

# Old Continent, New Growth

Pension Reform as an Economic  
Engine for Europe

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# Introduction

As European policymakers grapple with the dual challenges of pension shortfalls and productivity lags, some have suggested linking the two. In October 2025, former Italian prime minister Enrico Letta called for the integration of pension funds and investment accounts to create a single pool of European savings available for European investment. The idea has also been floated by the European Parliament's Research Service and the European Commissioner for the Savings and Investment Union, among others.

It is difficult to build political consensus around fundamental reforms to the pension system. But we believe that significant progress can be achieved without major structural redesign—by instead reforming the financial architecture of pensions to be more reliant on funded schemes. While insufficient to address the full depth and breadth of Europe's pension crisis, such reforms would deliver tangible means of easing future fiscal burdens for European governments and taxpayers.

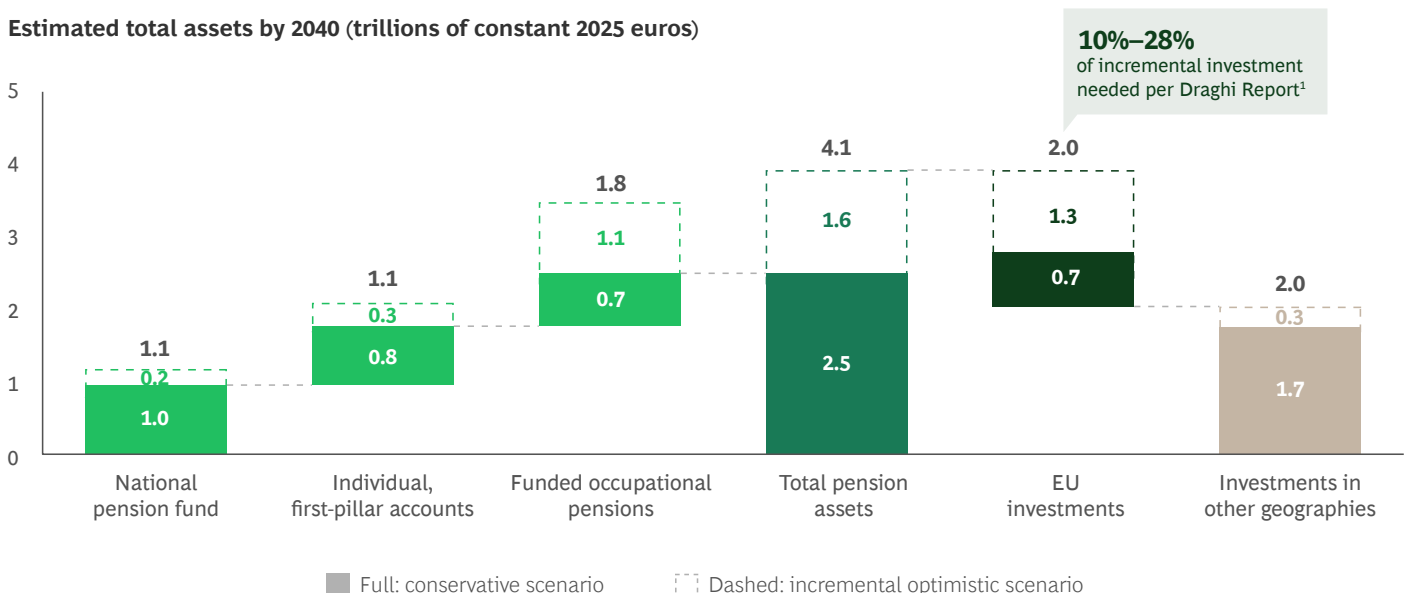
At the same time, by expanding funded components in the pension system, these reforms would have the welcome effect of directing capital toward productive investments. In so doing, they can fuel growth at a time when Europe needs it most: we estimate that by 2040, total capital accumulation could lead to €2.5 trillion to €4.1 trillion in pension assets, with €0.7 trillion to €2 trillion likely allocated to EU-based investments, depending on the scenario. (All euro figures are in constant 2025 euros.) This would amount to up to 28% of the combined share of incremental investment called for by the Draghi Report for the four largest EU economies: Germany, France, Italy, and Spain. **(See Exhibit 1.)<sup>1</sup>**

Over time, reliance on well-invested pension funds could trigger a virtuous cycle of greater capital inflows for European businesses to innovate and grow—leading to economic expansion and a stronger fiscal position for European governments to honor the promise of equitable, adequate, and sustainable retirement entitlements.

## EXHIBIT 1

### Reforms Could Result in Up to About €2 Trillion in Investments Across Europe by 2040

Estimated total assets by 2040 (trillions of constant 2025 euros)



**Sources:** Organisation for Economic Co-operation and Development; BCG analysis.

**Note:** Total accumulated assets by reform lever reflect only the subset of countries for which the reform is deemed to be fiscally viable.

<sup>1</sup>Based on the estimated share of incremental investment called for by the Draghi Report for the four countries of focus (Germany, France, Italy, and Spain) in proportion to their share of EU GDP.

1. The 2024 Draghi Report called for incremental investment across Europe of €800 billion per year or €12 trillion over the next 15 years, of which €7.2 trillion is estimated to correspond to these four countries in proportion to their share of GDP.





# The Art of the Feasible

## Modeling Reform

On the one hand, European countries already spend more than one-quarter of their public budgets on pensions, and the prospects are not encouraging: by 2070, Germany, France, Italy, and Spain will have fewer than two active workers per retiree, down from nearly three at present. Inaction is economically unsustainable. (To read more about the global pension crisis, see [Pension Systems Are Cracking—Here's How to Fix Them](#).)

On the other hand, typical proposals to stabilize the system's finances—raising contributions or slashing benefits by, for example, raising the retirement age—are politically fraught.

Can strategies somewhere in between be both feasible and sufficiently impactful?

To explore this space, we modeled the fiscal viability and potential capital accumulation for three concrete reform levers that cover the first and second pillars of European pension systems ([See “The Three Pillars of Pension Systems.”](#)) For the first pillar (pay-as-you-go, government-administered pensions), we consider the creation of national pension funds and individually funded accounts. For the second pillar (occupational pensions), we focus on expanding coverage and converting currently unfunded schemes.

At a high level, these reforms are aimed at expanding the funded components of the pension system. To appreciate the potential of that vision, policymakers need not look that far: countries in Northern Europe boast total pension funds in excess of 100% of their domestic GDP. ([See Exhibit 2.](#))

# The Three Pillars of Pension Systems



Most pension systems are structured around three pillars:

- The first, public pillar is administered by governments; often, its stated end is to ensure a minimum adequate retirement income for all elderly citizens.
- The second pillar is usually offered by employers and is meant to expand retirement income for formally employed workers.
- Finally, the third pillar allows individuals to set aside additional savings specifically for retirement.

In the US, for example, the three pillars roughly correspond to Social Security benefits, employer-sponsored 401(k) plans, and IRAs, respectively.

The three-pillar framework for understanding pension systems has limitations because of the many and subtle variations between countries. Still, there are recurring (though not universal) differences between the three pillars that are helpful to keep in mind, particularly along three core dimensions: who pays, how much retirees get paid, and funding structure.

**Who Pays.** First-pillar pensions are typically paid by active workers. Second-pillar pensions are usually paid by employers as well as employees. Third-pillar pensions, by contrast, are paid by the individual as the sole contributor to a personal retirement savings account.

**How Much Retirees Get Paid.** There are three basic ways to calculate how much retirement income an individual may receive. On the defined benefit (DB) model, retirees are guaranteed a certain amount based on how much they earned as active workers. (Often, the focus is on the highest salaries a worker drew for a set number of years.)

By contrast, the defined contribution (DC) model is solely dependent on how much a person contributes to a pension scheme. Third-pillar pensions are always DC by design; second-pillar pensions are typically, though not always, DC as well. First-pillar pensions, however, have historically been designed around a DB model. This often has the implication that an individual's first-pillar pension entitlements are insensitive to their life expectancy (that is, retirement income doesn't change even if the number of years in retirement grows without a corresponding increase in total contributions to the system).

