

Pension funds letter

Building together smart solutions to face a challenging environment



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Bridging the gaps to pension and climate resilience



Warnings over a looming pension crisis occur with increasing regularity. Global populations are not only ageing, they are also shrinking in many regions. The number of workers is declining in Europe and parts of Asia, living costs are rising and wages are stagnating. Set against a backdrop of extraordinary global uncertainty, this demographic transition is putting pressure on retirement systems around the globe.

At the same time, the world struggles to keep the goal of carbon neutrality by 2050 alive. The coming years are critical if we are to achieve a sustainable and inclusive transition to a low-carbon economy. At Amundi, we recognise we share responsibility with our clients to drive positive change and achieve our climate goals. As a leading asset manager, we can play a crucial role in mobilizing the capital necessary to support the energy transition and working hand in hand with our pension funds clients to achieve their sustainability goals.

This edition of our Pension Funds letter digs deeper into some of the elements underlying these concurrent challenges and the steps being taken to overcome them.

While progress in responsible investment may have stalled somewhat, due to intensifying debate and polarisation, particularly in the US, global momentum remains resilient. We explore how the landscape is likely to evolve and what this means for sustainable finance opportunities for pension funds.

The move away from defined benefit pensions systems shifts the burden of risk and decision-making away from employers to employees. Making these decisions is complex and compounded by behavioural tendencies. We review the different ways of incentivising retirement savings in a new study.

Public pension provision and sustainability is the focus of our third article as we look at the various reforms that have been implemented across Europe to address the demographic challenge.

Finally, we wrap up this edition with our regular review of the markets and how this has been driving pension funding ratios.

What's new & coming up?



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Chief Responsible
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Responsible Investment Pension Fund Outlook

Tracking the responsible investment path

The landscape of responsible investment has rapidly evolved in recent years, influenced by stricter regulatory changes, shifting market dynamics, and an increased emphasis on environmental, social, and governance (ESG) factors. In this article, we will explore the developments in responsible investment, including the growth of the Green, Social, and Sustainability (GSS) debt market and the rising trend of investments in renewable energy, as well as where opportunities lie for pension funds in the sustainable finance space.

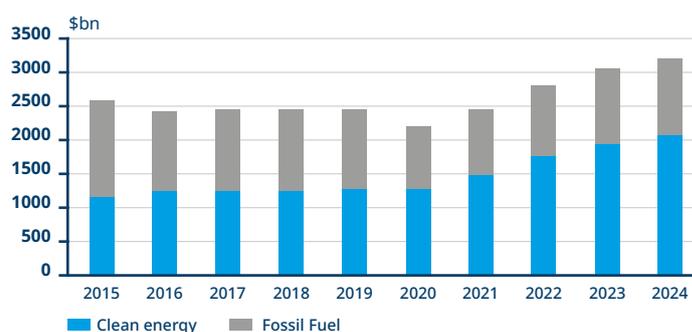
In 2024, the growth of assets under management (AUM) for responsible investment funds was relatively subdued, reaching €57 billion in the first three quarters, compared to over €98 billion in the broader non-ESG market in Europe. The market shares of responsible investment funds remained stable across regions, with Article 8 and Article 9 funds holding approximately 59% of the asset market share in Q3 2024, up from 56% in Q3 2023. Additionally, the trend of fewer global responsible investment fund launches continued, reflecting a **maturing market** that is facing increased scrutiny due to stricter regulatory developments including **more rigorous frameworks** that establish minimum standards, such as the European Securities and Markets Authority (ESMA) guidelines aimed at promoting transparency in ESG disclosures.

Energy Transition

The energy transition sector is experiencing a notable rise in investments, particularly in renewable sectors such as solar and wind, with **clean energy investments now outpacing fossil fuels** at a 2:1 ratio¹. This growth is for a significant part driven by key government policies such as the US Inflation Reduction Act, the EU Green Deal, and China's "Made in China" initiative.

¹. IEA, World Energy Investment report, May 2024

Figure 1: Global investment in clean energy and fossil fuels



Source: IEA, World Energy Investment report, May 2024

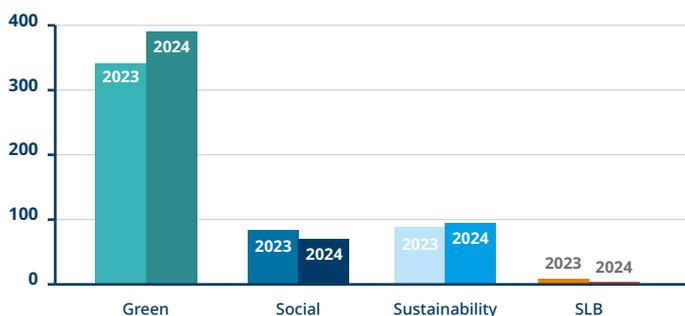
However, geopolitical shifts, particularly under the Trump administration, are also reshaping the energy landscape. **Trump's focus on cheap energy may boost fossil fuel production but could also accelerate green energy development** if clean energy becomes more competitive, as the administration's focus seems to lie on price. While protectionist policies may promote green technology, they could also **raise production costs**, potentially **undermining climate change efforts**.

The GSS+ Debt Market

Another key aspect of the responsible investment landscape is the market for labelled bonds. **By the end of 2024, the sustainable debt market has shown resilience** with the Green, Social, Sustainability market (GSS+) surpassing \$5 trillion in cumulative issuances, primarily through green bonds, which account for 80% of sovereign GSS+ volume. Aligned GSS+ bond volumes reached \$554 billion in the first half of 2024, with Europe contributing significantly. Africa has also seen a remarkable **412% increase in green bond issuances** from 2023, indicating a commitment to sustainable financing.

The green bond market is expected to continue growing in 2025, supported by upcoming regulations like the EU Green Bond Standards and ESMA's guidelines. Major ESG data providers are consolidating their offerings, leading to the development of tailored, sector-specific indicators that address the complexities of a maturing market.

Figure 2: Aligned GSS+ volumes recorded an increase of 7% in the H1 2024 compared to H1 2023 (\$bn)



Source: Climate Bond Initiative

Responsible investment and regulation

The recent responsible investment market growth is partly driven by **stricter regulatory frameworks** that establish minimum standards. At a European level, the ESMA guidelines aim to establish minimum standards for ESG disclosures and **promote transparency** for investment solutions. Whilst at a country level, there are initiatives such as France's ISR label, which can be obtained by investment funds that meet specific social and environmental criteria. Moreover, the upcoming Corporate Sustainability Reporting Directive (CSRD) will further **enhance corporate accountability** through additional disclosure requirements on sustainability practices, risks and impacts. For pension fund investors, this evolution is important as it promotes **greater transparency**, allowing for more informed decision-making based on **reliable ESG data**. **Enhanced reporting helps** identify potential risks and **aligns investments** with personal values, while also tapping into a growing market demand for sustainable practices.

