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Comparing pension systems in Greece, Mexico, Portugal and Turkey: Current situation and future perspectives

This report has been jointly prepared by
VITALIS and Pensión Research & Consulting



Pensión



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Comparing pension systems in Greece, Mexico, Portugal and Turkey: Current situation and future perspectives

VITALIS & Pensión Research and Consulting

Executive Summary

This report compares the pension systems of Greece, Mexico, Portugal, and Turkey, analyzing their demographic, macroeconomic, and labor market contexts, as well as the design, performance, and reform trajectories of their pension systems.

The four countries were selected to provide a diverse laboratory: Greece and Portugal represent mature PAYG systems in aging European societies, while Mexico and Turkey exemplify younger, fast-reforming markets where funded and behavioral approaches are shaping pension outcomes. Together, they offer rich contrasts for understanding how pensions can remain sustainable and adequate amid demographic and fiscal pressures.

Demographic and Economic Context. *Greece and Portugal face rapid population aging due to low fertility and high life expectancy, placing increasing pressure on pay-as-you-go (PAYG) systems. By contrast, Mexico and Turkey still benefit from relatively young populations, though outmigration and informality present challenges. Economically, Turkey and Mexico achieve higher growth rates but with greater macroeconomic volatility, while Greece and Portugal maintain higher per capita incomes but struggle with elevated public debt levels.*

Labor Market Conditions. *Labor market structures differ markedly. Portugal has high female participation and largely formal employment, while Turkey combines low female participation with high informality. Mexico also contends with large-scale informality, which undermines pension coverage despite its mature private system. Greece shows low old-age labor participation and limited accumulation of pension fund assets.*

Pension System Structures.

- **Greece** has historically relied on its PAYG system but introduced TEKA in 2022, a mandatory funded supplementary pillar for new workers. Assets remain small and investments conservative, though lifecycle strategies are planned. Public skepticism toward funded pensions remains a challenge.

- **Mexico** operates the most mature funded pension system among the four, built on mandatory individual accounts managed by Afores. With 85.2% coverage among formal workers and 20.5% of GDP in assets, Mexico has pioneered target-date funds (Siefores) and recent reforms have increased contributions, broadened eligibility, and enhanced diversification. However, informality continues to exclude more than half the workforce.
- **Portugal** has a moderately developed, voluntary private pension market (17.1% of GDP, 18.7% participation), mostly through occupational plans and personal retirement savings plans (PPRs). Assets are conservatively invested, and there is no auto-enrollment. Incremental reforms have improved governance but uptake remains modest.
- **Turkey** operates a voluntary defined-contribution system (BES), supplemented since 2017 by auto-enrollment for employees under 45. Coverage stands at 28.7% with assets at 2.9% of GDP. Participation is incentivized by a 30% state match, though high opt-out rates and informality limit its impact. Investment strategies remain conservative, but pilot target-date funds are being introduced.

Cross-Country Insights. Mexico demonstrates the advantages of a mature, fully funded DC system with lifecycle investment design, while Turkey’s auto-enrollment shows the potential of behavioral tools to expand participation. Portugal and Greece lag in private pension development, but could benefit from soft auto-enrollment, employer matching, and gradual adoption of lifecycle funds. In all four countries, women tend to have lower replacement rates but higher pension wealth due to longevity, underscoring the need for gender-sensitive pension design.

Policy Implications. Ensuring sustainable and adequate pensions will require tailored strategies. Key priorities include:

- Expanding coverage through auto-enrollment and re-enrollment cycles.
- Improving adequacy with higher contributions and default lifecycle investment strategies.
- Leveraging digital tools and behavioral nudges to engage informal and younger workers.
- Incentivizing employer contributions and voluntary savings.
- Aligning pension investments with capital market development and ESG objectives.

Overall, the comparative evidence shows that strengthening private pensions can enhance adequacy, relieve pressure on PAYG systems, and contribute to financial market

development. The experiences of Mexico and Turkey may offer useful insights for Greece and Portugal as they address the challenges of demographic aging and fiscal constraints.

Part 1: Demographic, Macroeconomic, and Labor Market Context for Pension Systems

When comparing and studying pension systems, certain indicators are of central importance. Some describe the environment in which pension systems operate—for example, demographics, macroeconomic conditions, and labor- and capital-market dynamics—while others pertain directly to system outcomes, namely performance (coverage and adequacy) and financial sustainability.

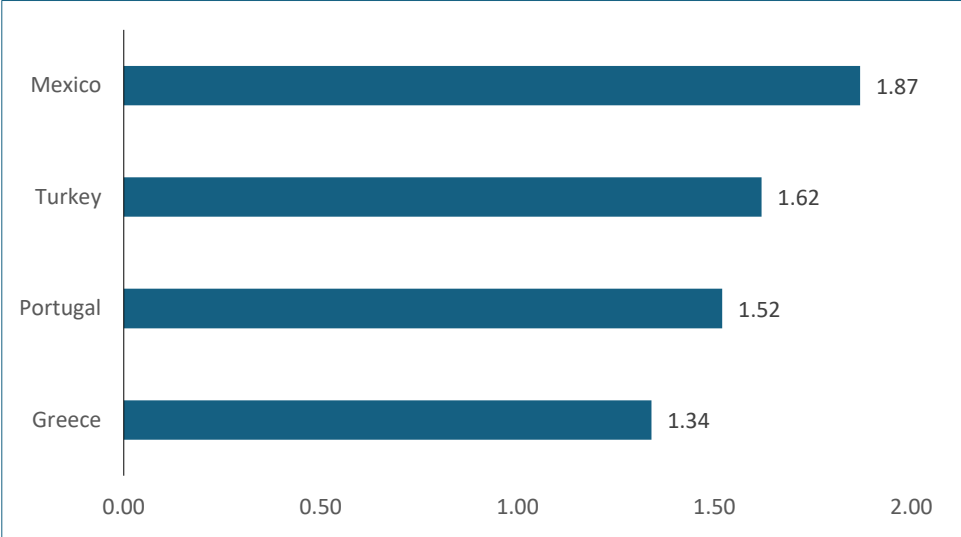
1.1. Demographics

Demographics describe the population profile, indicating the size of the productive labor force and the degree of societal aging—factors that directly affect both the needs and the resources available to the retired population.

Across the four countries under study, Mexico and Turkey have younger populations than Greece and Portugal, being Portugal slightly older than Greece. Fertility rates are also higher in Mexico (1.87) and Turkey (1.62) than in Portugal (1.52) and Greece (1.34) (Figure 1). Consequently, all four countries have fertility rates below the population replacement level of 2.1 children per woman (World Population Prospects, 2024).

In addition, Portugal and Greece exhibit the highest life expectancies at all ages among the four countries, for both men and women (Figures 2, 3, and 4). This combination of low fertility and high life expectancy accelerates population aging in these countries (see Box 1).

Figure 1. Total fertility rate (children per woman), 2025 projection



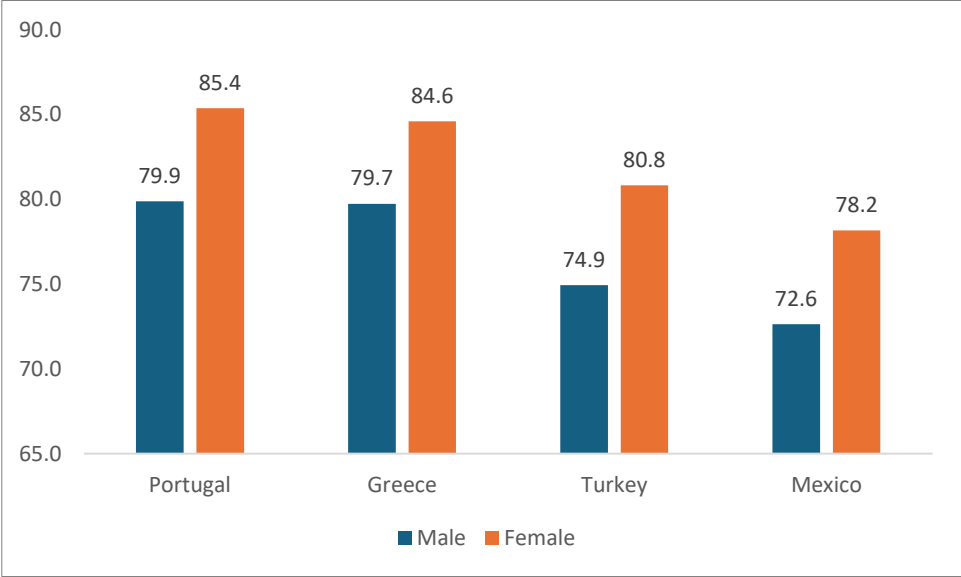
Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). *World Population Prospects: The 2024 Revision*.

