment of the refund is finalised within three years after the death of the plan member. If the payment is finalised more than three years after death but the claim is made within five years, the payment is treated as temporary income and is subject to personal income tax.

2. The rules for the United Kingdom reflect the changes to the inheritance tax regime that will apply as of 6 April 2027.

When taxable, survivor pensions tend to be subject to personal income tax. Survivor pensions are then taxed at the beneficiary's marginal tax rate. There are a few exceptions, like in Finland, Italy, Luxembourg and Norway. For example, in Norway, survivor pensions are taxed as pension income, which means both as personal income and ordinary income (flat tax rate of 22%). In Luxembourg, survivor pensions are subject to inheritance tax, although some exemptions apply.

Beneficiaries transferring the remaining account balance in the deceased's DC pension plan to their own pension plan can usually do it on a tax-deferred basis. This means that no tax is due at the time of transfer and beneficiaries may pay tax once they withdraw money from their plan. Only transfers to qualifying pension plans may be authorised. For example, in Canada, the deceased's spouse may only transfer the value of the pension from a registered pension plan (RPP) into their own registered retirement savings plan (RRSP), registered retirement income fund (RRIF), locked-in retirement account or RPP. In Germany, the pension capital from a Riester plan can be transferred to the Riester plan of the spouse or registered partner of the deceased member, and if they do not have their own Riester plan at the time of death of the plan member, they have up to 12 months to open an account and do the transfer. In Latvia and Romania, transfers can only be between two mandatory pension accounts.

There is significant heterogeneity across countries in the tax treatment of refunds of account balances paid as a lump sum. These payments may be tax free, taxed at a fixed rate, subject to personal income tax, or subject to inheritance tax. Several tax regimes may also be combined. For example, in Belgium,

beneficiaries receive the pension assets net of a 10% tax upon the death of the plan member before the normal age of retirement and inheritance tax also applies in certain cases, such as if the deceased was a self-employed worker.

Eleven countries covered by the analysis levy inheritance or estate taxes on refunds of account balances.[3] Some countries apply flat tax rates above a tax exemption threshold, while most countries apply progressive tax rates (OECD, 2021[3]).[4] Inheritance taxes apply more rarely to lump-sum death benefits (Ireland) and survivor pensions (Luxembourg).

Refunds of account balances may be subject to both personal income tax and inheritance tax. This is the case in the United Kingdom and the United States, where beneficiaries may pay personal income tax on the amounts received, while the total refund amount has already been subject to inheritance tax at the level of the deceased member's estate. In the United States, beneficiaries may be able to claim an Income in Respect of a Decedent (IRD) tax deduction. The IRD tax deduction corresponds to the portion of the federal estate tax attributable to the inherited pension assets at the time of the plan member's death. This avoids double taxation. Such a rule does not exist in the United Kingdom.

The tax treatment of death-related payments tends to disadvantage lump sums. For example, in Czechia, in the case of supplementary pension insurance schemes, the designated beneficiary receives a tax-free death-related payment if it is in the form of an annuity or programmed withdrawals paid over at least 10 years, while a 15% tax applies to the returns and employer contributions otherwise. In Denmark, beneficiaries pay tax at their marginal rate of personal income tax if they choose to receive death-related payments in instalments or as a life annuity, while they pay tax at the fixed rate of 40% if they choose a lump sum. In Greece, the tax rates applied to death-related payments from voluntary occupational insurance funds are twice as large for lump sums compared to periodic payments. By contrast, in Australia, dependent beneficiaries of the deceased may choose between a tax-free lump sum and an income stream that is taxed if the deceased and the beneficiary are younger than 60.

5.2.2. Differences across different types of beneficiaries

The tax treatment of death-related payments, irrespective of their form, tends to be more favourable when spouses, partners and children receive them than when other types of beneficiaries do. Spouses, partners and children receive death-related payments tax free or pay tax at a lower rate than other types of beneficiaries in Australia, Belgium, France, Ireland, Lithuania, Luxembourg, Portugal, the United Kingdom and the United States (Table 5.3). In Croatia and Norway, survivor pensions for children are taxed more favourably than for spouses or partners. This is most likely the case in Canada and Chile as well since children may have no other taxable income than the death-related payment, putting them in a lower personal income tax bracket than spouses who may also receive work income. In Czechia the tax treatment of death-related payments is more favourable when no beneficiary is designated by the plan member and the funds are processed as inheritance, while in Türkiye, inheritance tax rates are higher for nominated beneficiaries than for legal heirs. In Canada and Ireland, only spouses or partners can transfer their survivor entitlements to their own pension plan on a tax-deferred basis, meaning that they will only pay tax once they withdraw from their plan.