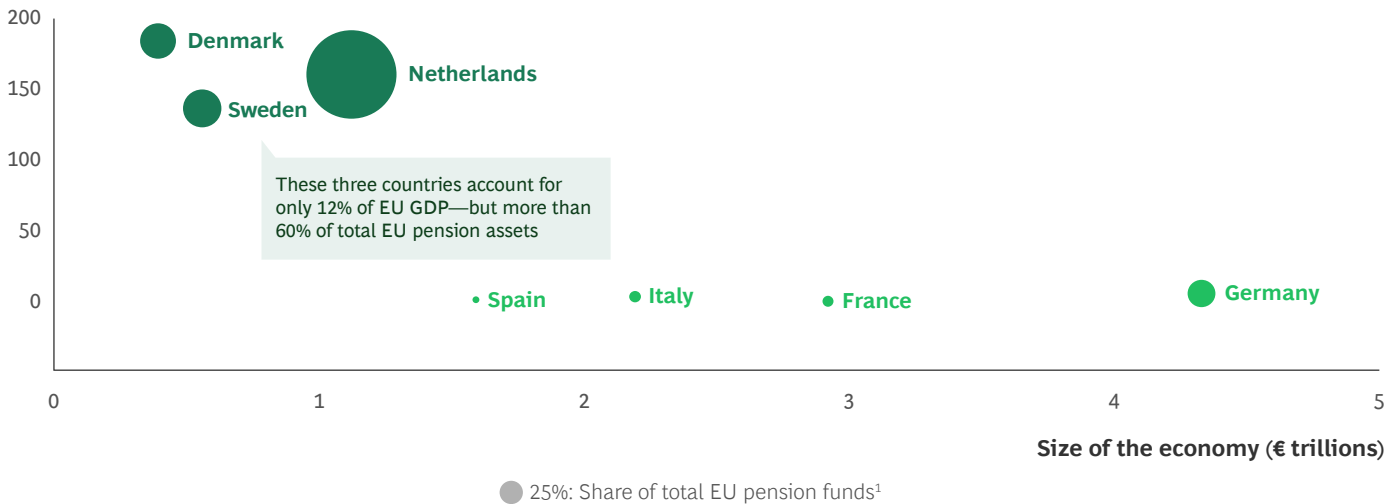
**Funding Structure.** Funded pension schemes are those wherein pension liabilities are backed by actual assets set aside for that purpose. In unfunded schemes, by contrast, entitlements show up as liabilities on a "balance sheet"—the government's in the case of first-pillar pensions or an employer's in the case of second-pillar, occupational pensions. (Third-pillar pensions are always funded by design.)

Unfunded first-pillar pensions tend to have a pay-as-you-go (PAYG) structure in which active workers' contributions are used to pay out pension liabilities. Because those liabilities tend to be estimated with a DB model, first-pillar systems are especially vulnerable to changes in the ratio between active worker contributions and payment obligations to retirees. Policymakers have tried to address this issue through "notionally defined contribution" (NDC) models to calculate pension entitlements. NDC models, such as those introduced in Sweden and Italy, tie total retirement benefits more closely to an individual's contributions during active working years by simulating individual accounts, as in DC models. First-pillar systems with NDC are still unfunded, PAYG systems, as the accounts in question are merely "notional" (that is, used for purposes of entitlement calculations).

## EXHIBIT 2

# The Netherlands, Sweden, and Denmark Have Outsize Pension Assets Across All Pillars

Size of existing pension funds (all pillars, % of domestic GDP)



**Sources:** European Central Bank; Deutsche Rentenversicherung; Finnish Centre for Pensions; French Ministry of Economy & Finance; INVERCO; COVIP; Organisation for Economic Co-operation and Development; L'Agirc-Arrco April 2025 Report; BCG analysis.

**Note:** Data as of 2024.

<sup>1</sup>Total European Union pension funds estimated at ~€5.1 trillion: ~€3.6 trillion from Euro area countries, ~€650 billion from Sweden, and ~€850 billion from Denmark. Estimate does not include Bulgaria, Czech Republic, Hungary, Poland, or Romania.

A detailed description of our approach is included in a methodological appendix. (See “Detailed Methodology.”) But four critical assumptions are worth highlighting, as they underpin the analyses that follow:

- **Fiscal Constraints.** Pension reform should result in healthier public finances in the long run. But change often requires higher fiscal cost in the near term. The impact of reform levers on public debt is therefore a core constraint. We account for this by quantifying the amount of incremental debt required for any given reform item—and the impact of rising indebtedness on interest payments over time. In other words, we estimate how sensitive sovereign bond yields are to rising debt-to-GDP ratios in each country.
- **Returns on Capital.** For all types of pension funds, estimates of capital accumulation over time are largely driven by the compounding effect of return rates. Throughout, we consider two scenarios: a conservative one averaging 4% real returns per year and an optimistic one at 6%. This range approximates the spread in return rates for numerous global pension funds over the last ten years. (See Exhibit 3.)

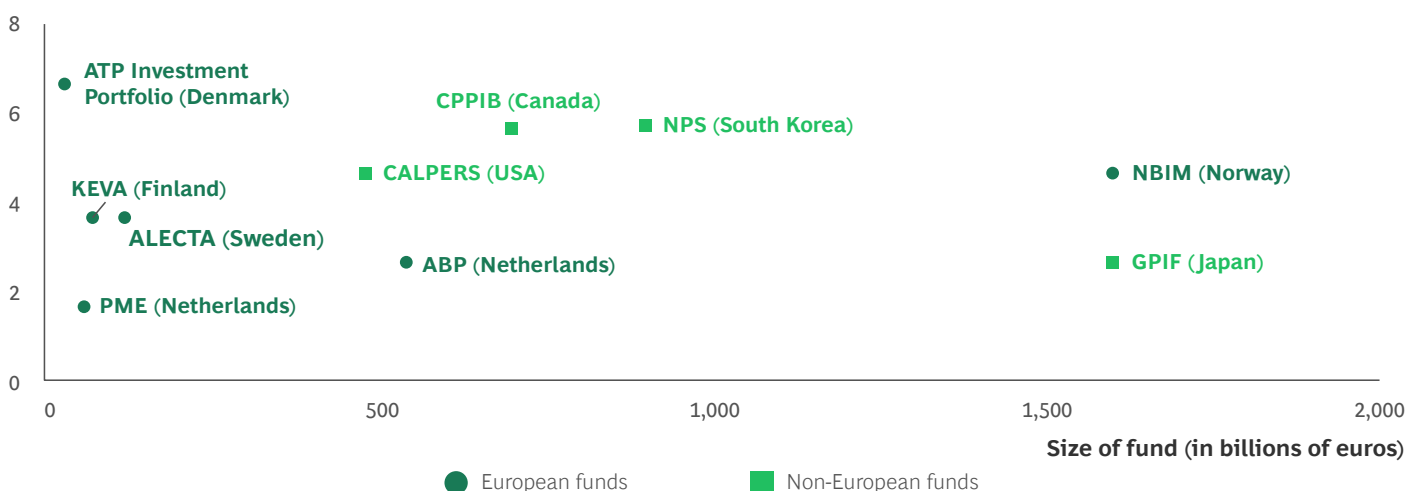
- **Pace of Transition.** For individually funded, first-pillar accounts and expanded coverage of funded occupational pensions, our scenarios also differ in the duration of the transition period. The optimistic scenario assumes a 15-year rollout process, in line with Sweden’s experience after its reforms in the late 1990s. The conservative scenario assumes a 30-year effort, recognizing that change may involve testing different types of incentives with variable uptake. A longer rollout spreads out the costs of transition—but also delays the realization of each reform’s benefits.
- **Asset Allocation.** The impact of pension funds on European investment depends on future, dynamic asset allocation. Our conservative and optimistic scenarios assume that 30% and 50% of total fund assets, respectively, would be invested in Europe. This range reflects the observed “home market bias” of various existing European pension funds—one resulting from autonomous, not mandated, investment decisions. (See Exhibit 4.)

In the following chapters, we explain the rationale for each of the proposed reforms to the financial structure of pensions systems in Germany, France, Italy, and Spain; how these reforms could be designed; their feasibility in each country; and the implementation tradeoffs involved.