Box 1. Aging in Greece and Portugal

Greece and Portugal exemplify the population aging that many countries are experiencing. According to the United Nations (UN), Greece’s population peaked around 2010 at just over 11 million. Since then, it has entered a period of decline, reaching slightly under 10 million in 2025 (UN projections). Greece is reported as having the fourth-fastest rate of population decline globally, surpassed only by Saint Martin, the Cook Islands, and the Marshall Islands. The largest age cohorts are now 40–59, and 1.5% of the population is age 90+.

Portugal likewise began to experience population decline around 2010, when its population peaked at over 10.5 million. Most of the Portuguese population is now ages 45–69, with 1.3% age 90+. In both countries, women constitute a higher share of the oldest age groups.

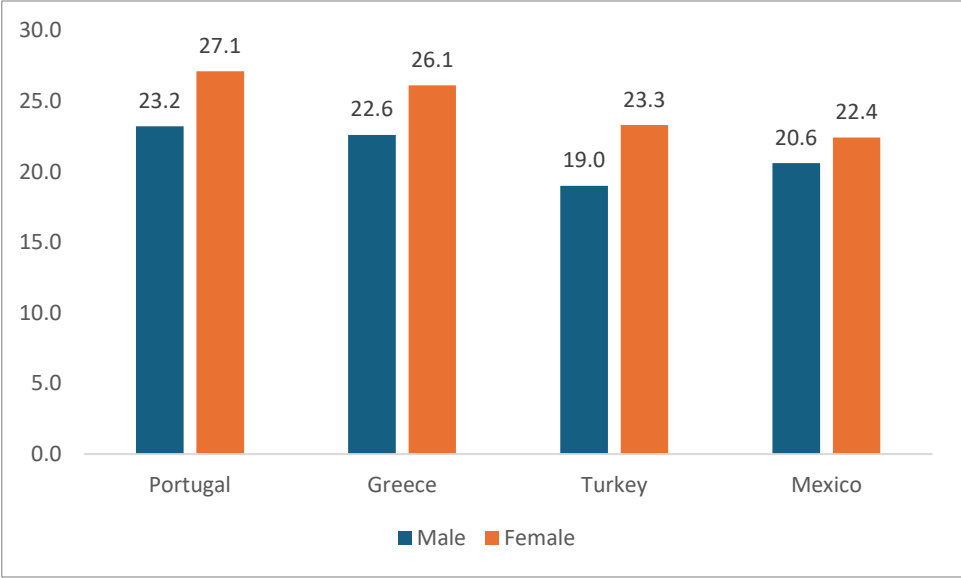
Figure 2. Life expectancy at birth (2025 projection)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). *World Population Prospects: The 2024 Revision*.

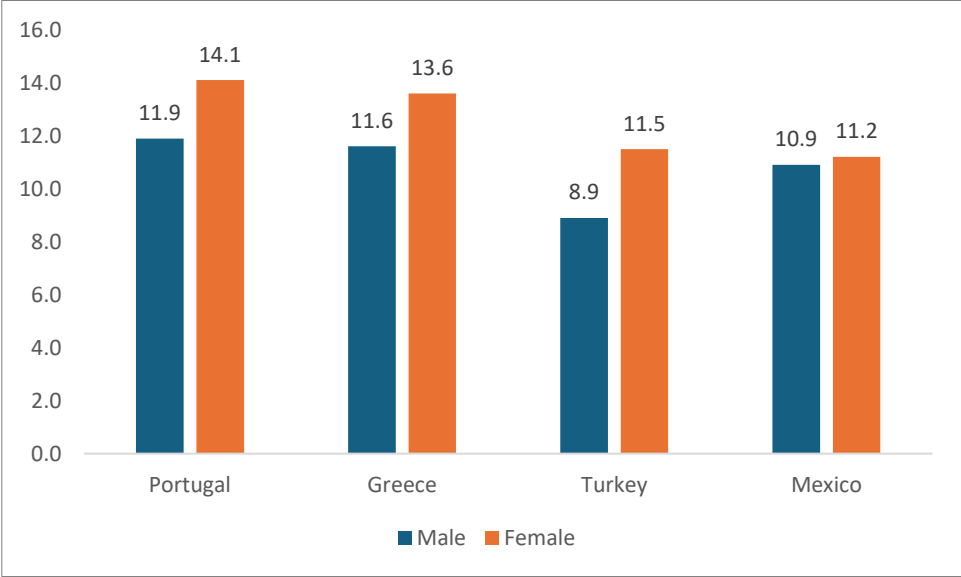
Alongside life expectancy at birth, life expectancy at age 60 and life expectancy at age 75 are important indicators for evaluating the sustainability of pension systems, as well as the needs and potential costs of a longevous population.

Figure 3. Life expectancy at age 60 (2025 projection)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). *World Population Prospects: The 2024 Revision*.

Figure 4. Life expectancy at age 75 (2025 projection)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2024). *World Population Prospects: The 2024 Revision*.

Across all four countries, life expectancy at birth, at age 60, and at age 75 is higher for women than for men. As in most regions, this persistent gender gap in longevity has practical implications for pension design—notably a longer average benefit duration, a higher prevalence of widowhood and single-person households at advanced ages, and greater exposure to longevity and health-care cost risks among women.

An informative lens on population aging is the share of women aged 80+ in the total population. In Mexico and Turkey this share remains comparatively low (1.8% and 2.4%, respectively), whereas in Portugal and Greece it represents a materially larger segment—8.7% and 9.1%, respectively (World Population Prospects, 2024). A higher proportion of very old women typically signals stronger demand for survivor benefits, minimum pensions, and long-term care services, and it underscores the importance of inflation protection and adequacy safeguards in late life.

The old-age dependency ratio (people aged 65+ per 100 people aged 15–64) reinforces these differences. Portugal (40 dependents per 100 working-age persons) and Greece (almost 39) face substantially higher demographic pressure than Turkey (15) and Mexico (almost 13) (World Population Prospects, 2024). Elevated dependency ratios tend to compress contribution bases relative to beneficiary pools, increasing the fiscal and actuarial strain on pay-as-you-go pillars and heightening the need for policies that raise labor-force participation, extend working lives, or improve funded-pillar accumulation and returns.

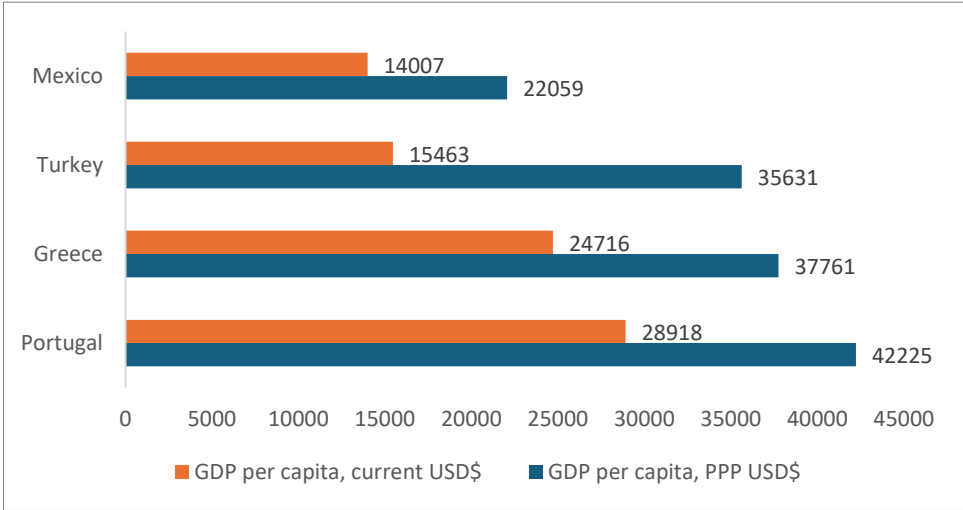
Migration can partially mitigate aging dynamics by augmenting the working-age population. Among the four countries, Greece and Portugal are net recipients of migrants, each with a crude net migration rate of 2 per 1,000 persons. By contrast, Mexico and Turkey record negative net migration rates (–1 and –3 per 1,000, respectively), indicating net outflows (World Population Prospects, 2024). While migration alone cannot reverse structural aging, sustained positive inflows—especially of prime-age workers—can moderate dependency ratios, support contribution revenues, and create a wider window for gradual parametric or structural pension reforms.