Emerging and Developing Economies (EMDEs)

Emerging and developing economies (EMDEs) are crucial for global climate change mitigation, projected to contribute significantly to CO2 emissions while **leading future clean energy investments**. With rapid urbanization and economic growth, EMDEs could attract up to \$5 trillion in investments, particularly in solar and wind energy.

The physical impacts of climate change are worsening, with projected damages reaching \$1.8 trillion by the century's end and current **economic costs estimated at \$300 billion**. The degradation of natural ecosystems exacerbates climate risks. Advancements in clean technology, particularly in batteries and power grid optimization, have benefited from rapid electrification. While solutions like green steel are technically feasible, they remain economically unviable under current policies, highlighting the need for **increased global investment** to effectively address climate change.

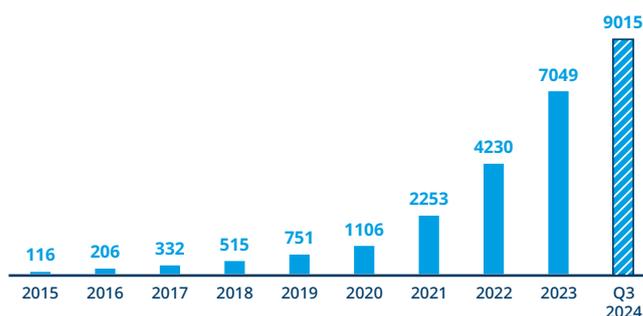
China's Influence on Decarbonisation Goals

The push for decarbonisation and sustainable development for a large part depends on a few key actors, notably China. It plays a significant role in renewable energy production, holding about 80% of the world's solar photovoltaic capacity, 60% of wind power, and 70% of electric vehicle battery manufacturing. However, despite its advancements, China's emissions rose in 2023 due to increased energy demand and reliance on coal, showing the **difficulties in meeting global climate targets**. This situation highlights the complexities of the energy transition, revealing the **delicate balance** between advancing renewable technologies and the ongoing challenges of achieving these targets. It is essential to understand **China's pivotal role** in this landscape, particularly because of its substantial impact on the energy transition and its implications for global sustainability efforts.

The crucial role of corporates in the energy transition

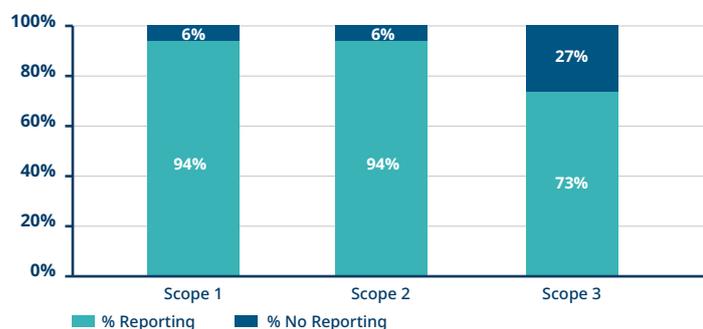
Corporates are increasingly integrating climate and nature risks into their investment strategies, with a **30% increase** in the first three quarters of 2024, as over 2,000 new companies joined the Science Based Targets Initiative (SBTI). As shown in figure 3, there is an increasing focus on corporate climate accountability, for companies to report their Scope 1, 2, and 3 emissions. Nearly all S&P500 firms disclose Scope 1 and 2 emissions, while scope 3 reporting remains comparatively a bit lower at 73%. This momentum is fuelled by the **growing awareness** of the impact of climate change and the current sluggish pace of the energy transition, which can negatively affect a company's value chains, potentially leading to increased costs. Rising regulatory requirements, especially in Europe, mandate due diligence on climate risks and public disclosures, pushing corporations to **enhance their reporting practices**.

Figure 3: Number of companies committed to the SBTi



Source: Science-Based Target initiative, as end of September 2024

Overall, there is **positive momentum** toward clean energy investments, recognized for their contribution to GDP growth through **job creation** and **economic resilience**. However, significant challenges remain, particularly in infrastructure development in the US and Europe, where complex administrative procedures delay renewable energy projects. Another factor will be artificial intelligence, which is expected to enhance efficiency by optimizing energy management and improving grid operations.

Figure 4: Share of Companies in S&P 500 Reporting Scope 1, 2, 3 emissions

Source: SBTi; Morgan Stanley Research

Plotting the responsible investing landscape for pension funds

The rising awareness of responsible investment among pension funds

According to the 2024 Amundi/CREATE research survey of global pension funds², many respondents allocate their assets toward impact investing funds targeting financial, social, and environmental benefits through **private markets**, especially private equity and private debt. For pension funds, private markets are particularly **suitable for ESG investing**, as their investments are more effective in **targeting impacts** through direct investments in pure-play companies whose business models are solely focused on chosen themes.

There is a growing emphasis on ESG factors, with 56% of respondents targeting a **triple bottom line** from their private market allocations. For 78% of respondents, maintaining a good track record of delivering clients' financial and ESG goals is the most important criteria, indicating a **growing demand** for ESG-related topics. When it comes to manager selection, survey participants rank delivering clients' financial and ESG goals as a top priority (63%). Moreover, thematic funds investing in renewable energy and sustainable bond funds are the preferred options for pension funds to access Asian emerging markets.

The influence of geopolitical factors on pension fund's investment strategy

However, **geopolitical changes** will affect pension funds' investment strategies. Positions for or against sustainable investing influence the management of state public pension funds. Several US

Innovative emerging metrics for investors

As the responsible investment landscape continues to evolve, pension funds face **growing demand for innovative products** that align with emerging sustainability objectives. Reflecting these shifts, asset managers are introducing **new performance indicators**, such as transition scores assessing both net-zero alignment and tangible carbon-reduction contributions. Additionally, social metrics related to human capital and human rights have gained traction, supported by enhanced transparency driven by frameworks like the CSRD. These developments enable pension funds to **better respond to beneficiaries expectations** by selecting investment solutions specifically designed to deliver **robust outcomes alongside sustainable financial returns**.

states have introduced or passed legislation aimed at **restricting pension funds** from incorporating sustainability factors into their investment strategies. Therefore, the current geopolitical landscape in regions such as the US may not favour investment strategies toward sustainable solutions among pension funds.

Pension funds resilience in responsible investment

Tensions have risen between long-term investors and **US asset managers, who have downgraded ESG investing** after Donald Trump's election³. While many large asset managers in the US, including State Street, BlackRock, Fidelity, and Vanguard, have withdrawn a large part of their ESG investments, pension funds have, conversely, decided to further engage in responsible investment. **A notable example of an asset owner pushing back against the retreat from ESG is The People's Pension**, one of the largest UK pension funds⁴, which pulled £28 billion from State Street after a review of its responsible investment policy to engage with more responsible investors such as Amundi and Invesco. This defined contribution scheme aims to run the funds with a **focus on responsible investment**.