Table 5.3. Differences in the tax treatment of death-related payments according to the type of beneficiary

Tax rate or applicable tax regime

	Type of plan	Spouse / partner	Children up to age limit	Other eligible survivors	Designated beneficiaries	Heirs
Australia	All	Tax free	Tax free	Tax free		Up to 15% (taxed element) or 30% (untaxed element) plus Medicare levy where applicable
Belgium	All	10%	10%			10% + IHT
Canada	All	PIT or tax-deferred	PIT			PIT (member)
Chile	All	PIT	PIT	PIT		IHT
Croatia[1]	Mandatory		Tax free	PIT		IHT for lateral line of kinship
Czechia	Supplementary pension savings schemes				15% (returns and employer contributions)	Tax free
France	Securities account	Tax free		IHT		
Ireland	ARF/AMRF	Tax deferred	IHT	30%		PIT + IHT
Lithuania	All	Tax free	Tax free	Tax free		IHT
Luxembourg	Occupational	Tax free	Tax free	Tax free		IHT
Norway	DC savings schemes	PIT + 22%	22%			45%
Slovenia	All				PIT	IHT
Türkiye	All				IHT (10%-30%)	IHT (1%-10%)
United Kingdom[2]	All	PIT		PIT + IHT		
United States	DC except Roth	PIT	PIT + IHT			PIT + IHT + GSTT

Notes: PIT = personal income tax, IHT = inheritance tax, GSTT = generation-skipping transfer tax. "PIT (member)" means the payment is taxed at the marginal rate of the deceased member.

1. Inheritance between parents and children, grandparents, grandchildren and great grandchildren is the vertical line of kinship, while inheritance between brothers, sisters or uncles is the lateral line.

2. The rules for the United Kingdom reflect the changes to the inheritance tax regime that will apply as of 6 April 2027.

The preferential tax treatment of spouses and children partly comes from the rules of inheritance taxes. Exemption thresholds for inheritance taxes tend to vary according to the relationship between the deceased and the beneficiaries, with close family members, typically spouses and children, benefitting from higher tax exemption thresholds. The surviving spouse is even fully exempt from inheritance tax in most countries (e.g. France, Lithuania, Luxembourg, Slovenia, the United Kingdom, the United States). Several countries also apply different tax rates, flat or progressive, depending on the proximity between the deceased and the beneficiary. Tax rates are typically lower for spouses and children than for other family members and non-related persons (OECD, 2021[3]).

5.2.3. Differences across different situations of the deceased member

There are a few countries where the tax treatment of death-related payments depends on the situation of the plan member at the time of death. For example, in Greece and Italy, the tax rate applied to death-related payments is inversely proportional to the length of participation of the deceased member in the pension plan, in line with the tax rates applicable to the pension benefits that the plan member was

receiving or would have received (Table 5.4). In France and the United Kingdom, the tax due on certain death-related payments is lower when the plan member dies at a younger age. In Belgium, the exemption from inheritance tax for lump-sum refunds never applies in case the deceased member was a self-employed worker. In Czechia and Germany, although the tax treatment remains the same, for plans where plan members can receive government contributions, part of these contributions may have to be returned to the treasury before paying the death-related payment to beneficiaries if the plan member was still in the accumulation phase at the time of death.

Table 5.4. Differences in the tax treatment of death-related payments according to the situation of plan members

	Type of plan	Situation of the plan member at the time of death	Tax rate or applicable tax regime
Belgium	All	Employee	10% if the beneficiary is the spouse or a child younger than 21, 10% + IHT otherwise
		Self-employed	10% + IHT
Czechia	Supplementary pension savings schemes	Not yet eligible for a pension	The lump-sum refund excludes government contributions
		Eligible for a pension that has not yet been paid or receiving programmed withdrawals	The lump-sum refund includes government contributions
France	Pension insurance contracts	Younger than 70	EUR 152 500 deduction for each beneficiary, then 20% up to EUR 700 000 and 31.25% on the excess
		Aged 70 or over	IHT after EUR 30 500 deduction to be shared among all the beneficiaries
Germany	Riester	In savings phase	The lump-sum refund excludes government subsidies
		Receiving a pension with a guaranteed period	The government subsidies must be repaid on a pro rata basis
		Receiving a lifetime pension with a survivor option	The government subsidies are retained
Greece	Voluntary occupational	> 5 years of insurance	10% down to 2.5% (respectively 20% down to 5%) after more than 20 years of insurance for periodic payments (respectively lump sums)
Italy	All	> 15 years of participation	15% down to 9% after 35 years of participation
		≤ 15 years of participation	15%
United Kingdom	DC	Younger than 75	PIT on part of the lump-sum refund exceeding the lump sum and death benefit allowance
		Aged 75 or over	PIT on the entire lump-sum refund

Note: PIT = personal income tax, IHT = inheritance tax.

5.2.4. Differences across different types of plans

Finally, the taxation of death-related payments may vary according to the type of plan the deceased was a member of. Examples include:

- Denmark and the United States: Death-related payments are tax free when paid out of plans from which plan members did not receive any tax relief on contributions (e.g. Roth plans in the case of the United States), while they are subject to personal income tax otherwise.
- Finland: Insurance compensation from individual pension insurance plans is subject to capital income tax, while survivor pensions from mandatory occupational plans are subject to personal income tax.
- France: Lump-sum refunds are always subject to inheritance tax when the pension plan takes the form of a securities account, while they are subject to inheritance tax only when the plan member dies after age 70 when the pension plan takes the form of a pension insurance contract (Table 5.4).