1.2. Macroeconomic and Capital Market Context

The next set of indicators relevant to pension systems comprises macroeconomic variables—gross domestic product (GDP) per capita, share of world’s GDP, GDP growth, the inflation rate, stock market capitalization ratio to GDP, and the national saving rate.

Among the four countries under study, Portugal has the highest GDP per capita—both in current U.S. dollars and in purchasing-power-parity terms—followed by Greece, Turkey, and Mexico (Figure 5). However, Turkey’s and Mexico’s economies account for a larger share of world GDP than those of Greece and Portugal: approximately 1.8% and 1.7%, respectively, versus 0.2% for Greece and 0.3% for Portugal (World Economic Outlook Database, 2025).

Figure 5. Gross domestic product (GDP), per capita (2024)

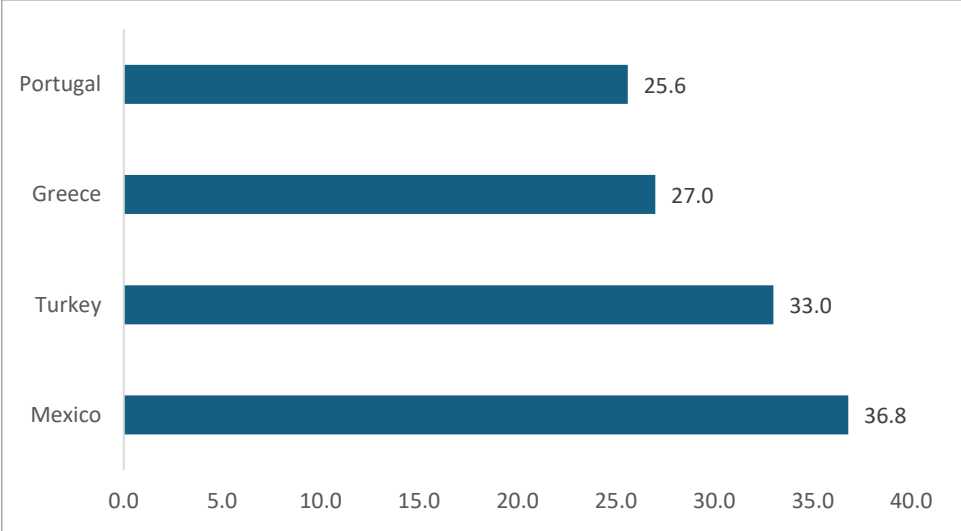


Source: International Monetary Fund, World Economic Outlook Database, April 2025.

With respect to GDP growth and inflation, Turkey leads on both indicators. In 2024, Turkey recorded 3.2% GDP growth and the highest inflation among the four countries (58.5%). For the others: Greece posted 2.3% growth and 3.0% inflation; Mexico, 1.5% and 4.7%; and Portugal, 1.9% and 2.7%, respectively (World Economic Outlook Database, 2025).

With respect to the development of capital markets in these countries, Mexico presents the highest stock market capitalization ratio to GDP (36.8% in 2020), followed by Turkey (33%), Greece (27%) and Portugal (25.6%) (Figure 6).

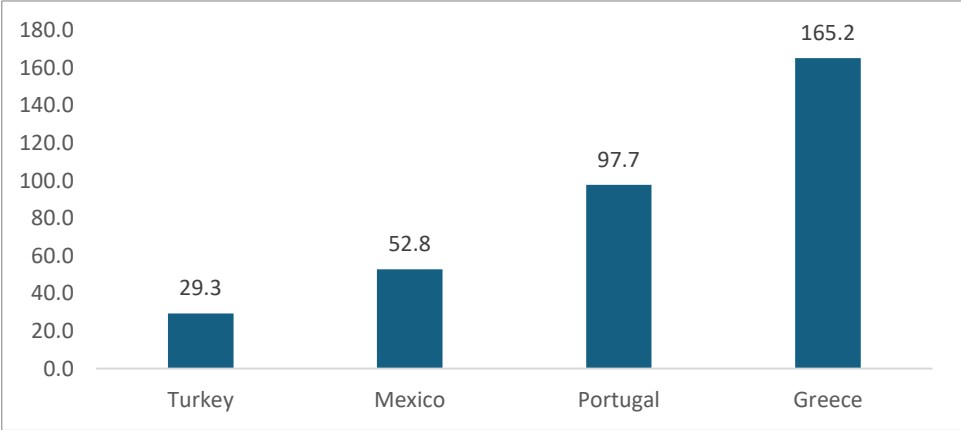
Figure 6. Stock market capitalization to GDP (%) (2020)



Source: World Bank.

Greece presents the highest general government debt among the four countries (165.2% of GDP), followed by Portugal (97.7%), Mexico (52.8%) and Turkey (29.3%) (Figure 7).

Figure 7. General government gross debt, % GDP (2023)

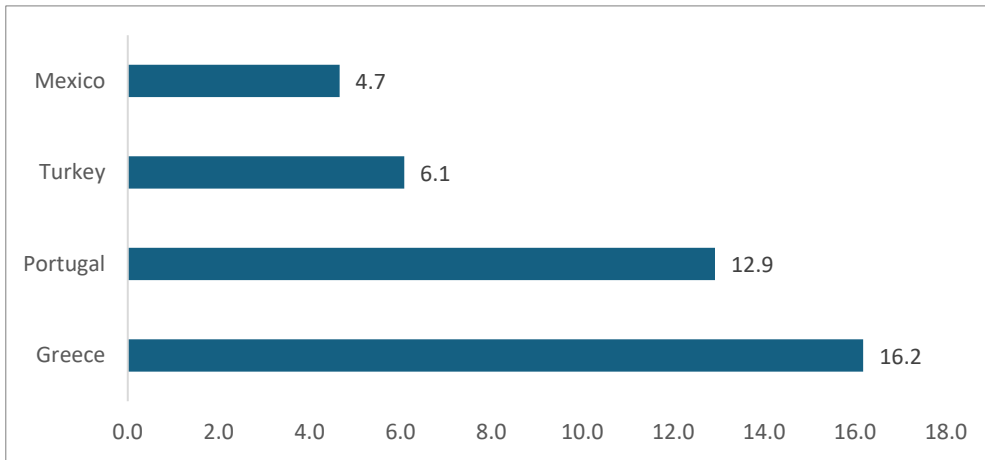


Source: International Monetary Fund, World Economic Outlook Database, April 2025.

Other relevant indicators include the national saving rate and public social-protection spending. In all three countries except Greece, national saving rates exceed 22% (Greece: 11.2%). However, Greece records the highest public expenditure on old-age and survivors'

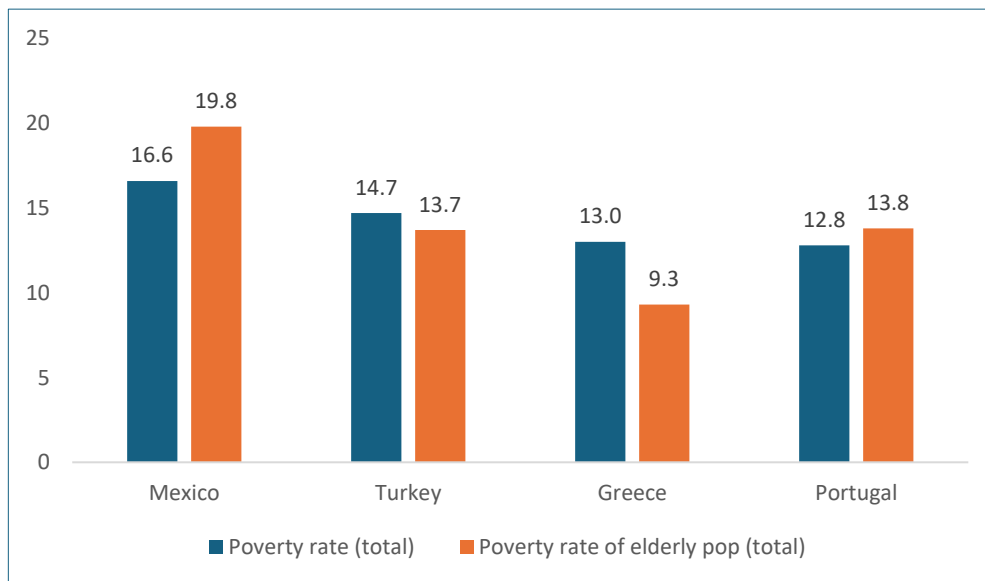
cash benefits among the four, which is consistent with the lowest elderly poverty rate (Figures 8 and 9).