Furthermore, in March 2025, a group of 26 financial institutions and pension funds launched a responsible investment campaign, urging their asset managers to **engage more actively** with companies they are invested in regarding their climate risk. Some major US pension funds, including Calpers (California Public Employees' Retirement System) and the California State Teachers' Retirement System, have also **warned against the dilution** of climate reporting standards.

2. Amundi. (2024). Where will returns come from in pensions' new economic regime? Amundi Research Center. <https://research-center.amundi.com/article/where-will-returns-come-pensions-new-economic-regime#:~:text=The%202024%20Amundi%E2%80%93CREATE%20global,these%20alternative%20sources%20of%20value>

3. Financial Times. (2024, March 17). Looking ahead: Continued interest in private markets. <https://www.ft.com/content/7847b48d-5c1e-4f4a-a87c-6fc7a9e2ba06>

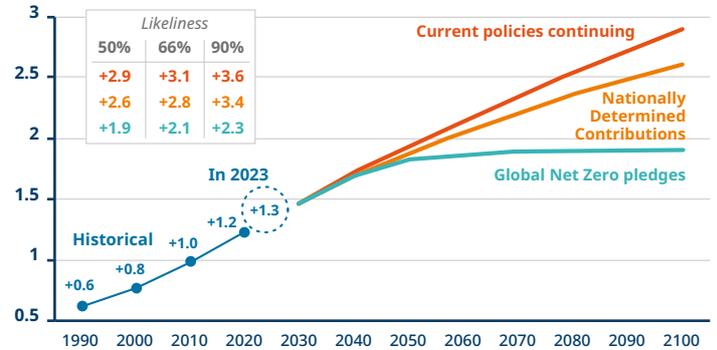
4. Financial Times. (2024, March 17). Top UK pension fund mandate changes hands. <https://www.ft.com/content/541c715b-d518-49c3-9838-1cf8d3fb73e5>

Conclusion

While the **geopolitical context** will undoubtedly influence **responsible investment** for pension funds, there is a notable and **growing commitment** to ESG principles among pension funds in Europe, distinguishing them from their US counterparts. These funds are increasingly turning to private markets to align their ESG investments with long-term objectives, underscoring a broader **recognition of sustainability's importance** in investment strategies. As pension funds strive to **balance financial performance** with positive social and environmental outcomes, a recent review indicates a **significant gap** between current policies and climate goals. The UN warns of potentially catastrophic warming scenarios if mitigation efforts are not intensified; if current policies persist, global temperatures could rise by 2.9°C by 2100, with only a 3% chance of limiting increases to below 2°C (Figure 5).

This evolving landscape reflects a shared commitment among pension funds to responsible investment, highlighting the urgent need to increase efforts in responsible investing to meet the critical targets necessary for a sustainable future.

Figure 5: Temperature pathways scenario to 2100 (°C)



Source: Climate Action tracker, November 2024 update; UNEP; Amundi analysis



Explore all the analysis
in Amundi's Responsible
Investment Views 2025

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Marie BRIÈRE

Head of Investor Intelligence & Academic Partnerships, Amundi Investment Institute

Overcoming barriers to retirement savings: behavioural factors

Individuals often struggle to make savings decisions due to the complexity of determining savings amounts and how to allocate assets, compounded by behavioural tendencies like prioritising more immediate rewards over a larger future reward ('present bias'), and procrastination.

Using the results of a **new Amundi paper** studying French employee savings schemes, alongside a review of existing studies into investor behaviour with regards to retirement savings, we look at the effects of various reforms implemented in different countries to promote private retirement savings. We also examine the impact of tax incentives, automatic contributions and increasing engagement through traditional or digital tools.

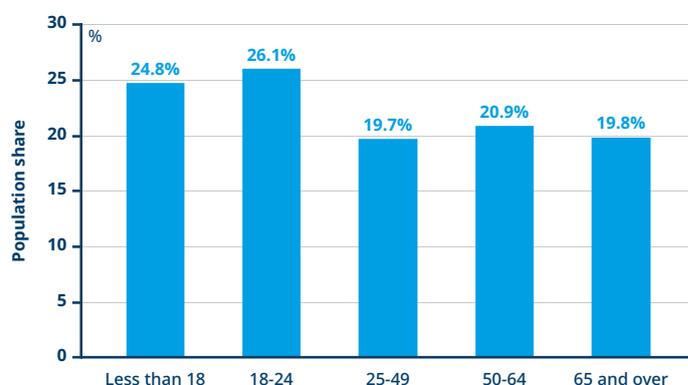
The challenge of retirement under-saving

Under-saving for retirement is a major issue for many economies. In the US, according to the National Retirement Risk Index, 39% of working-age households will not be able to maintain their standard of living in retirement¹. In Europe, more than 19.8% of people aged 65 years or older are at risk of poverty or social exclusion², and women are particularly at risk. To address these issues, many countries have introduced reforms to encourage private saving by providing **tax incentives** for voluntary pension contributions, **automatic enrolment** in pension plans, or trying to raise awareness about the importance of pension saving through **retirement education material**. What are the lessons learned from these reforms and how do the various incentives affect saving?

How efficient are tax incentives?

Today, countries differ in the tax treatment of retirement savings. In the US for example, in 401(k) accounts, contributions are made with **pre-tax income** – contributions are deductible from income tax – and withdrawals from the account are included in the savers' taxable income. An alternative structure (Roth IRA) permits **post-tax income** contributions to the saving plan. In this case, withdrawals from the plan are not taxed.

Figure 1: Risk of poverty or social exclusion by age in the EU in 2023



Source: Amundi Investment Institute on Eurostat data for 2023.

Figure 2: Tax treatment of retirement savings in OECD countries, 2023

| | |
|---|--|
| Exempt: contributions, investment income and withdrawals | Colombia; Estonia; Slovak Republic. |
| Taxed: contributions and withdrawals Exempt: investment income | Austria; France; South Korea; Portugal. |
| Taxed: contributions, investment income Exempt: withdrawals | Australia; New Zealand; Turkey. |
| Taxed: investment income, withdrawals Exempt: contributions | Denmark; Greece; Italy; Sweden. |
| Taxed: contributions Exempt: investment income, withdrawals | Costa Rica; Czech Republic; Hungary; Israel; Lithuania; Luxembourg; Mexico. |
| Taxed: withdrawals Exempt: contributions, investment income | Belgium; Canada, Chile; Finland; Germany; Iceland; Ireland; Japan; Latvia; Netherlands; Norway; Poland; Slovenia; Spain; Switzerland; United Kingdom; United States. |

Source: Amundi Investment Institute on [OECD country profiles 2023 data](#).

1. [National Retirement Risk Index](#), most recently updated for 2022. The NRRI is updated every three years with the release of the Federal Reserve's Survey of Consumer Finances (SCF).
2. [Eurostat data for 2023, Living conditions in Europe - poverty and social exclusion](#).

Tax incentives for individuals' retirement savings

A large debate prevails as to the effectiveness of the various tax incentives³. A recent working paper⁴, published by Amundi analysed **saving responses** to the **Pacte law**, a 2019 French law that was designed to encourage retirement saving contributions to supplement public pensions. It introduced a **new tax deduction for personal voluntary contributions** to employer-sponsored retirement accounts. The study examined whether the new availability of tax-deductible voluntary contributions raised the level of inflows to employer-sponsored plans.