- Greece: The tax rate applicable to payments from voluntary occupational insurance funds depends on the length of insurance (Table 5.4), while survivor pensions from the mandatory supplementary pension fund TEKA are subject to personal income tax.
- Luxembourg: Death-related payments from occupational pension plans are subject to inheritance tax, while those from individual pension savings contracts are taxed as extraordinary income.
- Poland: Death-related payments are taxed for OFE and IKZE plans, while they are tax free for PPK, PPE and IKE plans. This is in line with the tax treatment of pension benefits from the different plans.

5.3. Policy considerations for taxing death-related payments

There are merits and limitations to different approaches for taxing death-related payments from asset-backed pension plans. Their tax treatment depends on whether they are viewed primarily as income or as an inheritance, and therefore whether personal income tax and/or inheritance tax should apply. The discussion focusses separately on survivor pensions, refunds of remaining account balances and lump-sum death benefits as the nature of the different forms of death-related payments leads to different considerations.

5.3.1. Survivor pensions

Survivor pensions are an important policy instrument to smooth consumption upon the death of a spouse. A drop in total household income of around 30% after the death of a spouse is enough to cause a fall in the standard of living of the survivor as the economies of scale of living in a couple are no longer available (OECD, 2018[4]). Survivor pensions for spouses can alleviate that fall by replacing part of the pension income of the deceased partner. Additionally, the willingness to redistribute part of a pension benefit towards a survivor pension is stronger among plan members with a more vulnerable spouse who contributes less to total household income and has a longer life expectancy (de Grip, Fouarge and Montizaan, 2019[5]). In line with this, women are the main recipients of survivor pensions, which reduce the gender pension gap by about one-third on average among OECD countries (OECD, 2025[6]).

The income-replacement role of survivor pensions for spouses could justify a similar tax treatment as pension benefits for plan members. In all OECD countries, the tax treatment of survivor pensions for spouses is indeed identical to the one applying to pension benefits for members. Survivor pensions are tax free for the spouse, at least up to a threshold, in Colombia, Costa Rica, Israel, Luxembourg, Mexico and the Slovak Republic, in line with the tax-free status of pension benefits for plan members in these countries. Where pension benefits are subject to personal income tax, this is also the case for survivor pensions.

The taxation of survivor pensions for children needs to account for the different purpose they serve and for the fact that children usually do not earn income. Unlike survivor pensions for spouses, survivor pensions for children are not primarily meant to replace the beneficiary's own income. Their objective is to provide financial support to ensure continued care and investment in the children's education, health and living conditions. Besides, dependent children usually do not earn income and taxing survivor pensions would reduce resources available for their maintenance and development. This may call for a tax exemption of survivor pensions for children, as is the case in several countries (Table 5.3), although this raises equity issues across beneficiaries. For example, in Croatia, survivor pensions for children are tax free while survivor pensions for other eligible family members are subject to personal income tax. In other countries, even though survivor pensions for children are subject to personal income tax (e.g. Austria, Chile, Finland, Greece, Iceland, Switzerland, the United Kingdom), to the extent that tax schedules are progressive,

children may pay little or no income tax on the survivor pension they receive. In Norway, survivor pensions for children are not subject to personal income tax but they are subject to a 22% fixed tax rate.

Exempting survivor pensions from personal income tax when taxes on retirement savings were deferred until the retirement of the plan member may imply that a large part of retirement savings may go fully untaxed. Many OECD countries apply the "exempt-exempt-taxed" (EET) tax regime to retirement savings, meaning that contributions are deductible from taxable income, returns are tax free and pension benefits are taxed (OECD, 2024[7]). If the plan member dies before retirement and survivor pensions are not taxed – either because they are specifically exempt from personal income tax or they fall below a tax allowance threshold – the balances in the pension plan would effectively benefit from an "exempt-exempt-exempt" (EEE) tax regime. If survivor pensions are also exempt from inheritance tax, this implies that retirement savings transferred upon death receive a more favourable tax treatment than retirement savings used to finance retirement income (Adam et al., 2022[8]).

Levying inheritance tax on survivor pensions may be inappropriate as most countries do not treat them as inheritance, at least when beneficiaries are the spouse and dependent children. Survivor pensions can be considered as a benefit entitlement that is paid to beneficiaries surviving the plan member, rather than as a transfer of the capital accumulated by the deceased. As such, it may be more appropriate to levy personal income tax rather than inheritance tax. This is the approach followed in most OECD countries. Luxembourg is the only OECD country that applies inheritance tax on survivor pensions, although spouses and heirs in direct descending or ascending line are exempt from inheritance tax.