Figure 8. Public expenditure on old-age and survivors benefits, % of GDP (2021)



Source: OECD, OECD Social Expenditure Database.

Figure 9. Poverty rate (total) and poverty rate of elderly population, % (2020)



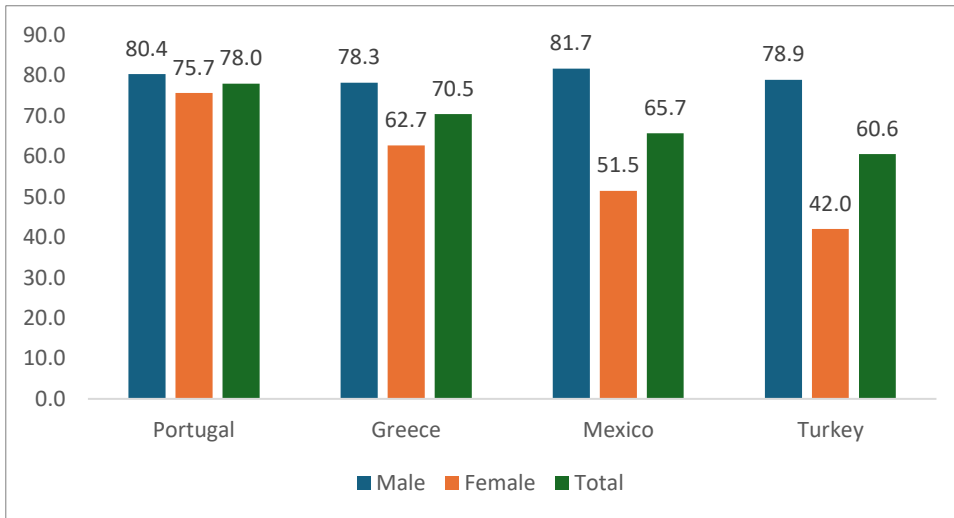
Source: OECD Pensions at a Glance (2023).

Among the four countries, Mexico records the highest overall poverty rate (16.6%) and the highest poverty rate among older persons (19.8%). In Greece, older adults are substantially less likely to be poor than the rest of the population—likely reflecting comparatively high public expenditure on old-age and survivors’ cash benefits (see Figure 9). Across all four countries, poverty among older women exceeds that among older men, with Portugal exhibiting the largest gender gap—nearly six percentage points.

1.3. Labor Market Indicators and Pension Coverage

With respect to labor markets, Figure 10 shows that men’s labor-force participation is broadly similar across the four countries, ranging from 78.3% in Greece to 81.7% in Mexico. By contrast, women’s labor-force participation varies substantially, highest in Portugal (75.7%) and lowest in Turkey (42.0%).

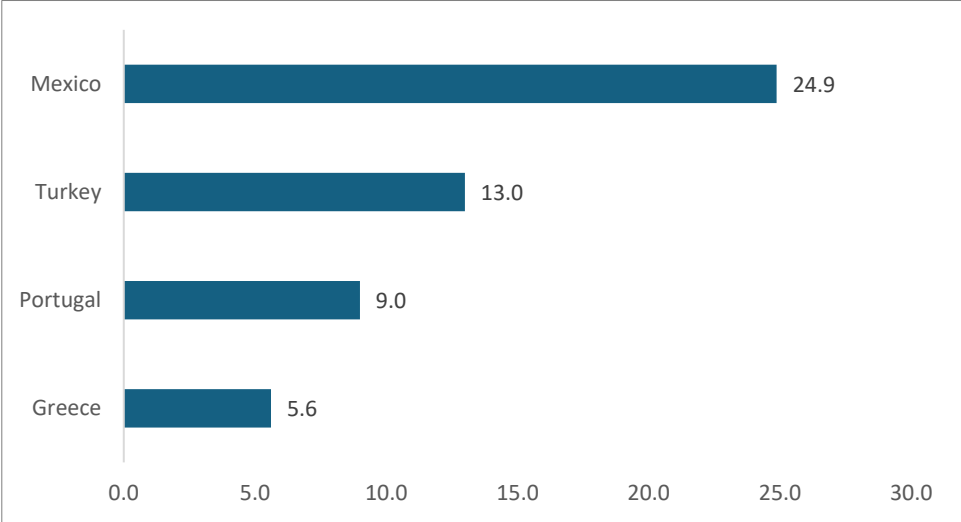
Figure 10. Labor force participation, % (2024)



Source: International Labor Organization (ILO).

Another indicator that varies substantially among the four countries is old-age labor force participation (Figure 11). It is highest in Mexico (24.9%) and lowest in Greece (5.6%). Like total labor force participation, older men show higher rates of labor market participation than older women.

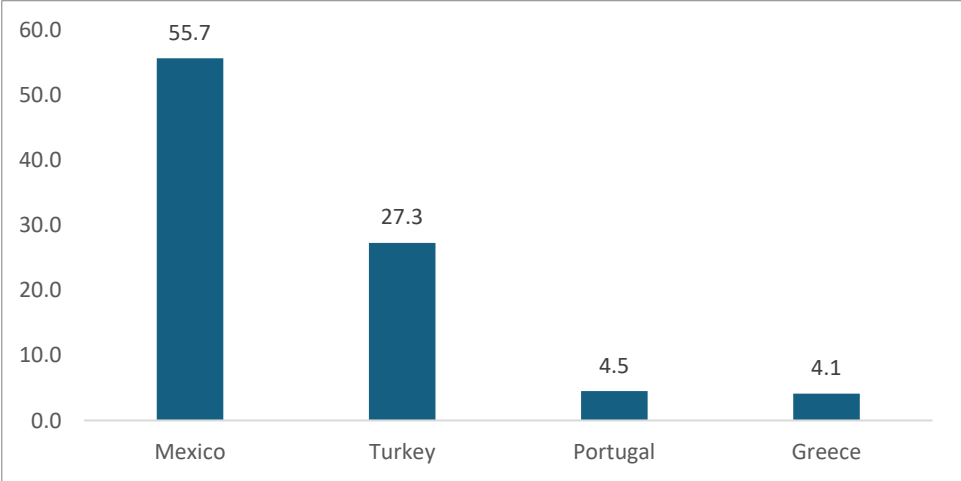
Figure 11. Old-age labor force participation, % (2024)



Source: International Labor Organization (ILO).

Another important difference among these countries is the degree of labor market formalization. In Greece and Portugal, employment is overwhelmingly formal, with less than 5% of workers in informal jobs¹. By contrast, Mexico and Turkey have large informal labor markets, reflecting structural differences in regulation, enforcement, and economic development (Figure 12). In all four countries, informal employment is higher among women than men, a pattern often linked to lower access to formal job opportunities and weaker social protections. This gender gap is especially pronounced in Turkey, where 34.5% of women work informally compared to 23.9% of men.