One criticism of tax incentives for retirement saving is that the benefits depend on the taxpayer's marginal tax rate, which can result in larger benefits for high-income taxpayers in higher tax brackets than for lower income households. In the Pacte law study it was found that the **take-up of the pre-tax LT contribution option was greatest among older employees with higher incomes and retirement plan balances**.

All in all, the reaction to this reform in France suggests that offering a voluntary pre-tax contribution option in an employer-sponsored retirement plan can boost contributions without a notable reduction in other employer-sponsored saving contributions. It also corroborates previous findings of heterogeneous responses to such incentives. Workers with larger pre-reform retirement saving balances, higher income, and who were closer to retirement were more likely to take advantage of the new saving option⁵.

Procrastination: do we need more automatic enrolment?

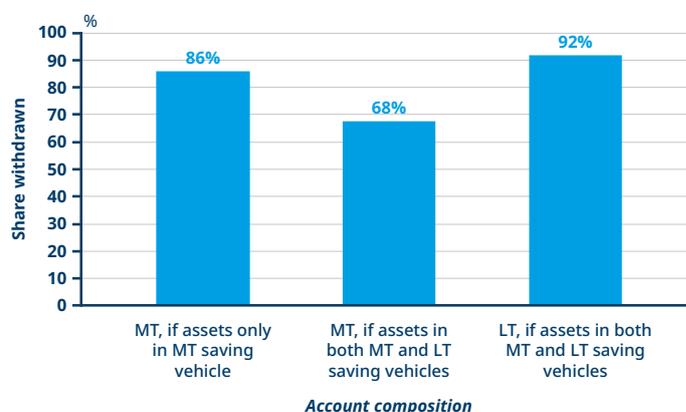
If a proportion of people are passive savers or procrastinators, would the introduction of an auto-enrolment solution paying, for example, a percentage of salary directly into a retirement savings plan be effective? In the short term, certainly. Several academic studies attest to this: switching from a voluntary to an automatic enrolment scheme can double the participation rate in retirement savings plans⁶.

But the **longer-term effects of automatic enrolment are increasingly being debated**. The 'present bias', which leads a significant proportion of households to take the default option via automatic enrolment, may also lead them to over-consume. Academic research has shown that individuals tend to **cancel out the short-term effects of automatic enrolment** by saving less in the future, or by unlocking their savings when possible. In the United States, when employees leave their employer, the assets accumulated in their 401k savings plan are transferred to a more liquid IRA account. Some take advantage of this opportunity to spend their savings⁷. In the UK, when employees change employer and the new employer does not have automatic enrolment, their participation rate drops by 13%⁸. Ultimately, the median cumulative

contributions of employees with and without automatic enrolment are identical after 3 years.

In French employee savings schemes, by default, 50% of the employer contribution is automatically paid into the retirement savings scheme when the worker makes no active choice. But we observe that in the following years, part of the effect of this automatic enrolment is **undone by workers' withdrawals**, possible under certain exceptional conditions⁹. On average, employees withdraw 92% of the Long-Term (LT) retirement funds when a hardship withdrawal opportunity arises, whereas they withdraw only 68% of Medium-Term (MT) saving funds (locked only for 5 years) in the same situation¹⁰.

Figure 3: Withdrawals from retirement accounts when hardship occurs



Source: Amundi Investment Institute on Amundi ESR data, Brière, Poterba, and Szafarz (2022).

Similarly in the US, analysis of nine 401(k) plans¹¹ shows that when employees leave firms (often before matching contributions from their employer have been fully vested), a large percentage of 401(k) balances are withdrawn, and many employees opt out of auto-escalation.

Should retirement savings be locked?

Many retirement saving vehicles in France, lock in the money until retirement, unless there are exceptional reasons for withdrawal (such as purchase of principal residence, unemployment or over indebtedness). Locking in savings can be an obstacle, particularly for young people, for whom retirement is still a long way off and who are highly uncertain about their liquidity needs. This raises the question of the **optimal degree of liquidity for retirement savings plans**. If the plan is 'too' liquid, individuals may be tempted to consume their savings before retirement. But if they have a strong preference for liquidity, offering them the possibility of easy access to their funds in case of need can be an incentive to save.

3. See *"Rothification" Coming for Your Retirement Account?* for an overview of the debate during the last US presidential election. Additionally, see the academic works of [Beshaers et al. \(2017\)](#), and [Horneff et al. \(2022\)](#).

4. Brière, Poterba, and Szafarz (2024).

5. In a controlled laboratory setting, [Bohr et al. \(2023\)](#) show that individuals tend to be influenced by behavioural biases when choosing between retirement accounts with different tax incentives. For example, time-inconsistent savers may favour pre-tax systems if they fail to anticipate their required post-retirement tax obligations. [Blaufus and Milde \(2020\)](#) suggest that low levels of tax knowledge, combined with tax misperception, may explain the small effect of tax nudges on retirement savings.

6. See experiments conducted in the US and UK by [Madrian and Shea \(2001\)](#), [Beshaers et al. \(2009\)](#), and [Berk et al. \(2024\)](#).

7. [Beshaers et al \(2022\)](#)

8. [Choukhmane \(2019\)](#)

9. These special circumstances include purchase of principal residence, unemployment, over indebtedness, death, or disability

10. Brière, Poterba, and Szafarz (2022).

11. [Choi et al. \(2024\)](#).

Retirement savings systems differ greatly in the degree of liquidity of their plans. In Germany and Italy, no withdrawals are possible except in the case of disability or terminal illness. In Australia, Canada and Spain, withdrawals are **possible for exceptional reasons** (i.e., health, employment). In the United States, early withdrawals are possible **when individuals change employer**. The accumulated 401(k) retirement savings are transferred to an IRA account, where withdrawals are possible before age 59.5, subject to a penalty of 10% of the funds withdrawn. In France, the majority of pensions come from the pay-as-you-go system, so they are automatically very illiquid.

The France study shows there is a **strong preference for liquidity**. For example, employees are less likely to opt for the default option when this involves part of the profit-sharing being paid into the LT retirement option (9% of employees vs. 41% when the profit-sharing is paid entirely into the MT option). Allowing more flexible withdrawals before retirement would undoubtedly improve the attractiveness of retirement savings schemes.

In the US, penalty-free emergency withdrawals are now permitted in 401k pension plans. Beshears et al. (2024) show that most participants continue making contributions after loans and hardship withdrawals. For plan sponsors considering the introduction of this new liquidity feature, these results suggest that most participants would be able to repay their withdrawals while maintaining their contribution rate to retirement savings.

Raising pension saving awareness

Evidence on the effectiveness of retirement information provision and financial education is mixed. Some experiments show that providing easily accessible information on pension entitlements has a significant impact. In Germany, for example, a **policy of systematic information on pension entitlements** was introduced between 2002 and 2005. This reform led to an increase in tax-deductible retirement savings and a rise in earned income¹².