5.3.2. Refunds of remaining account balances

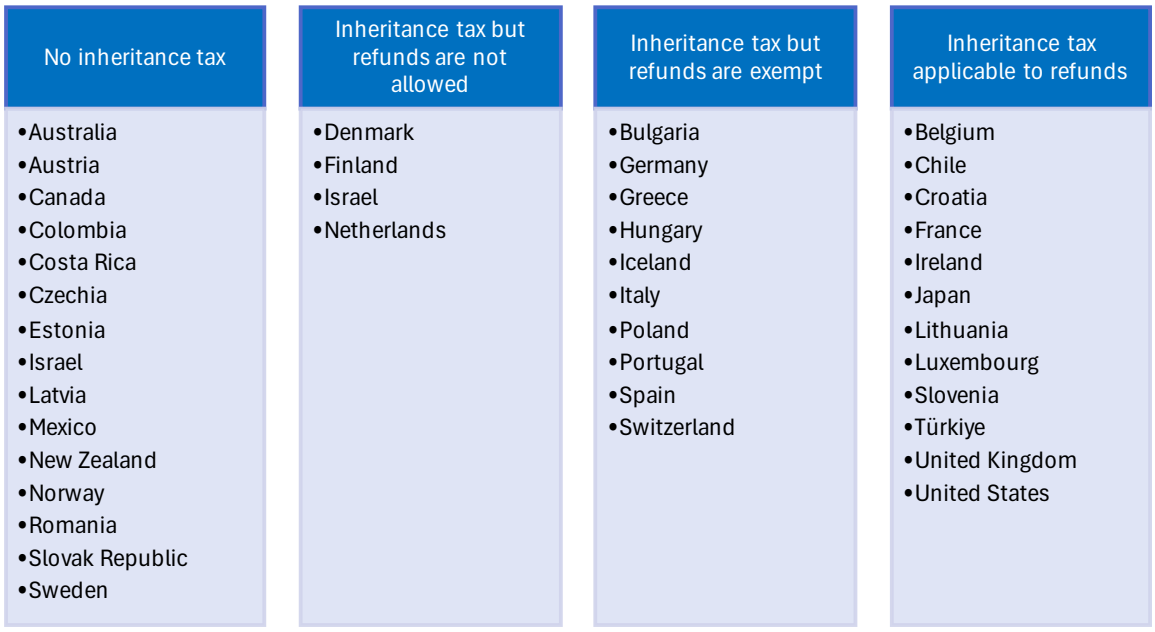
The purpose of refunds of remaining account balances is essentially to transfer the residual retirement savings to beneficiaries. This differentiates them from survivor pensions, whose objective is to support dependants after the plan member's death. As such, unspent DC account balances could be considered as any other type of wealth that individuals can leave as a bequest. This may influence which tax regime may be more appropriate, how individuals may respond to taxation, and the need to distinguish tax treatment across individuals.

Personal income tax versus inheritance tax

Refunds of account balances are usually subject to a single tax regime and the choice between personal income tax and inheritance tax depends first on whether countries have an inheritance tax regime. Fifteen countries covered by the analysis do not have an inheritance tax regime in place (Figure 5.3). In these countries, refunds may only be taxed at fixed rates or under the personal income tax regime.

The choice between personal income tax and inheritance tax for refunds also depends on whether inherited balances are treated as deferred labour income or as financial wealth. On the one hand, a personal income tax regime keeps the logic of deferred taxation of labour income that applies in many OECD countries ("EET" tax regime) and promotes horizontal equity (i.e. people receiving the same level of income are taxed similarly irrespective of the source of income) and vertical equity (i.e. people with a greater ability to pay tax pay relatively more tax). However, a personal income tax regime may lead to lower tax revenues than what would have been collected had the plan member consumed all the account balance, as beneficiaries may be exempt from personal income tax or may be able to time payments to the years when they would be subject to lower tax rates. On the other hand, an inheritance tax regime acknowledges the inheritance dimension of pension assets and reduces incentives to use asset-backed pensions as a vehicle for bequests rather than as a vehicle for retirement income provision. In addition, the appropriate tax treatment may depend on the form in which inherited balances are received. Refunds of account balances paid as an income stream may be closer to the deferred-income concept, while those paid as a single lump sum may be assimilated to wealth transfers. This may warrant the use of a different tax regime.

Figure 5.3. Application of inheritance tax to refunds of remaining account balances



Source: Based on OECD (2021[3]), *Inheritance Taxation in OECD Countries*, OECD Tax Policy Studies, No. 28, https://doi.org/10.1787/e2879a7d-en; OECD (2025[2]), *Annual survey of financial incentives for retirement savings: Country profiles 2025*, https://doi.org/10.1787/631aa80d-en.

In countries with an inheritance tax regime in place, including asset-backed pensions in the scope may limit the use of asset-backed pensions as a tax planning tool. While most countries covered by the analysis have an inheritance tax regime, refunds of remaining account balances are subject to that tax in less than 55% of them (Figure 5.3). For example, in Poland, assets accumulated in retirement plans acquired through inheritance are not subject to inheritance and gift tax. By contrast, the United Kingdom will apply inheritance tax to most unused pension funds and death benefits from April 2027 to reduce incentives to use pension schemes as a tax planning tool (HM Revenue & Customs, 2025[9]). Under current rules, individuals can accumulate tax-free savings in their pension plan, draw on other means to finance their retirement and leave their unused pension assets to be inherited by beneficiaries without any inheritance tax as long as their pension scheme is discretionary, which is the case of most pension schemes.[5] The reform will treat all pension schemes in the same way and include all unused pension funds in the plan member's estate for inheritance tax purposes. Taxation will no longer depend on the type of instrument used by individuals to accumulate wealth, reducing opportunities for arbitrage (OECD, 2021[3]).