### EXHIBIT 3

## Global Investment Funds Exhibit Variations in Returns Regardless of Fund Size

10-year real returns (%)



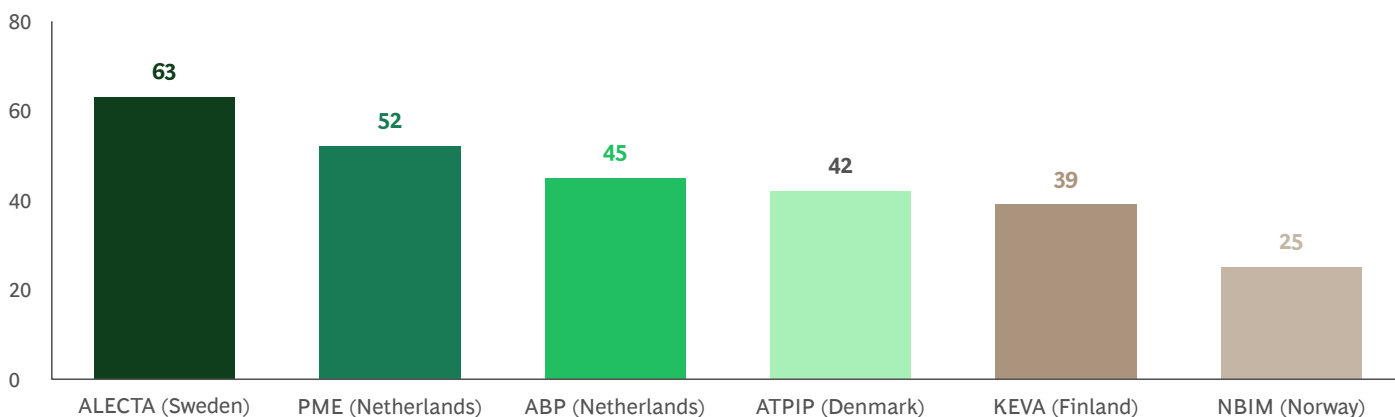
Sources: 2025 and 2024 annual fund reports; World Bank; BCG analysis.

Note: Real returns are calculated using the World Bank's estimate of average inflation of the last ten years in high-income countries (2.35%).

### EXHIBIT 4

## European Pension Funds Exhibit a Significant “Home Market Bias” in Their Investment Allocations

Share of assets invested in Europe (% of total fund assets)



Sources: 2025 and 2024 annual reports; BCG analysis.





# National Pension Funds

## Governments Harness the Market

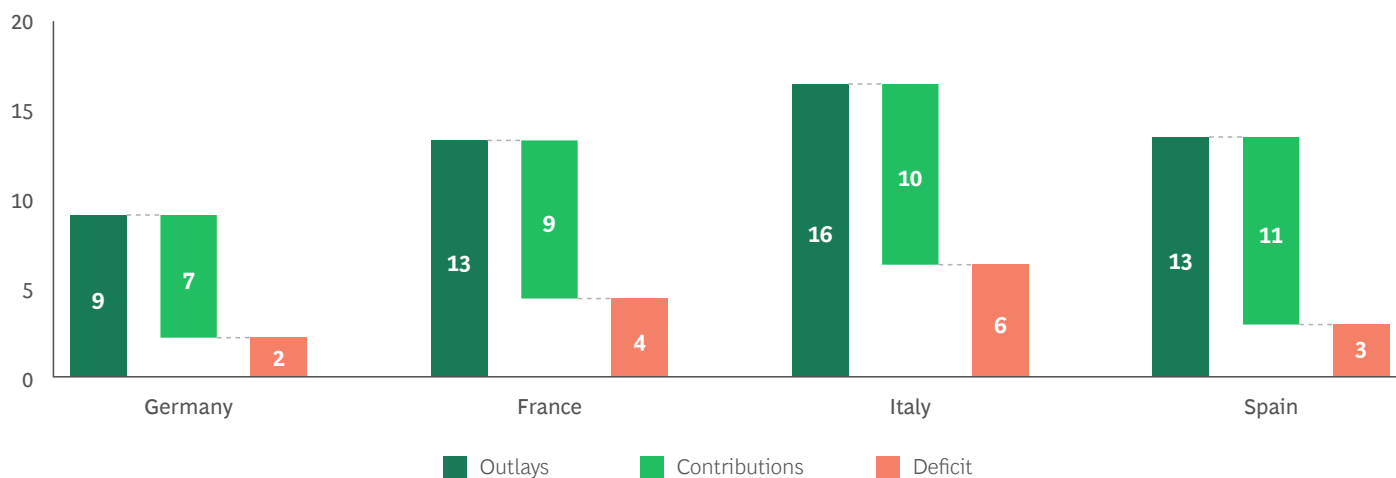
The largest EU economies are overwhelmingly reliant on the first pillar of their pension systems, which is administered by governments on a pay-as-you-go (PAYG) basis. Because contributions from active workers' payroll taxes are used to make payments to retirees, this system is particularly vulnerable to demographic shifts. In Germany, France, Italy, and Spain, first-pillar contributions already fall short of outlays by 2% to 6% of GDP. (See Exhibit 5.)

One way to alleviate the future burden of first-pillar pension liabilities is to set up debt-financed, national pension funds to autonomously manage long-term investments. Where this is fiscally viable, returns are likely to pay for the cost of additional debt—and to help cover a sizable portion of future pension outlays.

### EXHIBIT 5

## PAYG Pensions in the Four Largest EU Economies Have Annual Deficits of 2% to 6% of GDP

First-pillar pensions (% of GDP, 2024)



**Sources:** Eurostat; International Monetary Fund; Organisation for Economic Co-operation and Development; Cour des Comptes (France); Deutsche Rentenversicherung (Germany); INPS (Italy); Ministerio de ISSM (Spain); BCG analysis.

**Note:** Analysis based on 2024 official governmental reports and 2024 GDP figures as reported by EuroStat. In these countries, first-pillar pension contributions are often not disaggregated from other social safety net programs. When unavailable from official sources, pension-specific contributions are assumed to be proportional to total social security contributions in the country.



## Lessons from New Zealand and Canada

National pension funds have existed in countries such as Japan, South Korea, and Denmark for decades. But New Zealand’s Superannuation Fund offers a particularly instructive example.

Unlike other countries, New Zealand built its fund through direct budget allocations from the central government rather than contributions from active workers. From 2001 through 2009, the New Zealand government allocated on average approximately 1% of GDP to the fund; after a pause, allocations resumed in 2017 at a rate of about 0.4% of GDP per year. The fund now manages USD 48 billion in assets, equivalent to 20% of New Zealand’s GDP. Fund withdrawals are set to begin in 2028 at limited levels, which will help offset part of the rising cost of first-pillar pensions. (See Exhibit 6.)

Canada’s two largest pension funds, the Quebec Deposit and Investment Fund (CDPQ) and the Canada Pension Plan Investment Board (CPPIB), while technically associated with the second pillar (because they are funded through employer contributions), are also instructive

because they are both public entities. These funds are accountable to the public yet strictly autonomous as asset managers, which has enabled them to issue debt independently of the government—often at lower rates. The CDPQ has a higher long-term debt rating than the Government of Quebec (AAA vs. AA-), and the CPPIB has leveraged its assets to issue more than \$70 billion worth of bonds since 2015 with a AAA credit rating. This suggests that once national pension funds reach critical mass and prove their ability to deliver strong returns, they could become less reliant on ongoing debt financing from the central government to continue growing.

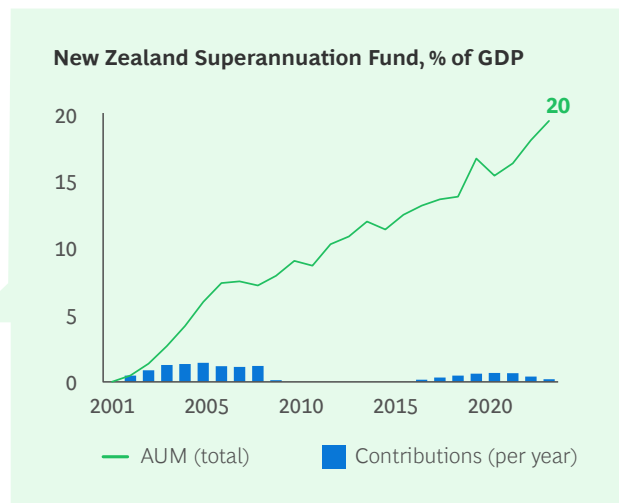
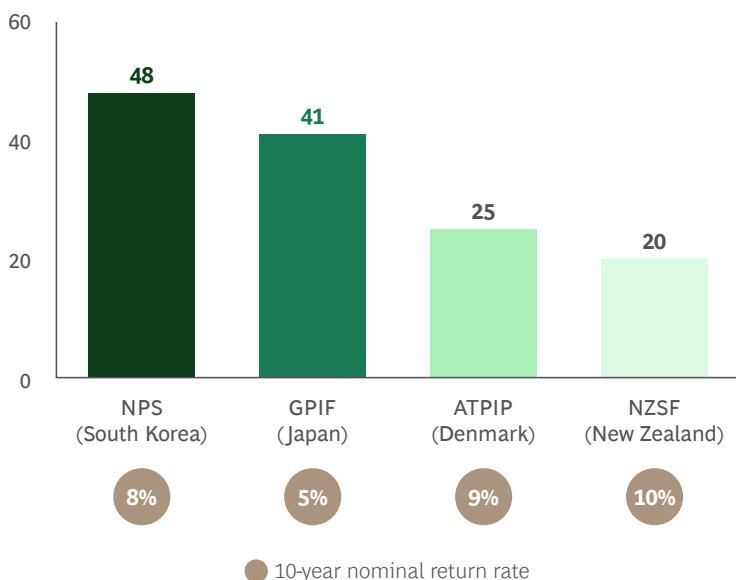
## Feasibility in Western Europe

Because of the unique fiscal environments in our four countries of focus, establishing a national fund is not equally feasible in each of them. On one end of the spectrum, Germany’s debt-to-GDP ratio stands at a modest 62%; on the other, Italy’s has reached 138% as of 2025.<sup>2</sup> Yield spreads speak to the market’s perceived difference in the long-term fiscal outlook for these countries: German ten-year bond yields averaged 2.6% in 2025, whereas French ten-year bonds averaged 3.4%.