Duflo and Saez (2003) conducted a randomised experiment in which individuals were offered a **financial incentive to attend an educational seminar** on a retirement savings plan. Both the 'trained' individuals and their peers were more inclined to take up the retirement savings plan. Also, 17,000 University of Minnesota

employees received retirement income projections based on their accumulated capital. Goda et al. (2014) observed a significant increase in their contribution rate and average contribution.

More recently, Bauer et al. (2022) examined whether **peer information and financial incentives** (in the form of a lottery) are effective in getting people to check their pension information and change their saving behaviour. They find that informing plan members about how much their 'peers' are saving for retirement has no effect on how much people check their pension accounts, but that lottery-type financial incentives do. However, the receipt of pension information does not lead to increased savings three weeks after our intervention. Meta-analyses of the impact of financial education on financial decisions find that interventions to improve financial literacy explain only 0.1% of the variance in the financial behaviours studied, with weaker effects for low-income people¹³. There are several reasons for this. People often avoid information when the outcome is **too uncertain or potentially negative** (the famous 'Ostrich effect'¹⁴). Financial education impact **decays over time**. Even large interventions with many hours of instruction have negligible effects on behaviour 20 months or more after the intervention. The partial effects of financial education diminish dramatically when one controls for people's **psychological characteristics**.

We might expect more impact from informational treatments that deal with people's emotions. Innovative tools have been tested to promote retirement savings. For example, preliminary evidence from a controlled experiment suggests that allowing people to interact with **realistic computer renderings of their future selves** using immersive virtual reality hardware have an impact on the propensity to save¹⁵.

Combined with pension simulators, these virtual reality tools could raise people's curiosity and awareness about retirement saving needs and be integrated in **robo-advisory services**.

After all, more than 80% of financial decisions are made after receiving advice from a **financial advisor**. Yet in the US, 46% of advisors say they do not have a retirement plan. Training financial advisors on retirement issues and allowing them to **use retirement planning and simulation tools** in order to interact with clients can be particularly effective.

Conclusions

Getting people to save for retirement is not an easy task and there are many reasons for that. **Saving decisions are complicated:** people don't know how much to save, or how to allocate their assets for retirement. The easy solution is to leave the money in their bank account. Present bias and procrastination explain the lack of decisions. In addition, savers like to have **access to liquid savings** that they can use when needed. However, most retirement saving vehicles lock the money until retirement, unless there are exceptional reasons to withdraw. This raises the question of the **optimal degree of liquidity offered by retirement savings plans**. Tax incentives can have an impact on retirement savings. They tend to have a bigger impact on savers that are already 'active' savers or wealthy individuals. Incentivising **automatic contributions from employers** to retirement savings plans might be more effective to touch a wider audience of potential investors. Finally, the provision of information on retirement saving needs (perhaps combined with engaging 'virtual reality' tools) can be useful, especially if it is channelled through financial advisors or easily accessible **digital tools such as robo-advisors**.

12. Dolls et al. (2019).

13. See for example Fernandes et al. (2014).

14. See Karlsson et al. (2009) and Sicherman et al. (2016).

15. Hershfield et al. (2011).

[Read the full paper ▶](#)



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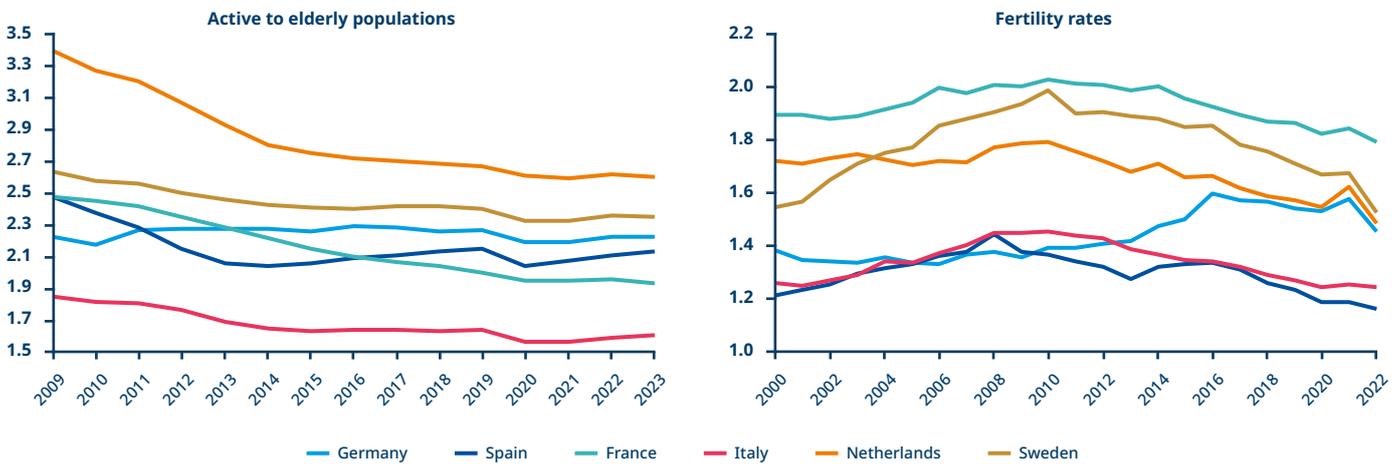
Eurozone Pension Systems: a health check

Post-war Second World War pension funds were developed on the basis of two different logics: the Bismarckian (defined contributions) in Germany and the Beveridgean system (defined benefits) in England. Today, there are hybrids of these systems but all have established minimum pension levels or social minimums.

Reforms have led to the development of funded pension systems alongside the pay-as-you-go (PAYG) systems, where active workers' contributions pay for pensions of retirees, as seen in France, and funded systems, where contributions are accumulated in pension funds that invest in financial securities for future benefits. There is no longer a typical pension system as each country has its own specific features and various degree of complexity.

Since 1980, the Eurozone has been grappling with **significant demographic challenges** due to an aging population, which has increased the financial demands on pension systems, particularly in countries using PAYG models. This demographic shift is primarily driven by declining birth rates and rising life expectancy (Figure 1). Additionally, the COVID-19 crisis has further exacerbated fiscal deficits and public debt, leading to increased pension expenditures across the region.

Figure 1: Ageing populations and declining fertility rates are weighing on pension systems



Sources: Amundi Investment Institute on Eurostat data as of April 2024. Active population is between 15 and 64, elderly population is above 65 years old.

Historically, countries such as Germany, France, Italy, Spain, the Netherlands, and Sweden have faced significant demographic challenges and implemented various reforms to stabilize their pension systems. Key reforms include:

- **Raising the Official Retirement Age:** Sweden has gradually increased the retirement age to 66, while Germany is raising it to 67 to align with rising life expectancy.
- **Extending the Contribution Period:** Spain has lengthened the required contribution period from 35 to 37 years, requiring workers to contribute longer for full pension benefits.