Figure 12. Proportion of informal employment on total employment (2023)

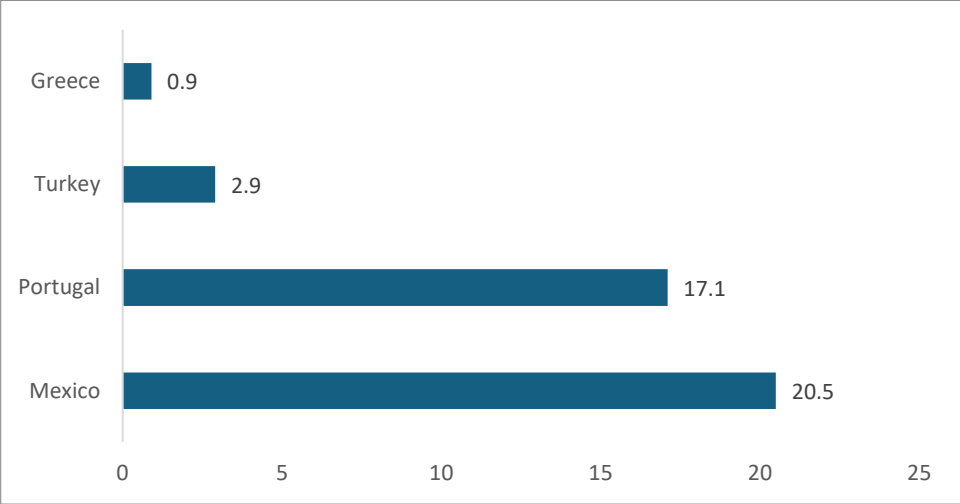


¹ Informality might be higher due to an important dark economy.

Source: International Labor Organization (ILO).

Turning to capital markets, Figure 13 illustrates the size of funded pension assets relative to GDP in the four countries. Pension fund markets are considerably larger in Mexico and Portugal (20.5% and 17.1%, respectively), while Greece and Turkey have very small markets (0.9% and 2.9%, respectively). This suggests significant room for development, particularly in strengthening retirement savings and capital market depth.

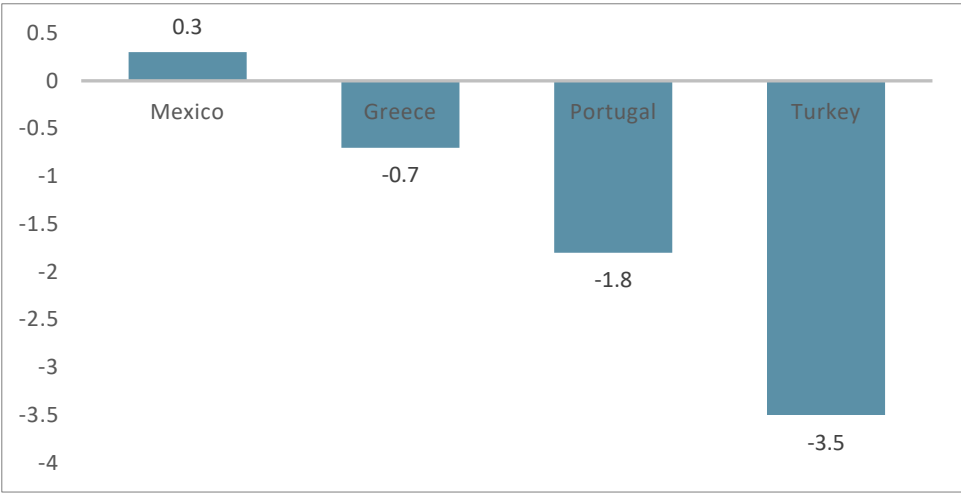
Figure 13. Funded pension assets to GDP (%) (2022 or latest available year)



Source: OECD Pensions at a Glance (2023).

Furthermore, when comparing the investment rate of return of pension plans between 2017 and 2022, Mexico was the only country among the four with a positive rate of return (0.3%). Greece, Portugal and Turkey presented, respectively, -0.7%, -1.8% and -3.5%, respectively (Figure 14).

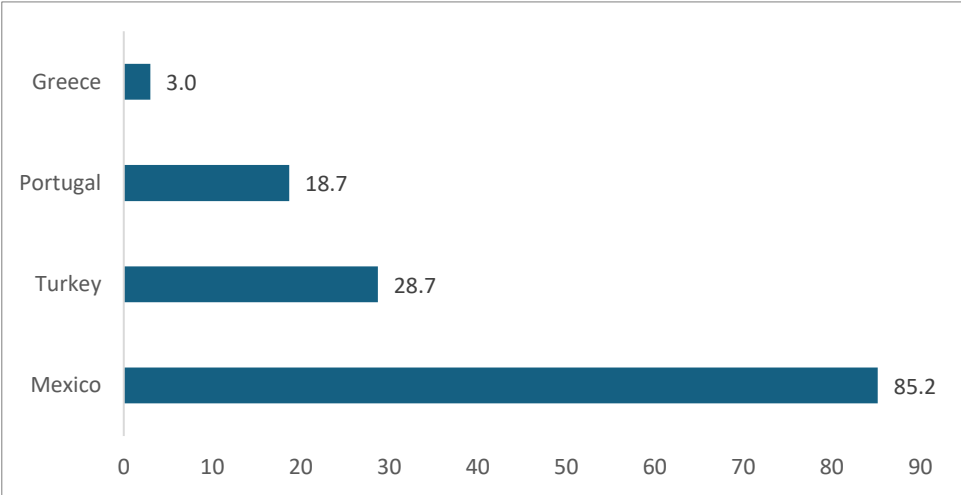
Figure 14. Real geometric average annual investment rate of return of pension plans over the last 5 years, in % GDP (2017-2022)



Source: OECD Pensions at a Glance (2023).

The four countries under study have different types of pension systems. In Greece, Portugal, and Turkey, the main public pension schemes are pay-as-you-go, whereas in Mexico the primary public scheme is a fully funded system based on individual accounts, administered by private institutions known as Afores (“Administradoras de Fondos para el Retiro”). This institutional design helps explain Mexico’s significantly higher participation rate in private pension plans (85.2%), compared with Turkey (28.7%), Portugal (18.7%), and Greece (3%) (Figure 15). Since 2017, Turkey has also implemented an auto-enrollment program, under which eligible employees are automatically enrolled in a private pension plan.

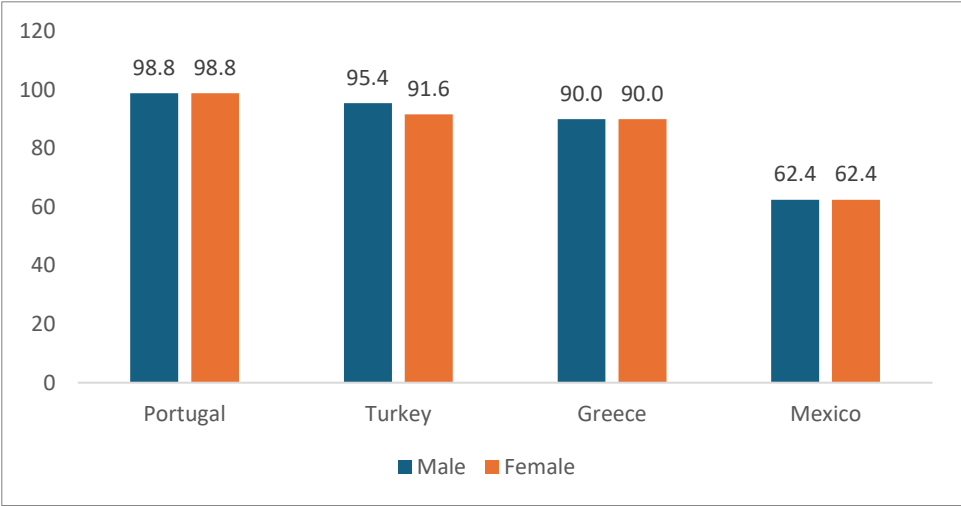
Figure 15. Participation rate in funded pension plans (%), latest year available



Source: OECD Pensions at a Glance (2023).