### EXHIBIT 6

## Well-Governed National Pension Funds Can Deliver Strong Returns to Cover Future Pension Outlays

Fund size (% of national GDP, 2025)



Sources: 2024 and 2025 annual fund reports; Eurostat; International Monetary Fund; BCG analysis.

Note: All funds are national funds created for the purpose of supporting national first-pillar pensions.

2. The Maastricht Criterion requiring Eurozone members to maintain public debt below 60% could be raised as a potential limitation. However, lack of enforcement has rendered the rule ineffective as a constraint: Italy hasn’t met it since joining the Eurozone in 1992, nor have Germany, France, or Spain in the last 15 years. The relevant “judge” of these countries’ ability to take on more debt is rather the market, as reflected in yield spreads.

Already-high indebtedness is admittedly a matter of concern in these countries. But that has not stopped most of them from committing to even higher levels of spending for pressing national priorities—most recently defense and in previous years the energy transition. It is possible that broad political dialogue on the importance of tackling the pension crisis could similarly result in the political will to act, particularly when the reforms in question can deliver net positive fiscal impact in the long run.

Our analysis assumes that only the least indebted European countries could follow New Zealand’s example of approximately 1% of GDP in annual allocations to a national pension fund. Those with the most debt could allocate only as much as would keep debt-to-GDP ratios constant. For example, in Italy, the allocation would be roughly 0.1% of GDP per year given the country’s high level of debt and comparatively low growth projections. Even with such capacity-adjusted allocations, our modeling suggests that launching a national public pension fund is viable only for Germany and, to a lesser degree, Spain. In France and Italy, where a weaker fiscal outlook already makes debt substantially more expensive, the risk is too high that investment returns might fail to cover the cost of incremental debt to capitalize their national pension funds. Indeed, in our conservative scenario, the net present value of debt-financed investments would be perilously low, possibly even negative, in these two countries, making this reform lever inadvisable for them. **(See Exhibit 7.)**

For Germany and Spain, the potential upside from setting up national pension funds is significant: They could jointly amass close to €1.1 trillion in assets by 2040, equivalent to 15% to 17% of GDP for Germany and 10% to 11% of GDP for Spain. Fund returns could cover a sizable share of first-pillar pension outlays starting as early as 2045, between 6% and 12% in Germany and 4% and 7% in Spain, depending on average returns. **(See Exhibit 8.)**

For Germany and Spain, the creation of a national pension fund involves the willingness to bear higher costs while seeding the fund in exchange for an improved long-term fiscal outlook. As a result, companies and citizens can expect a lesser tax burden in the future than they likely would have had.

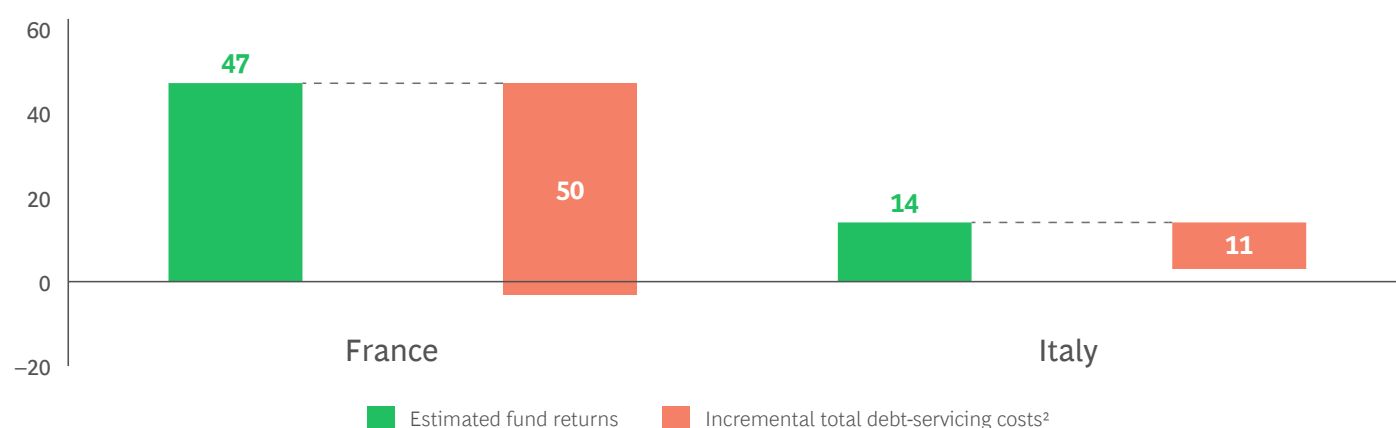
The soundness of this strategy ultimately rests on the quality of fund administration. Successful public funds—including those in New Zealand and Canada—are typically defined by public accountability, competitive talent policies, and clarity of mandate. The latter point is vital: it involves empowering fund managers to make sound, autonomous investment decisions without, for example, mandated domestic investment allocations.

**(See “National Pension Fund Governance.”)**

## EXHIBIT 7

# Debt-Financed National Pension Funds Are Likely Not Feasible in France and Italy Owing to Fiscal Constraints

Cumulative figures by 2040 in conservative scenario (billions of constant 2025 euros)<sup>1</sup>



**Sources:** Organisation for Economic Co-operation and Development; FRED – St. Louis Federal Reserve Bank; BCG analysis.

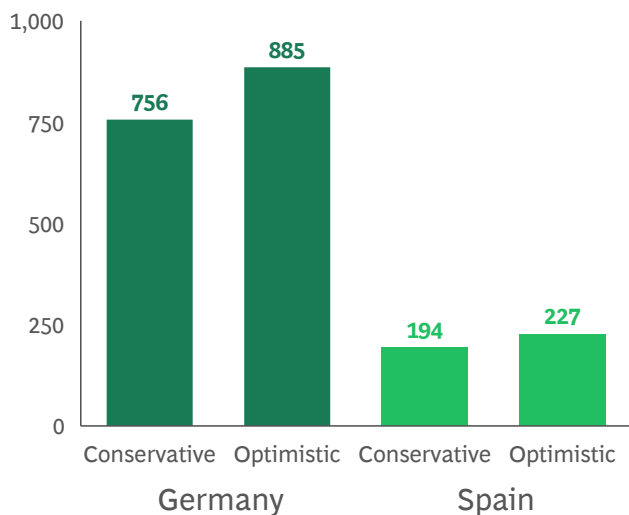
<sup>1</sup>We consider the conservative scenario for national pension fund viability testing.

<sup>2</sup>Includes additional interest payments on legacy debt owing to higher increased yields.

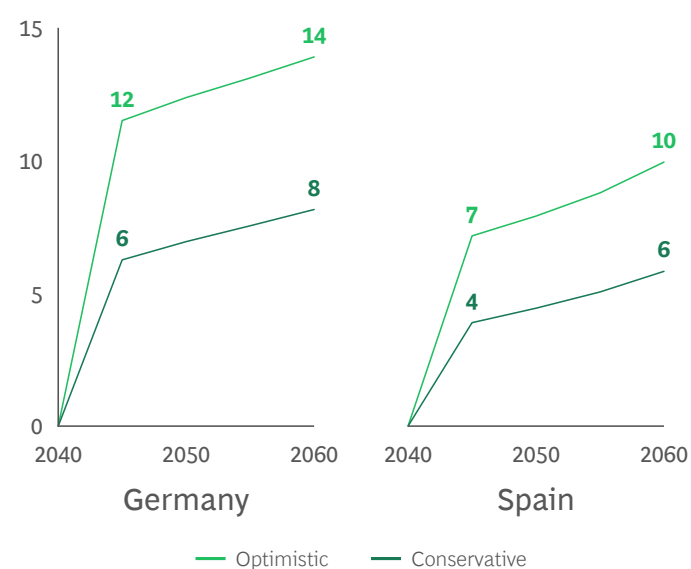
## EXHIBIT 8

# National Pension Funds Could Cover a Sizable Share of Future Pensions in Germany and Spain

Estimated total size of national pension funds by scenario in 2040 (billions of constant 2025 euros)



Estimated share of future first-pillar pension outlays covered by national pension fund returns (% of GDP)<sup>1</sup>



Sources: Organisation for Economic Co-operation and Development; BCG analysis.