Some countries apply both tax regimes, with personal income tax levied on payments to beneficiaries and inheritance tax levied on the deceased's estate. There are two approaches regarding the interaction between the two tax regimes. In the United Kingdom, inheritance tax is first levied on the deceased's estate and beneficiaries then pay personal income tax on the net amounts they receive. As a result, the transferred pension wealth may be subject to both inheritance tax and personal income tax, although the two taxes are levied on different taxpayers and reflect different tax bases (OECD, 2021[3]). By contrast, in the United States, there is a mechanism in place to avoid double taxation, by which beneficiaries can reduce their personal income tax liability on the death-related payments received by deducting an amount corresponding to the inheritance tax already paid by the estate on the transferred pension wealth.

Double taxation may also arise when beneficiaries pay inheritance tax on the payments received while the plan member had already paid personal income tax on the accumulated retirement savings. For example,

in Türkiye, account balances net of taxes on returns are subject to inheritance tax at the death of the plan member even though the contributions were paid from the after-tax earnings of the member. In this case, the tax system treats asset-backed pension plans more favourably as a vehicle for retirement income provision ("TTE") than as a vehicle for bequests ("TTT").

Behavioural responses to inheritance taxation

Long-term saving behaviour may change when including asset-backed pensions within the scope of inheritance tax. Some people may respond by withdrawing money from their pension plans at younger ages and in larger amounts during retirement, as the value of leaving pension wealth to beneficiaries is reduced (Oxford Economics, 2025[10]). This may increase the risk that people will run out of money and fall back on public safety nets later in life. This may also leave people with less wealth to cope with the costs of long-term care. Moreover, subjecting asset-backed pensions to inheritance tax may discourage people from saving for retirement in the first place. Alternatively, some people may save more to compensate for the increase in tax liability for their beneficiaries. Empirical evidence from a limited number of studies shows a negative impact of inheritance taxes on wealth accumulation. However, there is no consensus on the size of the effect, which ranges from modest to large depending on the studies (Schratzenstaller, 2025[11]). Moreover, the literature does not study the specific impact of inheritance taxation on pension savings.

The behavioural response to inheritance taxation may depend on the bequest motive. There are different types of bequest motives (OECD, 2021[3]; Kopczuk, 2013[12]). Some individuals may leave accidental bequests. This could be the case when individuals save to meet their needs in retirement (e.g. to smooth consumption, to have precautionary savings to cover long-term care expenses) and are willing to consume all their wealth, but pass away with unspent wealth due to uncertainty around life expectancy. Accidental bequests may also occur when individuals just want to accumulate wealth for the prestige and power it confers while they are alive and do not care about the amount received by their heirs. In these cases, inheritance taxation is unlikely to affect saving behaviour. By contrast, some individuals want to leave a bequest. These include individuals who derive utility simply from the fact of leaving a bequest, irrespective of the needs of their heirs ("joy-of-giving" or "warm glow" motive). Other individuals have more altruistic preferences and want to leave a bequest that considers the well-being of their heirs. Yet, for other individuals, bequests are used to compensate heirs for services provided to them, such as taking care of them in old age or granting access to grandchildren ("exchange" or "strategic" motive). Inheritance taxation is likely to affect saving behaviour in the presence of such intentional bequests. Some individuals may save more to compensate for the inheritance tax liability, while others may be discouraged to save (Schratzenstaller, 2025[11]).

The optimal inheritance tax regime depends on the policy objective, which is itself influenced by the type of bequest. If priority is given to economic efficiency, then taxing accidental bequests works better as people are less likely to change their savings behaviour. If equity issues are a bigger concern, then policymakers should target intentional bequests. Indeed, intentional bequests can contribute to higher wealth inequality and weaker equality of opportunity, whereby individuals with similar abilities and levels of effort should have similar life prospects (OECD, 2021[3]). Finally, intentional bequests should also be taxed if the policy objective is to discourage people from using their pension plan as a wealth transfer tool and encourage them to use their accumulated assets to finance their own retirement instead. However, this may lead to unintended behavioural responses with some individuals not saving or saving less for retirement.

However, uncovering the bequest motive is complicated, and there is no consensus on which bequest motive dominates. Indeed, the different bequest motives are not mutually exclusive, and people may have a mix of motives, including intentional and accidental. Moreover, motives may differ across individuals. For example, wealthier households may be more likely to have the intention to leave a bequest since they have more than enough resources to maintain their standard of living in retirement (Kopczuk and Lupton,

2007[13]). Besides, bequests can be considered as a luxury good in the sense that the desire to leave a bequest increases more than proportionally as individuals receive higher bequests themselves (De Nardi and Yang, 2014[14]). Bequest motives may also differ across countries. The fact that many retired elderly continue to save or decumulate their wealth more slowly than expected may be due to intentional bequests in Europe, while it may be due to precautionary savings in Japan and the United States (Yuji Horioka and Ventura, 2022[15]). In Norway, intentional bequests may account for approximately 75% of the wealth accumulated at age 85 (Fella, Holm and Pugh, 2024[16]).