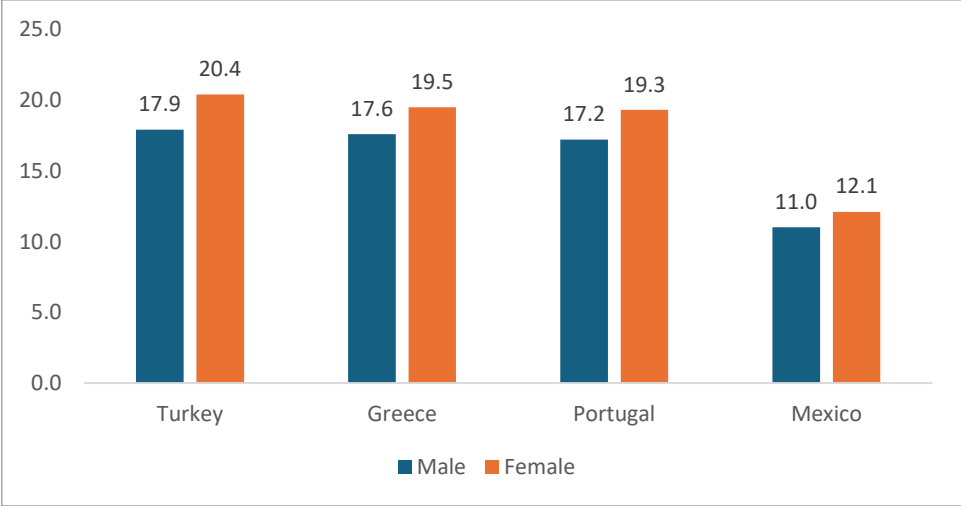
Net replacement rates for men and women in Portugal, Turkey, and Greece exceed 90%, likely reflecting the generosity of their pay-as-you-go pension systems. By contrast, in Mexico, net replacement rates under the individual accounts system are only slightly above 60% for both men and women. In Turkey, as in many other countries, the net pension replacement rate for women is about 4 percentage points lower than that of men (Figure 16). Interestingly, however, Figure 17 shows that in all four countries the net pension wealth—measured as a multiple of annual gross earnings—is higher for women than for men, with the highest levels observed in Turkey and the lowest in Mexico.

Figure 16. Net pension replacement rate (%), 2022



Source: OECD (2023).

Figure 17. Net pension wealth, multiple of annual gross earnings (2022)



Source: OECD (2023).

All the above-mentioned indicators give us a broad overview of the demographic, macroeconomic and labor market context in Greece, Mexico, Portugal and Turkey, showing four countries that face different stages of aging population and economic development, but present similar challenges to keep their older adults out of poverty. The following section deepens into the specific characteristics of each country’s pension system and present its latest developments and avenues for improvement.

Part 2: Main Characteristics of Funded Pension Systems: Greece, Mexico, Portugal, and Turkey

Funded pension systems play a critical role in ensuring retirement income adequacy, diversifying retirement savings sources, and relieving fiscal pressure on public pay-as-you-go (PAYG) schemes. While all four countries under study—Greece, Mexico, Portugal, and Turkey—share the goal of complementing their public pension pillars, their funded pension markets vary significantly in terms of coverage, maturity, regulatory frameworks, and investment strategies. Below, we provide a detailed country-by-country analysis, followed by cross-country observations.

Comparative Table: Main Characteristics of Funded Pension Systems

Country	Basic Characteristics	Supervision	Asset Allocation (End 2023)	Fee Structure	Recent Pension Reforms
Greece	Early-stage system; TEKA mandatory for new workers; low participation (~3%); assets 0.9% GDP	HCMC & Ministry of Labor; TEKA state-managed with market governance	An investment strategy has not been defined.	Very low (TEKA), modest in voluntary plans	2022 TEKA launch; EU IORP II alignment; lifecycle strategies planned
Mexico	Mature mandatory DC system; high coverage (85.2%); assets 20.5% GDP	CONSAR (Afores & Siefores regulation)	53% gov bonds, 6% domestic eq, 13% international eq, 28% alternatives	~0.57% AUM (low, competitive)	2020–21 reform; higher contributions; reduced eligibility;

Country	Basic Characteristics	Supervision	Asset Allocation (End 2023)	Fee Structure	Recent Pension Reforms
					greater diversification
Portugal	Supplementary voluntary system; 18.7% participation; assets 17.1% GDP	ASF & Bank of Portugal; EU IORP compliant	66% debt (37% gov), 25% corporate/insurance, 9% equities & alternatives	Front-end & annual fees; tax incentives reduce net cost	2006 governance reform; 2007 link to life expectancy; no auto-enrollment
Turkey	Voluntary BES with auto-enrollment since 2017; 28.7% coverage; assets 2.9% GDP	SEDDK & EGM; high digital transparency	60% gov bonds & cash, 20% domestic eq, 10% int'l eq, 10% alternatives	Tiered 1–2%; 30% state match offsets fees	2013–17 auto-enrollment; 30% state match; diversification & TDF pilots

Source: Hellenic Capital Market Commission (HCMC); Ministry of Labor and Social Affairs; TEKA Reform Law (Government of Greece, 2022); Comisión Nacional del Sistema de Ahorro para el Retiro (CONSAR); Afores Annual Reports; OECD Pensions at a Glance (2023); Autoridade de Supervisão de Seguros e Fundos de Pensões (ASF); Bank of Portugal; OECD Pensions at a Glance (2023).

2.1. Greece

2.1.1. Overview and Basic Characteristics

Greece has historically relied on its public PAYG pension system, which has faced significant fiscal and demographic pressures, particularly after the 2009 sovereign debt crisis. Funded pensions, until recently, played a marginal role, primarily through voluntary occupational and personal plans. As of 2023, funded pension assets accounted for just 0.9% of GDP, the

lowest among the four countries studied, and participation was roughly 3% of the workforce.

The landmark reform in 2022 introduced TEKA (Tameio Epikourikis Kefalaiochikis Asfalis) — a mandatory, funded supplementary pillar for all new labor market entrants. TEKA represents a paradigm shift, creating a multi-pillar pension framework in Greece for the first time. Contributions are defined-contribution, and benefits will be based on the accumulation of individual savings, gradually reducing Greece’s historical overreliance on the public PAYG system.

2.1.2. Supervision and Governance

- Regulators: Hellenic Capital Market Commission and Ministry of Labor
- New Entity: TEKA operates as a state-managed but professionally governed fund
- International Alignment: Full compliance with EU IORP (Institution for Occupational Retirement Provision) II enhances governance, risk management, and reporting standards.

2.1.3. Asset Allocation and Investment Strategy

As of end-2023, Greek funded pensions remain extremely conservative, reflecting both the nascent stage of TEKA and historical risk aversion.

Over time, TEKA aims to adopt lifecycle investment strategies similar to target-date funds, gradually increasing equity exposure for younger participants and shifting toward safer assets as retirement approaches. This dynamic allocation approach is expected to improve long-term returns and participant engagement, drawing on international best practices.

2.1.4. Fee Structure

Traditional voluntary plans charge modest annual management fees, and TEKA is designed to be low-cost, to maximize net returns for participants. This low-fee model is critical for building public trust in a country historically skeptical of funded systems.

2.1.5. Recent Pension Reforms

Greece has undergone profound pension reforms in the last decade, driven by the European sovereign debt crisis and acute demographic pressures. Historically, Greece’s pension system was almost entirely pay-as-you-go (PAYG), with very limited pension participation. The fiscal crisis exposed the unsustainability of the existing system, prompting a series of measures to contain public spending, reduce replacement rates, and gradually raise the retirement age.

The most transformational reform came in 2022 with the creation of TEKA (Tameio Epikourikis Kefalaiochikis Asfalisis)—a mandatory, funded supplementary pillar for all new labor market entrants. TEKA replaces the previously unfunded auxiliary pension scheme, transforming Greece’s pension architecture into a multi-pillar system for the first time. Key features include:

- Defined-contribution structure: Individual accounts accumulate based on contributions and investment returns.
- State-managed, market-governed model: TEKA is publicly supervised but follows modern asset management practices.
- Alignment with EU IORP II Directive: Ensuring strong governance, risk management, and participant protection.

TEKA’s initial investment policy is highly conservative, focused on government bonds and deposits, with a gradual transition to diversified portfolios, including equities and European assets. Future plans include the introduction of lifecycle investment strategies, similar to target-date funds, which automatically adjust asset allocation according to participants’ age profiles. This approach is designed to maximize long-term returns for younger workers while protecting older participants from market volatility.

The objectives of the reform are threefold:

1. Reduce fiscal pressure on the public PAYG system,
2. Enhance adequacy of future pensions through funded savings, and
3. Support domestic capital market development by channeling long-term institutional savings into the economy.