<sup>1</sup>Assumes that from 2045 onwards 100% of national pension fund returns is used to cover pension outlays and that central government allocations to the fund continue at a constant rate (i.e., same share of GDP).



# National Pension Fund Governance

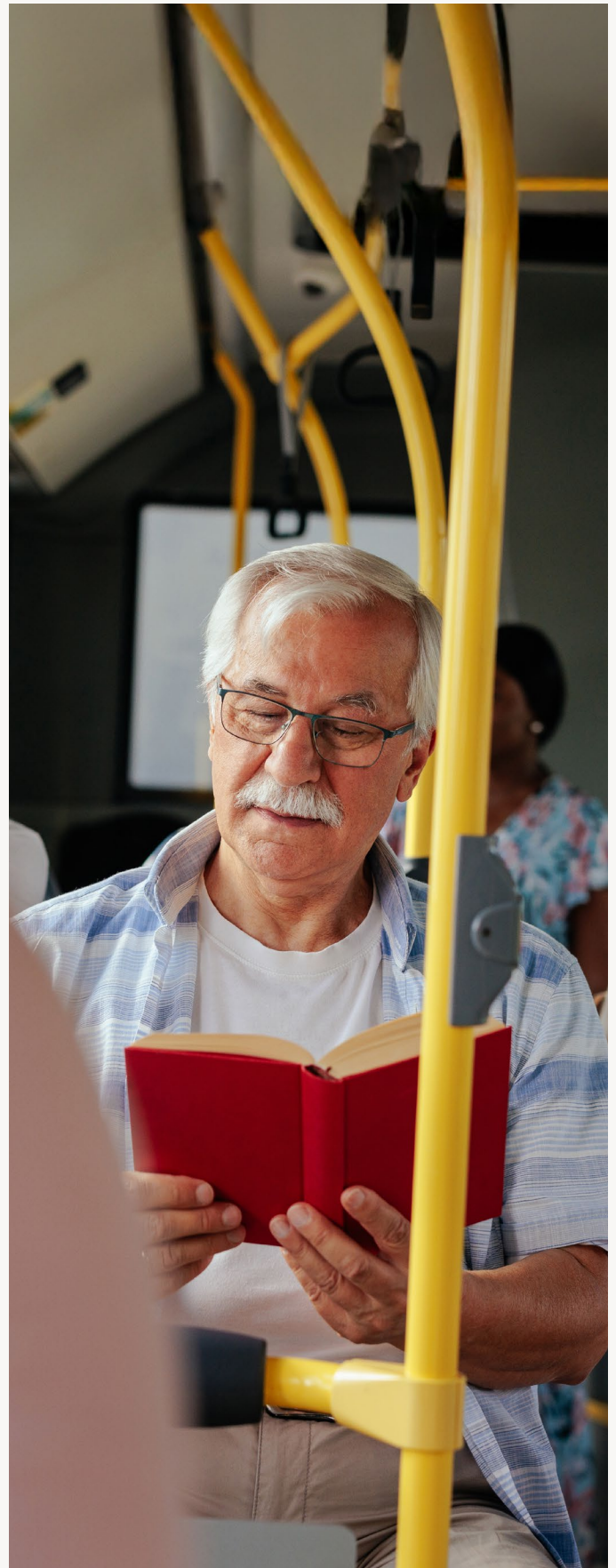
Successful international experiences argue for the following principles when it comes to designing effective national pension funds.

**Independent, Professional Management.** National pension funds should operate as autonomous entities led by investment professionals under a clear mandate to maximize long-term returns for retirees. For example, New Zealand’s Superannuation Fund is managed by an independent organization that works at “double arm’s-length” from the government, ensuring operational independence in its investment decisions. Canada’s public pension funds, including the CPPIB, are similarly structured as independent asset managers, enabling them to invest free of political interference. Competitive hiring and pay policies are also important to attract top talent and ensure successful results.

**Public Accountability and Transparency.** Autonomous investment decision making must and can coexist with public accountability. This is possible through regular reporting to specialized oversight bodies (for example, legislatures or finance ministries), and communications about investment strategies and performance results that directly engage the wider public.

**Clear Investment Mandate.** The fund’s governing framework should enshrine a prudent investor principle rather than restrictive asset-allocation rules, consistent with long-term fiduciary responsibilities. Fund managers need the latitude to make sound, diversified investments based on risk-return considerations, rather than being constrained by politically motivated quotas.

**Protected Purpose and Withdrawal Rules.** Sound governance requires that the fund’s purpose and use of assets be tightly ring-fenced. Pertinent rules include predefined timelines of fund withdrawals and disallowing withdrawals for general budget relief or short-term needs. For example, both the New Zealand Superannuation Fund and the Australian sovereign Future Fund were launched with explicit provisions barring drawdowns, originally, for at least 19 and 14 years, respectively, allowing assets to grow. Both also restrict asset use to fund public pensions. It is also important to explicitly consider the balance between first-pillar pension sustainability and adequate flexibility for fund managers to respond to changing market conditions, particularly severe market downturns. For example, it may be preferable to set target transfers from the fund to the first-pillar system for five-year periods, as opposed to overly rigid annual goals.





# Individual, First-Pillar Accounts

## Balancing the Burden Across Generations

The PAYG structure of first-pillar pensions guarantees retirees adequate, predictable pensions by passing on the risk of funding them to future generations. To create a more equitable structure across generations, governments could replace a modest portion of today's government-guaranteed retirement income with individually funded investment accounts. Such accounts would carry the risks inherent to any investment—but also the rewards of long-term compounding returns.

### Lessons from Sweden

The individually funded investment account structure is precisely the model that Sweden implemented as part of its pension system overhaul in the late 1990s. The so-called Premium Pension System that emerged diverted 2.5 p.p., or some 13.5% of workers' total payroll contributions

from the first-pillar PAYG scheme into individual investment accounts. Workers were empowered to select their preferred investment vehicles from a series of government-vetted options, similar to 529 accounts in the US, also known as the Qualified Tuition Program. Investment options can be designed with an eye toward balancing market risk exposure for individual savers, as is the case with AP7, the default investment fund for the Swedish Premium Pension.<sup>3</sup>

As a result, future retirees would obtain two types of first-pillar retirement incomes: one still tied to the PAYG scheme, another straight out of their market-exposed individual accounts. Crucially, Sweden was able to reduce the former without a proportional decrease in *total* first-pillar payouts, partly thanks to the compounding returns on the individual investment accounts. An added benefit: future retirees will bear a lighter burden as taxpayers.

3. AP7 mutualizes risk by spreading it across individuals *and* generations. By design, participants under the age of 55 hold 100% of their individual accounts in the AP7 Equity Fund, with gradual conversion to the AP Fixed Income Fund until the latter reaches 67% of total account value by the age of 75.