Variation of the tax treatment across individuals

Since bequest motives are hard to observe in practice, the degree of kinship between the beneficiary and the plan member, the age of the plan member at death, or the previous employment status of the plan member may be used as proxies to adjust the tax treatment.

Refunds of account balances to distant relatives and non-related heirs may be taxed more heavily than payments to direct relatives. Refunds to heirs or beneficiaries that are not the spouse and children of the deceased member may be perceived as a windfall (Cremer and Pestieau, 2011[17]). When not supporting dependants, such death-related payments could be taxed less favourably. Many OECD countries use this approach in inheritance tax regimes by applying lower tax exemption thresholds and higher tax rates to distant heirs (OECD, 2021[3]). In Australia and Norway, distant heirs face a higher fixed tax rate on DC refunds than spouses and children (Table 5.3). In the United States, an additional tax called the generation-skipping transfer tax applies on top of the inheritance tax for transfers to younger generations (e.g. grandchildren) or to unrelated heirs more than 37.5 years younger than the deceased individual. This additional tax is designed to prevent individuals from avoiding the inheritance tax by skipping the next generation and achieves the same result as if the transfer had been taxed at each generation (Gravelle, 2025[18]).

An alternative to the higher taxation of transfers to distant heirs is to impose higher constraints on how beneficiaries can access the inherited pension account. Taxing transfers to distant relatives at higher rates may encourage a greater concentration of wealth among closer family members and may lead to the build-up of dynastic wealth and greater wealth inequalities (OECD, 2021[3]). A softer approach could be to differentiate how close and distant heirs can access the refunds of account balances. For example, in the United States, the SECURE Act of 2019 made a distinction between eligible designated beneficiaries (i.e. spouses, minor children, disabled or chronically ill individuals and beneficiaries not more than 10 years younger than the deceased member) and other designated beneficiaries for Individual Retirement Accounts (IRAs). For IRA account holders passing away as of 2020, eligible designated beneficiaries can withdraw money from the inherited account within a period equal to their life expectancy at the time of inheritance, while other designated beneficiaries are required to empty the account within 10 years only. Any assets remaining in the account after 10 years are subject to a 25% excise tax. This distinction was introduced to reduce the use of IRAs as an intergenerational wealth transfer tool and limit long-term tax deferrals (Myers, 2020[19]).

The tax treatment of refunds may vary according to the age of the plan member at the time of death, but this may lead to inequities. Death at a younger age is more likely to lead to accidental bequests, which may be subject to higher tax rates from an efficiency perspective. However, some countries apply a more favourable tax treatment to refunds when death occurs before a certain age (e.g. 70 in the case of France and 75 in the case of the United Kingdom). The rationale for having a more favourable tax treatment when the plan member passes away before a certain age could be to compensate for a death considered premature. By contrast, when death occurs after a certain age, it could be considered that the plan member has had the opportunity to use the savings to finance retirement, and taxation aims to avoid that plan members leave their pension pot untouched to pass it to heirs in a tax-favoured way. However, this

distinction creates inequity between those inheriting a pension pot from someone who dies just before or just after the age threshold (Adam et al., 2022[8]).

There are similar considerations when taxation varies according to the previous employment status of the plan member. For example, in Belgium, inheritance tax is always applicable if the plan member was self-employed, but not if the plan member was an employee and the beneficiary is the spouse or a child younger than 21. A potential reason for this distinction is that employees are mandatorily enrolled in an occupational pension plan once such a plan is set by their employer or sector, while the self-employed can voluntarily decide to participate in a personal pension plan. Additionally, contribution levels are negotiated by the social partners in occupational pension plans, while they are freely determined by the worker in personal pension plans. This implies that the self-employed are more likely to use pension plans as a tax planning tool than employees and may justify the inclusion of self-employed pension plans in the scope of inheritance tax. However, two individuals inheriting the same amount would face different taxes depending on the employment status of the plan member.

5.3.3. Lump-sum death benefits

Lump-sum death benefits occupy a position between survivor pensions and refunds of remaining account balances. On the one hand, they could be regarded as an extreme form of survivor pension, providing a single payment to help households manage the immediate loss of income following the death of the plan member. On the other hand, such benefits may be viewed as an inheritance representing a portion of the accumulated capital. The tax treatment for these death-related payments should reflect which of these two aspects is most significant in each country's context. Consequently, the considerations outlined earlier also apply here.

5.4. Conclusion

The taxation of death-related payments from asset-backed pension plans can affect whether individuals use their retirement savings to improve their retirement income or as a form of wealth transfer. Death-related payments are payments made to beneficiaries upon the death of plan members. Asset-backed pension plans usually benefit from a favourable tax treatment compared to other savings vehicles to encourage people to set money aside to finance their future retirement (OECD, 2018[1]). However, the taxation of death-related payments may partially undermine this objective if it encourages individuals to use their plan to pass wealth on in a fiscally advantageous way.