Challenges remain, including public skepticism toward funded pensions and the slow accumulation of assets, meaning TEKA’s macroeconomic and social impact will materialize gradually over the next two decades.

2.1.6. Challenges and Outlook

Slow asset accumulation in Greece’s funded pension system means that its macroeconomic impact will materialize only gradually, limiting its ability to significantly contribute to capital market development or overall savings in the near term. Additionally, the country’s long-standing cultural reliance on the state for retirement security, coupled with historical mistrust stemming from past pension fund mismanagement, may hinder voluntary participation and broader adoption of the new funded pillar. Over time, however, the **integration of lifecycle investment strategies** and the **potential introduction of auto-**

enrollment for existing workers could gradually expand coverage, enhance participant confidence, and improve the adequacy of retirement benefits.

2.2. Mexico

2.2.1. Overview and Basic Characteristics

Mexico's private pension system is the most mature and extensive among the four countries, the product of the 1997 reform that replaced the old PAYG scheme with mandatory, fully funded individual accounts. These accounts are managed by Afores (Administradoras de Fondos para el Retiro) and are mandatory for formal-sector employees, driving coverage to 85.2% of the formal workforce. Private pension assets represent 20.5% of GDP, the highest among the four countries.

The system is defined-contribution, meaning benefits depend on contribution levels and investment returns. Workers are automatically assigned an Afore if they do not choose one, and their contributions are invested in Siefos, Mexico's version of target-date (lifecycle) funds, which automatically shift allocations from equities to bonds as participants age.

2.2.2. Supervision and Governance

- Regulator: CONSAR (National Commission for the Retirement Savings System)
- Market Participants: Afores include Citibanamex, Afore XXI Banorte, Sura, Principal, among others.
- Governance: Strict regulation of investment limits, risk management, and fees

2.2.3. Asset Allocation and Target-Date Funds

As of end-2023, Afores' portfolios were well-diversified:

- 53%: Government bonds
- 6%: Domestic equities
- 13%: International equities
- 28%: Alternatives and inflation-linked instruments (including ~7–8% private equity/infrastructure)

Siefos (Target-Date Funds) are central to the system:

- Younger workers are allocated more heavily to equities and higher-risk assets
- Allocation automatically shifts to bonds and lower volatility instruments as retirement approaches

- This reduces behavioral risks, such as panic selling, and improves long-term adequacy

2.2.4. Fee Structure

Mexico has one of the lowest fee structures in Latin America, with Afores charging ~0.57% of AUM in 2023. Regulatory pressure has steadily reduced fees, increasing participants' net returns.

2.2.5. Recent Pension Reforms

Mexico's pension reform journey represents one of the most successful transitions to a fully funded system in Latin America. The landmark 1997 reform replaced the old PAYG scheme with a mandatory defined-contribution system, managed by private pension fund administrators (Afores).

Over the past decade, reform efforts have focused on improving adequacy and expanding coverage, particularly as low contribution rates and labor informality limited the effectiveness of the original design. The 2020–2021 reform package was a game changer for Mexico's pension system, addressing multiple structural weaknesses:

1. Contribution Rate Increase:

- Gradual increase from 6.5% to 15% of wages by 2030, significantly boosting future replacement rates.
- Employer contributions represent the bulk of the increase, easing the burden on employees.

2. Eligibility Relaxation:

- Minimum weeks of contributions reduced from 1,250 to 750, allowing more workers—especially those with informal employment gaps—to qualify for pensions.

3. Minimum Pension Enhancement:

- Improved social protection for low-income workers, addressing high old-age poverty risks.

4. Investment Diversification:

- Expanded ability for Afores to invest in international markets and infrastructure projects, including private equity and green bonds, enhancing returns.

Mexico's Afore system relies heavily on Siefores (target-date funds), which have proven to be efficient behavioral tools:

- Younger workers are invested in growth-oriented portfolios with higher equity exposure,
- Allocations gradually de-risk as retirement approaches, protecting accumulated savings,
- This automatic glide path reduces the need for participant decision-making and minimizes behavioral risks.

Despite its strengths, Mexico's system still faces coverage gaps due to labor informality (~55%). Ongoing policy discussions include voluntary auto-enrollment for self-employed workers and incentivized micro-savings channels, including digital apps like AforeMóvil. These reforms aim to broaden participation and further enhance retirement adequacy.

2.2.6. Challenges and Outlook

High labor informality, which affects approximately 55% of the workforce in Mexico, continues to limit the potential for universal pension coverage despite the maturity of its private pension system. This structural challenge results in low replacement rates for informal workers, as irregular or absent contributions prevent them from accumulating sufficient retirement savings. Looking ahead, the system could be strengthened through the introduction of auto-enrollment mechanisms for self-employed and informal workers, combined with the expanded use of behavioral nudges—such as mobile notifications, gamified savings tools, and micro-contribution options—to encourage voluntary top-ups and increase long-term adequacy.

2.3. Portugal

2.3.1. Overview and Basic Characteristics

Portugal's private pension market is moderately developed, serving as a supplement to the generous PAYG public pension. As of 2023, private pension assets represent 17.1% of GDP, and participation is 18.7%, mostly among employees in large companies and public enterprises.

The market is composed of occupational pension schemes and personal retirement savings plans (PPRs). PPRs are voluntary, tax-incentivized savings vehicles aimed at long-term retirement planning.

2.3.2. Supervision and Governance

- Regulators: ASF (Insurance and Pension Funds Supervisory Authority) and Bank of Portugal
- EU IORP Compliance: High standards for funding, risk management, and participant protection

2.3.3. Asset Allocation

As of end-2023, Portuguese private pension funds adopt a highly conservative investment strategy:

- 66%: Debt instruments (including 37% in government bonds)
- 25%: Corporate bonds and insurance-linked products
- 9%: Equities and alternatives

The limited equity exposure reflects risk aversion, small domestic capital markets, and the dominance of insurance-based products.

2.3.4. Fee Structure

- Front-end and annual management fees are common for PPRs
- Tax deductions for contributions and deferrals on investment returns lower net costs for participants

2.3.5. Recent Pension Reforms

Portugal's pension reforms have been incremental rather than transformative, reflecting the country's continued reliance on a generous PAYG public system. Private pensions remain supplementary, with assets representing 17.1% of GDP and participation around 18.7%, mostly via large occupational plans and personal retirement savings plans (PPRs).

Key reforms have focused on public system sustainability and governance improvements for private schemes rather than mass expansion:

1. Linking Retirement Age to Life Expectancy (2007):

- Automatic retirement age adjustment mechanism introduced to reflect demographic aging, reducing long-term PAYG pressures.

2. Occupational Pension Regulation (Decree-Law 12/2006):

- Strengthened fund governance, solvency requirements, and transparency, aligning with EU IORP standards.

3. Promotion of Voluntary Savings (PPRs):

- Tax incentives for contributions and deferral of investment gains encourage long-term saving, though uptake remains modest.

Unlike Mexico and Turkey, Portugal has not implemented auto-enrollment in private pensions. Participation remains voluntary, and behavioral inertia limits uptake among younger workers and low-income groups. The adoption of target-date fund strategies is limited, with most PPRs conservatively invested in bonds and insurance-linked products.

Future reforms may focus on:

- Introducing soft auto-enrollment in occupational plans,
- Encouraging employer matching contributions,
- Modernizing investment strategies with lifecycle allocations to improve long-term outcomes.

2.3.6. Challenges and Outlook

Low voluntary participation in Portugal's private pension system, combined with its predominantly conservative investment portfolios, continues to limit replacement rates and the overall adequacy of retirement savings. However, several opportunities exist to strengthen the system and enhance long-term outcomes. Introducing auto-enrollment in occupational pension plans could significantly increase participation by leveraging behavioral inertia, while expanding employer matching contributions would provide stronger financial incentives for employees to remain in the system. Additionally, adopting target-date fund structures could improve long-term returns by automatically adjusting asset allocations to participants' age profiles, balancing growth potential for younger savers with capital preservation for those nearing retirement.