## Feasibility in Western Europe

The viability of implementing the aforementioned Swedish model depends on two factors: the capacity to take on debt to offset reduced contributions to the first-pillar, PAYG scheme, and the magnitude of fiscal relief from a reduction in government-guaranteed first-pillar income for future retirees. Our estimates suggest that Germany, France, Italy, and Spain all have sufficient fiscal room to take action. This reform would entail 0.1% to 0.3% of GDP in incremental debt-servicing costs per country in 2040 (compared with total debt-servicing costs of about 1% to 4% at present). The net impact is lower still when accounting for reduced government payments to future retirees, the precise magnitude of which can vary in each country.<sup>4</sup>

Assuming these countries, like Sweden, divert 13.5% of payroll contributions to the first pillar toward individually

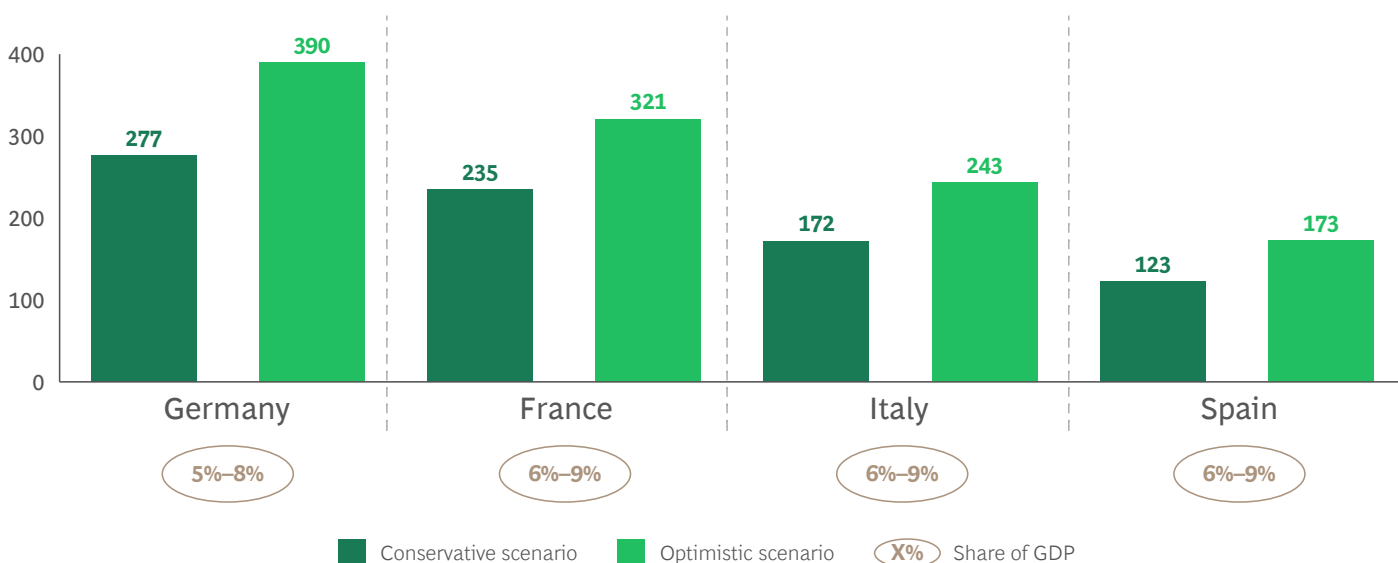
funded accounts, they could collectively accumulate €0.8 trillion to €1.1 trillion within the next 15 years, equivalent to 5% to 9% of GDP by 2040 in each country. (See Exhibit 9.)

The most likely obstacle to this type of reform may be cultural. Individually funded accounts within the first pillar of the pension system require embracing a reduction in government-guaranteed benefits coupled with individually borne risk attributable to market exposure. Persuading the public will be hard—as any adjustment of benefits is bound to be—but may prove possible if the benefits of reform are clearly communicated. First, as noted in the case of Sweden, individual first-pillar accounts can partially offset reductions in government-guaranteed benefits. And second, policymakers can reinforce to future retirees that income isn't the only relevant consideration: if public budgets become more strained, they will likely pay more taxes.

### EXHIBIT 9

## Individual, First-Pillar Accounts Could Reach Up to €1.1 Trillion in Assets by 2040

Estimated assets by 2040 (billions of constant 2025 euros)



Sources: Organisation for Economic Co-operation and Development; BCG analysis.

4. In Italy, for example, reforms dating back to 1995 effectively reduced government-guaranteed benefits by switching from a “defined benefit” to a “notionally defined contribution” model for retirement income calculations. Because of those reforms, Italian retirees will receive approximately 12% less first-pillar pension income relative to lifetime earnings in 2070 than in 2022. Absent the political will to further reduce *total*, first-pillar replacement rates, government-guaranteed benefits could be set at a level that would, on average, be fully offset by the returns on individual, first-pillar accounts.





# Funded Occupational Pensions

## Expanding Access for All

First-pillar, PAYG pensions are directly managed by governments and, by design, cover the vast majority of citizens. By contrast, second-pillar, or occupational, pensions are offered by employers, which are often responsible for at least a portion of contributions.

In France and Italy, where occupational pensions are mandatory, coverage is near-universal—but most schemes are unfunded. Only about 22% and 24% of French and Italian workers, respectively, have individually funded

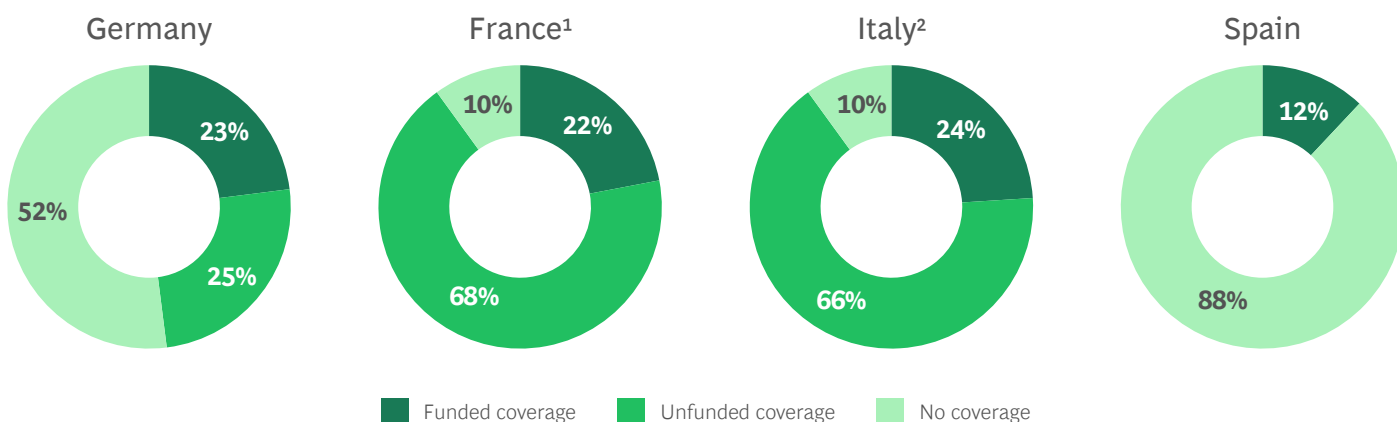
accounts. In Germany and Spain, where occupational pensions are not required by law, coverage reaches only 48% and 12% of workers, respectively—and in Germany, only about half of those covered (23% of all workers) participate in a funded scheme. **(See Exhibit 10.)**

The opportunity for these countries lies not just in expanding second-pillar coverage but also in converting existing unfunded schemes into funded ones.

### EXHIBIT 10

## Less Than a Quarter of German, French, Italian, and Spanish Workers Have Funded Occupational Pensions

Share of labor force by second-pillar (occupational) pension coverage status



**Sources:** aba – German occupational pension association; French Ministry of Economy; FRED – St. Louis Federal Reserve Bank; INVERCO; COVIP; World Bank; BCG analysis.

<sup>1</sup>L'Agirc-Arrco is mandatory for all private-sector employees.

<sup>2</sup>The *Trattamento di Fine Rapporto* (TFR) system is mandatory for all workers in Italy.

# Lessons from the Netherlands and the US

Unlike the four largest EU economies, the Netherlands has built a pension system that relies primarily on its second pillar. Most firms offer occupational pension plans specific to their sectors, often as a result of collective labor agreements. For example, most workers in the metal and technology industries contribute to a common, sectoral retirement savings and investment plan. Through this sector-based model, more than 90% of the workforce is covered by funded occupational schemes that, in aggregate, add up to approximately €1.8 trillion in invested assets. That's nearly 65% more than all pension assets across Germany, France, Italy, and Spain—in an economy that's 10% the size of those four combined.

Similar to the Netherlands, the US 401(k) system makes a clear argument for occupational pensions' potential to boost investment through sheer scale. While coverage is far from universal (only 48% of private-sector workers participate in employer-provided occupational retirement schemes), 401(k) accounts hold more than \$9 trillion in investments.

## A Country-by-Country Reform Agenda

Given national differences in second-pillar system structures, expanding coverage of funded occupational pensions for each of our countries of focus will require a tailored approach.

**Germany and Spain.** Germany has an array of occupational pension schemes that firms can offer to employees, from fully funded pensions to insurance products to unfunded liabilities in company balance sheets. Such models combined cover approximately 48% of the German workforce, but only about half of workers participate in fully funded schemes. Moreover, most funded occupational pensions are heavily regulated, with a strong insurance component to them—with the exception of the *Pensionsfonds* created in the 2000s, which tend to be more heavily invested in equities.

Although *Pensionsfonds* cover just 2% of German workers, there's an opportunity to expand analogous, market-exposed funded schemes. Employers can be encouraged or required to discontinue balance sheet liability schemes in favor of funded alternatives. This will raise the cost of working capital for some businesses—but only for the proportion that comes from workers' pension liabilities.