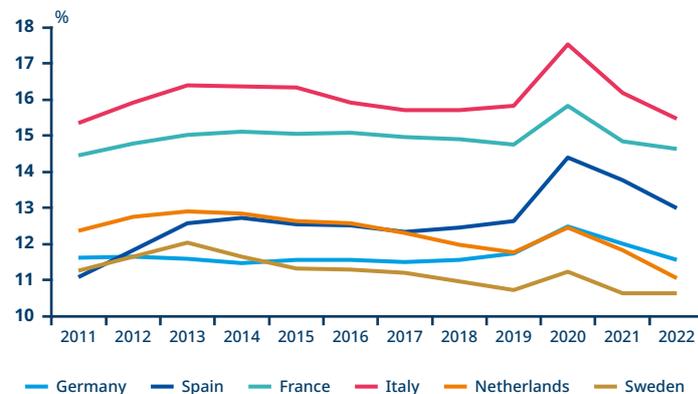
- **Adjusting Pension Calculations:** Countries like Sweden, Germany, and the Netherlands have incorporated demographic factors into pension calculations, recalibrating benefits based on the worker-to-retiree ratio, which may lead to lower pensions as the population ages.
- **Increasing Contribution Rates:** Spain has raised contribution rates from both workers and employers to enhance the pension system's financial sustainability amid a growing retiree population.

To enhance retirement security, several countries have encouraged private pension savings through **tax incentives** and **employer-sponsored plans**, thereby reducing reliance on PAYG systems. In hybrid models, where PAYG pensions may fall short, individuals are motivated to invest in employer-sponsored plans and personal savings. Overall, these measures aim to adapt pension systems to the realities of an aging population by creating a more **hybrid approach** that combines PAYG with additional investments from employer plans and personal savings. This strategy seeks to ensure **long-term sustainability** and provide **adequate support** for retirees.

Pension spending on PAYG systems constitutes a significant portion of government expenditure, particularly in France and Italy, where it accounts for 14.7% and 15.5% of GDP respectively, compared to an overall European average of 12% (Figure 2). Sweden and the Netherlands have lower proportions at 10.7% of GDP. The sustainability of these systems is a concern, as they rely on intergenerational solidarity, requiring a sufficient number of workers to maintain the balance.

A decline in the working population or real wages can disrupt this equilibrium, leading to deficits. PAYG systems are rarely 'pure,' meaning contributions and benefits often do not balance. Pensions may be adjusted for social reasons, and these systems typically depend on taxes and subsidies. An increasing dependency ratio—where retirees outnumber workers—can strain financial sustainability, resulting in lower replacement rates or higher contribution rates. Currently, the Netherlands and Sweden have the **lowest deficits** at 0% (Figure 3), followed by Germany at 2%. In contrast, France, Spain, and Italy face **higher deficits** of 3%, 5%, and 7%, respectively. Countries like the Netherlands, Germany, and Sweden are noted for their **effective pension management**.

Figure 2: Pension expenditures are a growing proportion of countries' GDPs



Sources: Amundi Investment Institute on Eurostat data as of November 2024.

Figure 3: Retirement deficits and labour costs are two dimensions of pension systems' sustainability

| Deficit for retirement in GDP | | Annual labour costs in EUR thousands** | | | | |
|-------------------------------|------|--|------|------|------|------|
| | 2023 | 2020 | 2021 | 2022 | 2023 | |
| Netherlands | 0% | | | | | |
| Sweden | 0% | | | | | |
| Germany | 2% | | | | | |
| France* | 3% | | | | | |
| Spain | 5% | | | | | |
| Italy | 7% | | | | | |
| | | Spain | 23.0 | 22.9 | 23.3 | 24.6 |
| | | Italy | 29.2 | 28.7 | 29.4 | 29.8 |
| | | Eurozone-20 | 32.1 | 32.4 | 34.0 | 35.6 |
| | | Eurozone-19 | 32.4 | 32.6 | 34.2 | 35.9 |
| | | Sweden | 38.0 | 40.8 | 40.2 | 38.9 |
| | | Germany | 36.8 | 37.2 | 39.4 | 41.3 |
| | | France | 38.8 | 39.3 | 40.8 | 42.2 |
| | | Netherlands | 37.7 | 38.1 | 40.5 | 43.3 |

Sources: Amundi Investment Institute on Eurastat data as of April 2024.

* For France, the deficit reported by the COR is -1%. By convention, the COR only displays the private system deficit. According to IFRAP, the deficit would be much higher if civil servants' pensions were taken into account: an additional EUR 26 bn, bringing the total deficit to 3% of GDP.

** Labour costs are measured as employees compensation plus taxes less subsidies, for industry, construction and services, except public administration, defence, and social security.

A 2023 study by the Centre for Economic Policy Research (CEPR) assessed the fiscal capacity of governments to finance pensions, revealing that France and Italy have the **least fiscal leeway** to counter rapid declines in pension levels, while Germany and Spain are in a slightly less critical position. To alleviate the fiscal burden of first-pillar pensions, the German government has proposed a state-funded pension plan aimed at reaching EUR 200 billion by 2036, financed through government loans and additional federal assets. Meanwhile, Sweden, despite having a balanced pension system, faces **poverty issues among retirees**, particularly affecting women, who receive pensions that are, on average, **30% lower than those of men**, highlighting the intersection of income inequality and pension replacement rates.

The room for manoeuvre to finance public pensions varies significantly between countries. Finland, Germany, Netherlands, Portugal and Spain pension space ranged between 10 and 25% while Belgium, Austria, France and Italy have less than 10% pension space. France and Italy especially are expected to have **no pension space by 2030**. While pension sustainability based on funding is one way to approach the subject, to take complete generational equity into account, it is also important to consider **life expectancy** and years remaining in **good health** in determining the sustainability and fairness of pension systems (Figure 4).

Figure 4: Ranking countries by their Sustainability Indicator

| | Public Deficit | Retirement Deficit | Replacement rate | Labour cost | Active to elderly | Fertility rate | Years in good health | No. of criteria in critical situation | Average | Rank Synthesis |
|-------------|----------------|--------------------|------------------|-------------|-------------------|----------------|----------------------|---------------------------------------|---------|----------------|
| Germany | 3 | 3 | 6 | 4 | 3 | 4 | 4 | 2 | 4.14 | 3 |
| Spain | 5 | 5 | 1 | 1 | 4 | 6 | 5 | 3 | 4.29 | 4 |
| France | 4 | 4 | 3 | 5 | 5 | 1 | 2 | 4 | 4.00 | 3 |
| Italy | 6 | 6 | 2 | 2 | 6 | 5 | 1 | 4 | 4.57 | 5 |
| Netherlands | 2 | 2 | 5 | 6 | 1 | 3 | 6 | 2 | 3.86 | 2 |
| Sweden | 1 | 1 | 4 | 3 | 2 | 2 | 3 | 1 | 2.43 | 1 |

Sources: Amundi Investment Institute.
 The following thresholds were considered critical (red shaded areas): A deficit in excess of 3%; A replacement rate below 50%; Less than 2 working people per elderly person; A fertility rate below 2.1 (renewal threshold); A retirement age lower than the perceived healthy age. As the cost of labour has a dual effect on retirement, qualification/wage level and tax level, it has not been taken into account as a critical factor. The average rank includes a penalty according to the number of critical indicators, and is not significant if the difference is less than 0.14 by construction.