In most OECD countries, death-related payments are in general taxable for beneficiaries when pension benefits were or would have been taxable for the plan member. However, the applicable tax regime may be different, and important variations arise depending on the form of payment, the type of beneficiary, the situation of the plan member at the time of death and the type of plan.

Death-related payments can take three forms, survivor pensions, lump-sum death benefits and refunds of remaining account balances in defined contribution (DC) pension plans. They serve different purposes, which may explain the tax treatment applied.

Survivor pensions for spouses are primarily for replacing income and smoothing consumption following the death of a partner. Following this, most countries align the tax treatment of survivor pensions with that of pension benefits for plan members and, where personal income tax applies to pension benefits, tax survivor pensions at the marginal rate of the beneficiary.

The objective of survivor pensions for children is typically to provide continued support and investment in the child's welfare rather than income replacement. This may explain why some countries apply a more favourable tax treatment, including tax exemptions or reduced taxation through allowances. However, such

exemptions may imply that parts of retirement savings may go fully untaxed when the plan member benefited from deferred taxation.

The tax treatment of refunds of remaining account balances depends on whether countries have an inheritance tax regime in place and whether inherited balances are treated as deferred labour income or as financial wealth. Most OECD countries have an inheritance tax, but not all of them include refunds in the scope of that tax. Treating refunds as taxable income under personal income tax takes the view that pension wealth is a form of deferred labour income and maintains the logic of deferred taxation embedded in "EET" regimes. This is particularly the case when beneficiaries can roll over balances into their own pension accounts on a tax-deferred basis. By contrast, treating refunds of account balances as inherited financial wealth may better reflect their economic similarity to other bequests, and including them in the scope of inheritance tax may reduce incentives to preserve retirement savings for bequests rather than using them to finance retirement income. Where both personal income tax and inheritance tax can apply to the same death-related payment, deductions to avoid double taxation may be necessary.

When considering refunds of remaining account balances as financial wealth, inheritance taxation should balance different policy objectives and trade-offs. From an economic efficiency perspective, inheritance taxation could be high in the case of accidental bequests as it may not affect saving behaviour. Taxing intentional bequests may address equity concerns, preserve the retirement-income objective of pension savings and discourage the use of pensions as a tax planning tool. However, it may also induce individuals to save less or to withdraw too much and too early from their pension plan, thereby increasing the risk of outliving their resources.

Unfortunately, uncovering the bequest motive is complicated. Countries may therefore use the degree of kinship between the heir and the plan member, the age of the plan member at death or the previous employment status of the plan member as proxies to adjust the tax treatment of refunds. Spouses, partners and dependent children tend to receive preferential treatment compared with more distant heirs, reflecting both family-protection objectives and the fact that bequests to distant heirs may be perceived as a windfall. While adjusting the tax treatment based on the age or the employment status of the plan member may reduce tax planning opportunities, it could also lead to beneficiaries in similar circumstances being taxed differently.

Lump-sum death benefits are hybrid types of death-related payments with features making them resemble both survivor pensions and refunds of account balances. Therefore, policymakers should align their tax treatment with their policy purpose. When the benefit is tied to dependency and functions as survivor protection, taxation under personal income tax may be warranted. When it is broadly payable and functions as a wealth transfer, inheritance taxation may be more appropriate.

The analysis suggests a set of high-level principles to guide policy and ensure that the right framework is in place to encourage people to spend their money for their retirement:

1. The broader tax treatment of retirement savings should be coherent, particularly in systems that defer taxation to the payout phase ("EET"). Exempting death-related payments essentially treats asset-backed pension plans more favourably as a vehicle for bequests or survivor protection than as a vehicle for retirement income provision. While a preferential tax treatment for retirement savings encourages participation in and contributions to asset-backed pension plans (OECD, 2018[1]), the tax treatment upon death may not influence savers' decisions to the same extent, and therefore the tax exemption of death-related payments may be unnecessary.
2. The tax treatment of death-related payments should align with the main policy objective. Protecting dependants, preserving equity among taxpayers and beneficiaries, limiting tax planning opportunities or optimising tax revenues would lead to different tax treatments.
3. The tax treatment of death-related payments should be coherent with the inheritance tax system when it is in place, avoiding distortions between different types of wealth transfers. The interaction

between personal income tax and inheritance tax should also be carefully designed to avoid double taxation or gaps.

4. The tax treatment of death-related payments should consider efficiency and equity implications, looking at the effects on savers, beneficiaries and tax revenues. It should avoid inducing people to save less for retirement and treating beneficiaries in similar circumstances differently.