The design of the Spanish system has the virtue of simplicity: since 2000, firms offering occupational pensions have been required by law to contribute to individual accounts administered by third parties. Still, coverage reaches only 12% of workers. In Spain, the reform agenda revolves around expanding coverage of the existing model, which is already funded by design. In fact, the Spanish government has taken steps in this direction: in 2022, it increased the tax incentives for participation in second-pillar pensions relative to third-pillar, individual retirement accounts. Spain could eventually consider some form of mandatory occupational pension to accelerate coverage expansion.

Admittedly, both Germany and Spain face a common challenge. Because so many workers lack coverage altogether, extending occupational pensions is likely to raise the total cost of employment for many businesses. Companies don't generally reduce nominal wages; as a result, if they are required to make new contributions for previously unenrolled employees, they would likely have to absorb that cost. This argues for a multiyear transition period in which contributions increase slowly over time. It may also require differentiated rollout mechanisms for small businesses and large employers, as the former would be particularly strained by higher employment costs.

**Italy.** In Italy, all employers participate in the *Trattamento di Fine Rapporto* (TFR) system. While primarily designed as severance pay, workers have the option to direct employer contributions to pension accounts. Of all contributions into the TFR system, 55% are unfunded liabilities in company books; 23% are transferred to a government-administered, PAYG pension scheme; and only the remaining 22% are administered by third parties as fully funded pension savings.

Italy has enabled a “pension first” use of TFR since third-party-administered pension accounts became the default option for workers in 2007. But reaching universally funded occupational pensions would involve two further, independent efforts:

- The first is converting unfunded business liabilities into funded accounts. This will likely require regulatory change to phase out unfunded employer liabilities as a vehicle for future TFR accruals, coupled with a phased transfer of existing TFR book liabilities owed by employers to funded accounts administered by third parties. This latter move will, as in the case of Germany, raise the cost of a portion of some businesses' working capital. Workers, by contrast, will be net winners, as TFR book liabilities grow at rates well below market performance.<sup>5</sup>

5. TFR liabilities are adjusted every year at a nominal rate of 1.5% plus three-quarters of inflation, or approximately 3% on average for the last ten years. This is well below the performance of European indices like STOXX 600, which has appreciated at an average nominal rate of nearly 7% over that same period.

- The second, distinct effort involves transitioning the portion of the TFR system administered by the government on a PAYG basis into a fully funded scheme. This would involve forgoing the use of temporary TFR surpluses, which have averaged €2.5 billion per year since 2007, for the general budget, as well as honoring all outstanding TFR liabilities (estimated at €42 billion or approximately 2% of Italian GDP) without relying on future contributions. The combined fiscal effect is considerable but not insurmountable considering that these TFR liabilities will be paid out over a long period of time, possibly decades.

The case for pushing this TFR change is a compelling one, though: the longer the Italian government can use TFR surpluses, the more vulnerable the long-term finances of the system will be. Most importantly, as with TFR liabilities carried in company books, workers will likely gain substantially higher retirement income through third-party-administered, market-exposed accounts.

**France.** In France, private employers participate in a PAYG second-pillar pension scheme administered by *L'Agirc-Arrco* (LAA), which holds €86 billion in reserve funds. Like first-pillar PAYG systems, this mandatory component of the French second pillar is vulnerable to demographic shifts in the workforce. Only 22% of French workers have an additional, funded occupational pension, offered at employers' discretion.

Because current retirees' occupational pensions could no longer be paid out of active workers' contributions, the government would likely have to step in—but at a prohibitive cost given current fiscal conditions in France. Our modeling therefore excludes this reform in France, though policymakers could still explore more piecemeal approaches. For example, it may be possible to replicate for the second pillar something like the individually funded, first-pillar accounts; the proportion of contributions to LAA that can be diverted into a fully funded, non-PAYG scheme would be constrained by the French government's ability to make up the difference during the transition (which could take several decades).

## Calculating the Potential

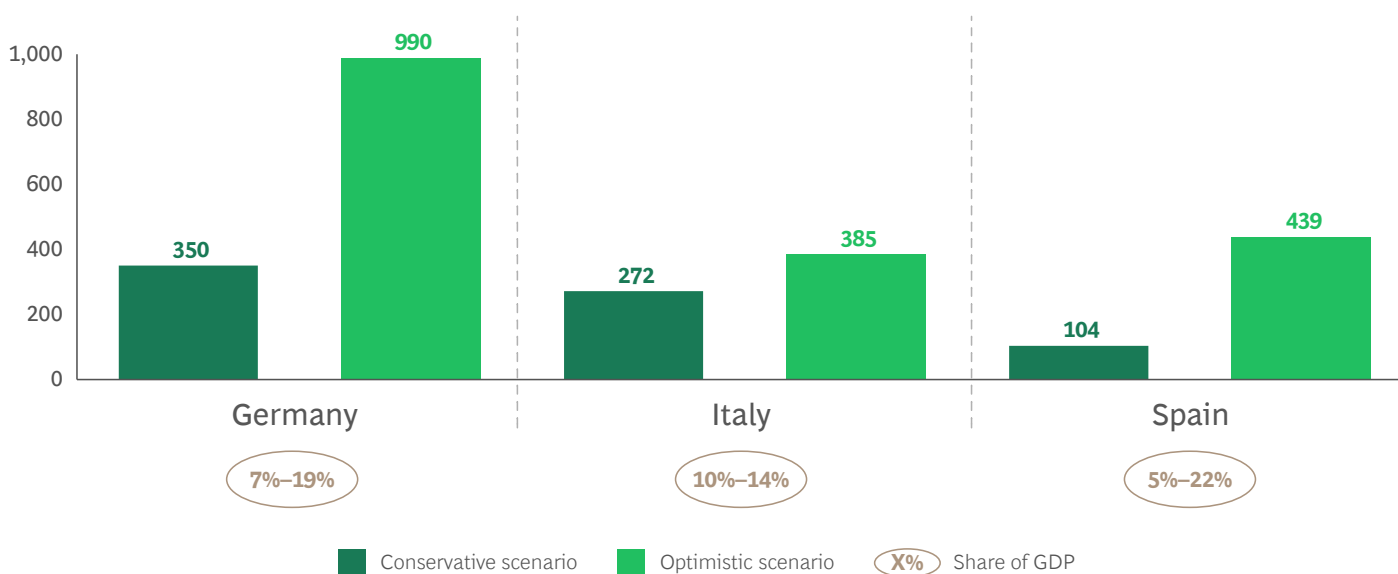
For Germany, Spain, and Italy, achieving universally funded occupational pensions could lead to as much as €1.8 trillion in total second-pillar pension assets by 2040. (See Exhibit 11.)

A stronger occupational pillar in these countries has the additional virtue of making the overall pension system more resilient to future pressures on first-pillar sustainability. Moreover, when citizens can count on robust occupational retirement income, there may be greater social and political room for structural reform to the first pillar, if required.

### EXHIBIT 11

## Funded Occupational Pensions Could Accumulate About €0.7 Trillion to €1.8 Trillion in Assets by 2040

Estimated assets by 2040 (billions of constant 2025 euros)



Sources: Organisation for Economic Co-operation and Development; BCG analysis.





# A Practical Guide to Expanding Funded Pensions

Europe can narrow its pensions gap and increase investment without rewriting its social contract. How? By expanding the funded component of pension systems—prudently, transparently, and with clear fiscal guardrails. Like any other pension reform agenda, our proposed levers will understandably be met with apprehension, but this only underscores the importance of openly acknowledging the costs while clearly communicating the benefits of change.

The steps below translate this report's analysis into an implementation guide that any government can adapt to local conditions.

## National Pension Funds

**Step 1.** The first step for policymakers is to determine the feasibility of setting up a national pension fund in their unique context. This can be done by modeling the projected debt-to-GDP ratio and the maturity composition of debt for various target allocations, as well as the sensitivity of sovereign yields to higher debt levels over time. Such estimates should be updated with market data over time,

particularly the impact of changing yields on the entire stock of debt as it rolls over. Government allocation to the national fund would be defined and adjusted over time based on the preceding calculations.

**Step 2.** Once they've determined feasibility, policymakers would create an autonomous public institution empowered to administer the national fund. Its clear mandate would be to maximize long-term, risk-adjusted returns for retirees. While remaining accountable to the public, this institution must remain apolitical. And to ensure the fund attracts the best investment talent, it will require competitive people and compensation policies.