The emergence of hybrid pension systems in the Eurozone highlights the necessity for individuals to find **alternative ways** to finance their retirement alongside the traditional PAYG model. While PAYG systems provide **essential support** for retirees, the increasing financial demands due to demographic changes, such as an aging population and declining birth rates, make it clear that **relying solely on PAYG is not sufficient**. Countries are starting to recognise the importance of integrating funded pension schemes and **encouraging private savings** to create a more sustainable retirement framework. This hybrid approach not only complements the existing PAYG systems but also empowers individuals to take control of their financial futures.

Motivating people to invest and save for their retirement is a major challenge and has significant implications for both individual outcomes as well as economies at large. Although pension systems vary significantly across Europe, challenges faced are similar and solutions are not clear-cut. Across all 3 pillars of the pension system, increasing awareness of the importance of investing for retirement will be key.

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**Benjamin BRUDER**

Senior OCIO Advisor,
Amundi

Market risks are increasing, but funding ratios remain comfortable

Most market moves at the end of 2024 have been reversed in early 2025. Pension funds are still enjoying a strong financial position on average, but the current environment has become highly unstable.

Market review of the last few months: From measured optimism to growing instability

From the end of October 2024 to mid-March 2025, financial markets navigated a **complex landscape** shaped by geopolitical developments, including threats of US tariffs.

In the United States, the S&P 500 rose by 2.4% in the fourth quarter, buoyed by a rally in November following the presidential election. However, December saw a decline of 2.4%, largely due to a hawkish shift from the Federal Reserve that surprised many investors. 2025 began positively, but current **tariff threats** had a very strong negative impact on the S&P, losing around 10% from mid-February to mid-March. US Treasury yields rose significantly during Q4 2024, with the 10-year yield moving from 3.8% to 4.6%. This rise reflected expectations of fewer rate cuts in 2025, but recent concerns on growth due to tariffs lowered the 10-year rate to 4.2% in February.

In Europe, equity markets struggled in Q4 2024, with the MSCI Europe index declining by 2.9%. This was followed by a strong rally at the beginning of 2025. The European Central Bank (ECB) cut its key deposit rate to 2.75% in January 2025, down from 3.0% in December, in an effort to stimulate the economy amid signs of stagnation. Long interest rates fluctuated during Q4 2024 and early 2025, but those rates rose sharply in early March (from 2.3% to 2.7% for the 10Y Euro swap rate), despite an additional ECB rate cut.

Inflation remained a central theme throughout this period. In the US, headline inflation rose to 2.6% in December, while core inflation remained stable at 3.3%. The Federal Reserve maintained its target range for the federal funds rate between 4.25% and 4.50%, adopting a cautious approach to rate cuts.

Currency markets reflected these dynamics, with the US dollar strengthening significantly, gaining 7.6% in the fourth quarter against a basket of currencies. In contrast, the euro weakened by 7.0% against the dollar. These effects were mostly reversed in early March.

Globally, the period from October to mid-March was neutral for US equities and positive for European equities, while interest rates went down both in the US and EU. These developments were **very volatile**, with a strong differentiation between geographies. Political uncertainties suggest that future behaviour of markets will likely remain highly volatile.

Impact on pension funds

In the US, funding ratios increased due to both higher yields, which lead to a reduction in liability valuations and a strong equity market that **benefited assets**. This trend continued in January, but reversed in February.

In Europe, variations in funding ratios were mainly driven by interest rates until the end of January, following a reverse pattern in the long-term Euro rate, with the additional help of positive equity performance.

In the UK, funding ratios were **stable** from the end of October to end of January, with February being negative due to lower yields. The full impact from current equity market movements has yet to be seen in March.

Pension Funding ratios

| | 31/12/2020 | 31/12/2021 | 31/12/2022 | 31/12/2023 | 31/03/2024 | 30/06/2024 | 30/09/2024 | 31/10/2024 | 30/11/2024 | 31/12/2024 | 31/01/2025 | 28/02/2025 |
|--------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Netherlands | 100.2% | 114.3% | 115.8% | 114.6% | 116.7% | 120.4% | 119.4% | 117.3% | 115.9% | 117.3% | 119.1% | |
| UK | 95.5% | 107.7% | 136.5% | 142.8% | 146.5% | 149.4% | 148.4% | 126.0%* | 125.7%* | 125.7%* | 127.0 %* | 126.1%* |
| US | 87.9% | 95.5% | 98.2% | 97.8% | 100.2% | 100.9% | 100.9% | 101.2% | 102.5% | 102.5% | 103.5% | 102.6% |

Sources: - UK data: Purple Book, PPF S179 funded status. - Netherlands data: Dnb - US data: Aon Pension Risk Tracker

Overall, the funding situations across all regions is **still very positive**. Nevertheless, current geopolitical instabilities lead to higher risks not only on equities, but also on interest rates and inflation. Pension funds should therefore make sure that their hedging policies concerning the latter two are **managed carefully** in accordance with the current environment and their risk appetite.

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WATCH THE REPLAY

The Amundi Pension Fund Club 2025

Pension strategies 2025: adapting to geopolitical volatility while focusing on return engines

Our 2025 online pension fund event took place on March 13 2025.

Vincent Mortier, *Amundi Group CIO*, and **Anna Rosenberg**, *Head of Geopolitics at the Amundi Investment Institute*, explored the risks and opportunities for pension funds in 2025 in the context of the current market volatility and uncertainty.

This was followed by a focus on two asset classes that can provide alternative sources of future growth in this ever-changing environment: real assets and Asian emerging markets.

Prof. Amin Rajan, *CEO of CREATE Research*, took a retrospective look at what has been driving and constraining pension allocations to these two asset classes, before **Peter Derendinger**, *Vice-Chairman & CEO, Amundi Alpha Associates*, and **Rajiv Nihalani**, *Senior Emerging Markets Investment Specialist*, dug into the main opportunities.