References

Adam, S. et al. (2022), *Death and taxes and pensions*, The Institute for Fiscal Studies, https://ifs.org.uk/sites/default/files/2022-12/Death-and-taxes-and-pensions-Institue-for-Fiscal-Studies.pdf. [8]

Cremer, H. and P. Pestieau (2011), "Wealth and Wealth Transfer Taxation: A Survey", in *The Elgar Guide to Tax Systems*, Edward Elgar Publishing, https://doi.org/10.4337/9780857933898.00012. [17]

de Grip, A., D. Fouarge and R. Montizaan (2019), "Redistribution of Individual Pension Wealth to Survivor Pensions: Evidence from a Stated Preferences Analysis", *IZA Discussion Paper Series* IZA DP No. 12625, https://docs.iza.org/dp12625.pdf. [5]

De Nardi, M. and F. Yang (2014), "Bequests and heterogeneity in retirement wealth", *European Economic Review*, Vol. 72, pp. 182-196, https://doi.org/10.1016/j.euroecorev.2014.09.004. [14]

Fella, G., M. Holm and T. Pugh (2024), "Saving after retirement and preferences for residual wealth", *IFS Working Paper* 24/02, https://ifs.org.uk/sites/default/files/2024-01/WP202402-Saving-after-retirement-and-preferences-for-residual-wealth.pdf. [16]

Gravelle, J. (2025), *The Generation-Skipping Transfer Tax (GSTT)*, Congressional Research Service, https://www.congress.gov/crs-product/IF13053. [18]

HM Revenue & Customs (2025), "Inheritance Tax on unused pension funds and death benefits", *Policy paper*, https://www.gov.uk/government/publications/reforming-inheritance-tax-unused-pension-funds-and-death-benefits/inheritance-tax-on-unused-pension-funds-and-death-benefits. [9]

Kopczuk, W. (2013), "Taxation of Intergenerational Transfers and Wealth", in *Handbook of Public Economics, handbook of public economics, vol. 5*, Elsevier, https://doi.org/10.1016/b978-0-444-53759-1.00006-6. [12]

Kopczuk, W. and J. Lupton (2007), "To Leave or Not to Leave: The Distribution of Bequest Motives", *Review of Economic Studies*, Vol. 74/1, pp. 207-235, https://doi.org/10.1111/j.1467-937x.2007.00419.x. [13]

Myers, E. (2020), *Inherited or "Stretch" Individual Retirement Accounts (IRAs) and the SECURE Act*, Congressional Research Service, https://www.congress.gov/crs-product/IF11328. [19]

OECD (2025), *Annual survey of financial incentives for retirement savings: Country profiles 2025*, OECD Publishing, Paris, https://doi.org/10.1787/631aa80d-en. [2]

OECD (2025), *Pensions at a Glance 2025: OECD and G20 Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e40274c1-en. [6]

OECD (2024), *OECD Pensions Outlook 2024: Improving Asset-backed Pensions for Better Retirement Outcomes and More Resilient Pension Systems*, OECD Publishing, Paris, https://doi.org/10.1787/51510909-en. [7]

OECD (2021), *Inheritance Taxation in OECD Countries*, OECD Tax Policy Studies, No. 28, OECD Publishing, Paris, https://doi.org/10.1787/e2879a7d-en. [3]

OECD (2018), "Are survivor pensions still needed?", in *OECD Pensions Outlook 2018*, OECD Publishing, Paris, https://doi.org/10.1787/pens_outlook-2018-en. [4]

OECD (2018), *Financial Incentives and Retirement Savings*, OECD Publishing, Paris, https://doi.org/10.1787/9789264306929-en. [1]

Oxford Economics (2025), *Alternative Approaches to Taxing Unused Pension Wealth at Death: A Report for TISA*, https://www.tisa.uk.com/wp-content/uploads/2025/07/Alternative-Approach-to-Taxing-Unused-Pension-Wealth-at-Death-Report-by-OE.pdf. [10]

Schratzenstaller, M. (2025), "Behavioral responses to inheritance taxation – A review of the empirical literature", *Economic Analysis and Policy*, Vol. 85, pp. 238-260, https://doi.org/10.1016/j.eap.2024.11.026. [11]

Yuji Horioka, C. and L. Ventura (2022), "Do the Retired Elderly in Europe Decumulate Their Wealth? The Importance of Bequest Motives, Precautionary Saving, Public Pensions, and Homeownership", *Review of Income and Wealth*, Vol. 70/1, pp. 187-212, https://doi.org/10.1111/roiw.12632. [15]

Notes

[1] The analysis covers all OECD countries except Korea, as well as Bulgaria, Croatia and Romania.

[2] In some cases, death lump-sum payments are subjected to income tax as temporary income.

[3] There are two types of taxes levied on wealth transfers upon the death of an individual. Inheritance taxes are levied on the wealth received by the heirs, while estate taxes are levied on the total wealth transferred by the deceased. Among OECD countries that levy wealth transfer taxes, most levy inheritance taxes (OECD, 2021[3]). In this chapter, the term "inheritance tax" is used to refer to both types of taxes.

[4] In the United States, several states have estate taxes with lower exemption thresholds than the federal one.

[5] Scheme members are often able to nominate who they would like to receive any death benefits, but the scheme trustees are generally not obliged to follow the member's wishes. These are referred to as "discretionary" schemes. In other schemes, the rules provide that the scheme member can choose who will receive the death benefits and the scheme trustees must follow the scheme member's directions. These are referred to as "non-discretionary" schemes.

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