**Step 3.** Finally, because the ultimate purpose of the fund is to help pay for first-pillar pensions, it is vital that there be clear mechanisms to transfer fund returns back to the public pension system. This will involve decisions on the timing of future fund withdrawals, rules to set and adjust withdrawal amounts in response to fiscal needs and market conditions, and guidance for potential future debt issuance by the fund itself.

## Individual, First-Pillar Accounts

**Step 1.** Policymakers can start by considering the transition period. In our model, the creation of individually funded first-pillar accounts is generally feasible in all four countries we studied. But how exactly it is designed and rolled out has significant fiscal implications. Different transition scenarios will have to be assessed on the basis of the share of payroll contributions diverted to funded accounts, the reduction in government-guaranteed pensions, and the enrollment cadence and transition period for workers into the new system (all workers vs. age cohorts). Ultimately, governments would select the scenario that is optimal given current and future fiscal constraints.

**Step 2.** Next up for policymakers is to design the system. Unlike with national pension funds, governments do not have to directly administer investment on behalf of individual account holders. What they can do is capture the benefits of scale by procuring low-cost third-party investment management services on behalf of workers. Governments can also simplify choices for workers by defining a default portfolio as well as a set of options from which workers can choose.

**Step 3.** Lastly, as we noted before, one of the cultural challenges in rolling out individual investment accounts is the fact that workers would have to become comfortable having a part of their pension exposed to capital markets. To help, governments can invest in the proper communication channels to drive social acceptance for reforms and outline clear withdrawal, taxation, and inheritance guidelines for savers.

## Funded Occupational Pensions

**Step 1.** To start, mechanisms to expand coverage must be put in place. While specific actions will vary from country to country, certain themes are common across second-pillar designs, such as tax or other incentives. Eventually governments may consider mandates if such incentives prove ineffective or insufficient, while remaining attentive to the impact on cost of employment, especially for small businesses.

**Step 2.** Aside from the transition process itself, the administration of these occupational pension savings needs design. Options include the industry-based model (for example, Netherlands), consolidated national administration (Canada), an open market through private managers (US), or a hybrid design. Where they do not exist, clear employer portability, withdrawal, tax treatment, and inheritance rules will have to be established.

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By setting aside asset pools to back up pension liabilities, policymakers can alleviate fiscal pressure in the future while boosting investment in the present. These two challenges—honoring the social contract with Europe’s current and future retirees and reigniting long-term growth—appear to be in tension, but it is possible for Europe to address them in tandem. Although there will be transition challenges and costs, reforming the financial architecture of the pension systems would ultimately benefit governments, business, and future retirees.

# Appendix

## Detailed Methodology

### Macroeconomic Inputs: GDP, Total Wages, and Pension Contribution Base

We rely throughout on OECD GDP forecasts through 2060, in constant 2015 PPP USD. These values are converted into constant 2025 EUR using the European Central Bank's average conversion rate for 2015, OECD PPP conversion factors, and the European Commission's AMECO CPI for the Euro area. Population and wage-share dynamics follow OECD and AMECO series. For levels of public debt, we use debt-to-GDP ratio projections for the next decade from credit rating and governmental agencies, all issued in 2025 and accounting for expected increases in defense spending.

For individually funded, first-pillar accounts and funded occupational pensions, our model requires estimating the contribution base or share of wages on which retirement contributions are paid (given that most countries have caps on pensionable income). To arrive at that estimate, we first project total wages by applying the ten-year average wage share of GDP (from AMECO) to OECD GDP projections. Next, we size the contribution base through the most recently available income tax filings published by each country. Income tax data allows us to approximate the current share of total wages that falls within the pensionable income threshold for the first pillar or the maximum tax incentive for corporate contributions for the second pillar. We assume that the contribution base as a share of total wages in the economy stays constant over time.

### Fiscal Modeling Assumptions: Debt Levels and Indebtedness- Sensitivity of Sovereign Yields

The crux of our fiscal viability test is the cost of debt servicing—that is, the share of the economy spent on interest payments. We used the ten-year, year-to-date September 2025 bond yields as a basis for our analysis. That cost tends to rise (nonlinearly) with levels of indebtedness, so we make country-specific assumptions to quantify it. European Commission research shows that Eurozone countries on average face 4.7 bps *higher* nominal yields (approximately 2.3 bps in real terms) for debt per every 1 percentage point increase in their debt-to-GDP ratios. To capture the variety of fiscal conditions across European countries, we translate this figure into ranges. Our conservative scenario assumes higher yield sensitivity, with European countries falling within the range of 2.5 to 4 real bps, compared with 1 to 2.5 real bps in our optimistic scenario.

Countries are assigned a specific value in each range that reflects their current levels of debt-to-GDP relative to other European countries. This results in the following assumed sensitivities for the conservative and optimistic scenarios, respectively: 1.5 and 3 real bps in Germany, 2 and 3.5 real bps in Spain, and 2.5 and 4 bps in both France and Italy.

Crucially, our fiscal impact analyses account not only for the cost of incremental debt required by each reform lever but also for the incremental cost in the total *stock* of debt for each country. In other words, we quantify how much more a country would spend on debt-servicing as yields rise across the board as a result of coupons on new debt issued pursuant to our proposed pension reforms. We model this effect by reconstructing the maturity composition of each country's current debt stock based on the most recently available reports from each country's ministry of finance. We also assume that the maturity mix stays constant over time, such that, for example, the projected share of German debt held in ten-year bonds by 2040 is the same as today's.

### Additional, Reform-Lever- Specific Assumptions

**National Pension Funds.** As noted in the text, we make country-specific assumptions about the size of potential annual allocations to a national pension fund in proportion to current debt-to-GDP ratios. Country values follow the same logic we apply for the indebtedness-sensitivity of yields: 0.75% of GDP for Germany, 0.5% of GDP for Spain, 0.25% of GDP for France, and 0.1% of GDP for Italy. Notice that only Denmark, the country with the lowest debt-to-GDP ratio of the largest EU nations (currently at approximately 30%), would, under our logic, be able to reach the upper bound of 1% of GDP in annual allocations, following New Zealand's early example when it set up the Superannuation Fund.

**Individually Funded, First-Pillar Accounts.** Our modeling generally follows the Swedish example, setting the share of first-pillar pension contributions to be diverted toward individual accounts at 13.5%. To calculate the corresponding monetary value for each country, we use OECD estimates of first-pillar contribution rates as share of gross wages. The OECD figures cover more than old-age pensions, usually including disability, early retirement, and similar welfare schemes. Therefore, to size old-age-specific first-pillar contributions, we scale these figures by the old-age share of total first-pillar spending, per Eurostat. In the end, the amount diverted toward individual accounts as a share of gross wages is 2% for Germany, 2.4% for France, 3% for Italy, and 2.5% for Spain.



**Universally Funded Occupational Pensions.** In France and Italy, the rate of contribution to occupational pensions is set by statute, amounting to 8% and 6.9% of total gross wages, respectively. However, in Germany and Spain, the design of reform would have to determine target contribution rates. We therefore model two cases. In our conservative scenario, we assume universal coverage at current, observed contribution rates among funded occupational pension participants: 3.3% of gross wages in Germany and 2.6% in Spain. By contrast, our optimistic scenario assumes that both countries reach contribution rates analogous to those in France, of 8% of gross wages at or below the level for which companies can claim tax benefits in either country. In Germany, for example, companies would receive tax benefits for 8% of contributions on up to €66,250 in yearly salary per employee. (As previously indicated, we rely on income tax filings to calculate the share of total wages that fall below this threshold; in Germany, this figure is approximately 74%.) For both the conservative and optimistic scenarios, we model a five-year phase-in (of equal yearly increments) for contributions to reach their target rates in both Germany and Spain. This facilitates adjustment for companies whose employment and working capital costs would be adversely impacted.

The rollout period for both individually funded, first-pillar accounts and universally funded occupational pensions is modeled on an age cohort basis, based on UN demographic projections by country. In the conservative, 30-year transition scenario, only workers who are 34 or younger in 2026 are enrolled in the new schemes; in every subsequent year, only new (younger) entrants into the workforce are enrolled as well. In other words, no worker who is 35 or older in 2026 is transitioned to a new pension scheme. By contrast, in the optimistic, 15-year transition scenario, older workers are progressively enrolled as well: only those 34 and younger are enrolled in the new schemes in 2026, but in 2027 those who are 36 years old then (and so were 35 years old in 2026) are also enrolled, and so on for every subsequent year. For occupational pensions in particular, the enrollment cascades in both scenarios are capped at 90% of the workforce to account for the share of workers who do not have a formal employer (including the self-employed).

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