The Pension Fund Club

Pension Strategies 2025: adapting to geopolitical volatility while focusing on return engines

March 13th, 2025

Watch the Replay

2025 Outlook Main and alternative scenarios

| | PROBABILITY 70% | PROBABILITY 20% | PROBABILITY 10% |
|--|--|--|--|
| MAIN SCENARIO Resilient multi-speed growth | DOWNSIDE SCENARIO Renewed stagflationary pressure | UPSIDE SCENARIO More disinflation with productivity gains | |
| GEOPOLITICS | <ul style="list-style-type: none"> Rising protectionism. Re-routing of global supply chains. Ukraine-Russia: ongoing fighting. Middle East: talks and conflicts likely. China-US: decline in relations. US-Europe: relations under pressure. | <ul style="list-style-type: none"> Autarchical new alliances challenging advanced economy democracies: worrying divergences among advanced countries. Countries forced to choose between US and China. Global trade begins to decline. | <ul style="list-style-type: none"> Geopolitical risk subsides. Shifting power dynamic reshapes global trade, fostering balanced growth and prosperity. |
| INFLATION & POLICY MIX | <ul style="list-style-type: none"> Disinflation trend still intact. DM CBs to reach neutral rates in 2025. Most EM CBs at peak rates. Divergent fiscal policies: US under scrutiny; EU consolidating; China expansionary. | <ul style="list-style-type: none"> Trade protectionism weakens growth outlook. Central banks' response also constrained. Elevated fiscal debt keeps the cost of debt high and constrains policy space. | <ul style="list-style-type: none"> Stabilisation of inflation around central banks' targets (and inflation expectations remain anchored). |
| GROWTH PATH | <ul style="list-style-type: none"> Back to potential growth. Resilient multi-speed growth: subdued recovery in Europe, mild US deceleration. Growth gap still favours EM. India's growth potential revised up. | <ul style="list-style-type: none"> Lower output and sharp reduction of migration into advanced economies lowers labour supply and growth. Economic imbalances persist, further lowering potential growth (China, EU,...). | <ul style="list-style-type: none"> Growth enhancing reforms lifting mediumterm growth potential. Industrial / trade policies boosting investment and activity. |
| CLIMATE CHANGE | <ul style="list-style-type: none"> Climate change hampers growth and exacerbates stagflationary trends. Chinese dominance in critical minerals. | <ul style="list-style-type: none"> Further policy delays imply more adverse climate events, hampering economic dynamism. | <ul style="list-style-type: none"> From zero to hero: geoengineering, globally coordinated policies. |

RISKS TO MAIN SCENARIO

| | LOW | PROBABILITY | HIGH | | |
|----------------------|-----|--|--|--|---|
| | | 10% | 15% | 15% | 20% |
| | | Central banks quantitative tightening combined with structural shift in US Treasury buyers | Geopolitical crisis with global spill-overs | Market volatility rises sharply to reflect higher geo-economic uncertainty | Reacceleration of DM inflation, due to trade/ geopolitical tensions |
| MARKET IMPACT | | for cash and gold | for DM govies, cash, gold, USD, volatility, defensive assets and oil | for cash and gold | for TIPS, gold, commodity FX and real assets |
| Negative | | for govies and expensive equities | for credit, equities and EM | for risk assets | for bonds, equities, DM FX and EM assets |

Source: Amundi Investment Institute as of 20 February 2025.

DM: developed markets. EM: emerging markets. CB: central banks. USD: US dollar. TIPS: Treasury inflation-protected securities. FX: foreign exchange markets.

Cross Asset Investment Strategy Amundi asset class views

In focus this month



- **Credit attractive in search for income:** corporate fundamentals are robust, with companies enhancing their credit profiles. Supportive technical conditions, including higher yields attracting income-seeking investors and limited net supply, bolster demand.

Equity and global factors

| REGIONS | Change vs M-1 | -- | - | = | + | ++ | GLOBAL FACTORS | Change vs M-1 | -- | - | = | + | ++ |
|----------------|---------------|----|---|---|---|----|----------------|---------------|----|---|---|---|----|
| US | | | | ● | | | Growth | | | ● | | | |
| Europe | | | | | ● | | Value | | | | | ● | |
| Japan | ▼ | | | | ● | | Small caps | | | | | ● | |
| EM | | | | ● | | | Quality | | | | | ● | |
| China | | | | ● | | | Low Volatility | | | | ● | | |
| EM ex China | | | | ● | | | Momentum | | | | ● | | |
| India | ▲ | | | | ● | | High Dividend | | | | ● | | |
| Overall | | | | | ● | | | | | | | | |

Fixed income & FX

| DURATION | Change vs M-1 | -- | - | = | + | ++ | CREDIT | Change vs M-1 | -- | - | = | + | ++ |
|----------------|---------------|----|---|---|---|----|----------------|---------------|----|---|---|---|----|
| US | ▼ | | | ● | | | US IG | | | | ● | | |
| EU | | | | | ● | | US HY | | | ● | | | |
| UK | | | | | ● | | EU IG | | | | | ● | |
| Japan | | | ● | | | | EU HY | | | | ● | | |
| Overall | | | | | ● | | Overall | | | | | ● | |
| EM BONDS | Change vs M-1 | -- | - | = | + | ++ | FX | Change vs M-1 | -- | - | = | + | ++ |
| China govt. | | | | ● | | | USD | | | | | ● | |
| India govt. | | | | | ● | | EUR | | | ● | | | |
| EM HC | | | | | ● | | GBP | ▲ | | | | ● | |
| EM LC | | | | ● | | | JPY | | | | | ● | |
| EM corp. | | | | | ● | | CNY | | | ● | | | |

Source: Summary of views expressed at the most recent global investment committee held 19 February 2025, with US duration views updated as of 3 March 2025. Views relative to a EUR-based investor. Views range from double minus to double positive, = refers to a neutral stance. This material represents an assessment of the market at a specific time and is not intended to be a forecast of future events or a guarantee of future results. This information should not be relied upon by the reader as research, investment advice or a recommendation regarding any fund or any security in particular. This information is strictly for illustrative and educational purposes and is subject to change. This information does not represent the actual current, past or future asset allocation or portfolio of any Amundi product. FX table shows absolute FX views of the Global Investment Committee.

▼ Downgrade vs previous month

▲ Upgraded vs previous month

To go further: The Amundi Research Center



Amundi Investment Institute

In an increasing complex and changing world, investors need to better understand their environment and the evolution of investment practices in order to define their asset allocation and help construct their portfolios. This environment spans across economic, financial, geopolitical, societal and environmental dimensions. To help meet this need, Amundi has created the Amundi Investment Institute. This independent research platform brings together Amundi's research, market strategy, investment themes and asset allocation advisory activities under one umbrella; **the Amundi Investment Institute**. Its aim is to produce and disseminate research and Thought Leadership publications which anticipate and innovate for the benefit of investment teams and clients alike.

To find out more, please visit: research-center.amundi.com

ESG and Net zero

ESG Thema
#19 January 2025

Measuring Scope 3 Emissions: Implications & challenges for investors

Using Factor investing to integrate sustainability objectives into a "3D" portfolio

Artificial intelligence for sustainable finance: why it may help

2025 Responsible Investment Views

Responsible Investment Views 2025

Thematic Papers

From sluggish to strong: Germany poised to support Europe's growth

Tariffs and European news fuel volatility

Alternative & Real Assets Hedge fund investor barometer 2025

Capital Market Assumptions 2025

Seeking potential in a pivoting world

IMPORTANT INFORMATION

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