2.4. Turkey

2.4.1. Overview and Basic Characteristics

Turkey's private pension system, BES (Bireysel Emeklilik Sistemi), was established in 2003 as a voluntary, defined-contribution system, complementing the mandatory PAYG public pillar. As of 2023, private pension assets represent 2.9% of GDP, and participation stands at 28.7% of the workforce.

The 2017 auto-enrollment reform marked a turning point, requiring all employees under 45 to be automatically enrolled in BES, with the option to opt-out. Though opt-out rates have been high, behavioral nudges like re-enrollment cycles and government matching contributions have significantly improved long-term participation.

2.4.2. Supervision and Governance

- Regulators: SEDDK (Insurance and Private Pension Authority) and Capital Markets Board
- EGM (Pension Monitoring Center): Provides real-time monitoring, digital dashboards, and participant transparency
- Major Providers: AvivaSA, Anadolu Hayat Emeklilik, Allianz Türkiye, Garanti BBVA Emeklilik

2.4.3. Asset Allocation and Target-Date Funds

As of end-2023, BES funds are diversified but still conservative:

- 60%: Government bonds and cash
- 20%: Domestic equities
- 10%: International equities
- 10%: Alternatives and inflation-linked assets

Turkey is gradually introducing target-date fund concepts to better align risk exposure with participants' age. This is expected to improve retention and deliver higher long-term returns while reducing behavioral risks.

2.4.4. Fee Structure

- Tiered management fees (1–2%), decreasing with higher balances
- 30% government matching contribution, credited annually, significantly offsets fees and incentivizes retention

2.4.5. Recent Pension Reforms

Turkey has implemented a series of reforms to transform its voluntary private pension system (BES) into a major pillar of retirement savings. Launched in 2003, BES was initially fully voluntary, but participation was modest, limited by low awareness and high informality.

The 2013–2017 auto-enrollment reform was a critical turning point:

- Employees under 45 are automatically enrolled into BES upon employment,
- Opt-out option exists, but behavioral research shows that automatic enrollment substantially boosts initial participation,
- Re-enrollment cycles were introduced to bring back opt-outs, improving long-term retention.

To strengthen incentives, the government introduced a matching contribution program:

- Initially 25%, increased to 30% of employee contributions,
- Credited annually and fully vested after 3 years, providing a strong retention mechanism.

Turkey has also invested heavily in digitalization and participant engagement:

- EGM (Pension Monitoring Center) offers real-time tracking, retirement calculators, and mobile notifications,
- Behavioral nudges—such as reminders about government bonuses and projected pensions—encourage sustained saving.

Recent investment-related reforms have encouraged diversification:

- BES portfolios historically focused on government bonds and deposits,
- New rules allow greater equity, international, and alternative exposure,
- Target-date fund structures are being piloted to automatically adjust allocations with age, enhancing returns while controlling risk.

Challenges persist:

- High opt-out rates (especially during economic volatility),
- Informality (~30%), which leaves a large segment of the labor force outside the system,
- Need for further behavioral innovations and employer matching schemes to improve retention and adequacy.

2.4.6. Challenges and Outlook

High opt-out rates continue to pose a significant barrier to achieving mass coverage in Turkey's private pension system, while labor market informality—affecting roughly 30% of the workforce—further limits the potential participant base. To address these challenges

and improve both coverage and adequacy, the next steps should focus on strengthening auto-enrollment cycles to re-engage those who initially opt out, expanding employer contributions to create stronger financial incentives for long-term participation, and deploying target-date funds as default investment options, which would enhance returns over time while reducing decision complexity for participants.

2.5. Cross-Country Reform Insights

1. Auto-Enrollment as a Catalyst

- Turkey's auto-enrollment and re-enrollment cycles provide lessons for Portugal and Greece, which could introduce soft defaults to boost participation.
- Behavioral economics shows that default participation plus modest incentives significantly increase coverage.

2. Target-Date Funds and Lifecycle Design

- Mexico's Siefors are a global best practice, ensuring age-appropriate risk exposure and minimizing participant decision fatigue.
- Turkey and Greece are beginning to adopt lifecycle strategies to enhance long-term adequacy.

3. Incentive Alignment and Fiscal Strategy

- Turkey's 30% match and Mexico's gradual contribution increases show that government incentives can drive both participation and adequacy.
- Greece and Portugal may need to introduce or expand tax and matching incentives to stimulate private saving.

4. Integration with Capital Markets

- Pension reform success is closely tied to capital market development.
- Mexico and Turkey demonstrate how private pension savings can fund domestic growth, while Greece and Portugal remain in early stages.

PART 3: Policy Suggestions for Strengthening Funded Pension Systems in Greece, Mexico, Portugal, and Turkey

The funded pension systems in Greece, Mexico, Portugal, and Turkey face the dual challenge of ensuring retirement adequacy and expanding participation amid fiscal constraints and demographic aging. Their levels of maturity vary widely:

- Mexico has a mature, fully funded defined-contribution (DC) system with broad coverage in the formal sector.
- Turkey has a hybrid, voluntary system with auto-enrollment (BES) that is growing but still constrained by high opt-outs and informality.
- Portugal operates a conservative, supplementary private pension market with voluntary participation.
- Greece has only recently introduced its first mandatory funded pillar (TEKA) and remains in the early stages of asset accumulation.

This report provides detailed policy suggestions for strengthening these systems, integrating behavioral finance, digital innovation, and international best practices.

1. Expanding Coverage via Auto-Enrollment and Re-Enrollment

Greece and Portugal: Introducing Auto-Enrollment

Participation in funded pensions remains extremely low in Greece ($\approx 3\%$) and modest in Portugal ($\approx 18.7\%$) due to their voluntary nature. To achieve broad coverage, soft auto-enrollment with opt-out flexibility should be introduced, starting with large employers and public-sector workers.

Implementation suggestions:

- Introduce auto-enrollment for occupational plans, with automatic payroll deduction.
- Implement re-enrollment cycles every 2–3 years to capture those who initially opt out.
- Offer small state bonuses or seed contributions to encourage initial retention.

Combine with awareness campaigns to address public mistrust, particularly in Greece.

Example from international practice:

- UK NEST increased private pension participation from ~40% to over 80% using soft auto-enrollment with staged contribution escalation.

Turkey: Strengthening Re-Enrollment and Employer Contributions

Turkey's BES system reached 28.7% participation by 2023 through auto-enrollment, but high opt-out rates limit its effectiveness. The next phase should strengthen re-enrollment and encourage employer participation.

Policy actions:

- Mandate re-enrollment cycles for all workers every 2–3 years.
- Introduce employer co-contributions, incentivized by tax credits.
- Use digital engagement campaigns through EGM to highlight the 30% state match and compound savings effect.

Mexico: Reaching the Informal Sector with Auto-Enrollment for Self-Employed

Mexico's Afore system achieves 85.2% coverage of formal workers, but 55% of the labor force is informal, leaving a significant coverage gap. Auto-enrollment for self-employed workers combined with mobile micro-savings can close this gap.

Practical solutions:

- Expand AforeMóvil features to allow instant micro-deposits and QR-code contributions.
- Offer state co-matching or bonuses for consistent small deposits.
- Partner with digital wallets and payment apps to capture gig-economy and informal sector workers.²

Example platforms:

- AforeMóvil (Mexico) – digital pension app allowing small, flexible contributions.
- Fintual (Mexico) – a fintech app that lets you invest and save seamlessly through a simple, everyday digital platform.

2. Improving Adequacy with Target-Date and Lifecycle Investment Strategies

All four countries can improve retirement adequacy by adopting target-date or lifecycle funds, which automatically adjust risk exposure based on age:

² In July 2025, a reform approved giving social security and pension savings to workers of platforms.

- Mexico is a global best practice with Siefors, where younger savers are equity-weighted and portfolios de-risk near retirement.
- Turkey has piloted target-date funds, but default use is limited.
- Greece and Portugal maintain highly conservative, bond-heavy portfolios, constraining long-term returns.

Policy suggestions:

- Make target-date funds the default investment option in Turkey and Greece.
- Reform Portugal's PPRs to allow lifecycle investment allocations.
- Gradually diversify TEKA's assets toward equities, infrastructure, and ESG (Environmental, Social and Governance) investments to improve real returns.
- Maintain risk-based supervision under EU IORP II to balance growth and participant protection.

3. Leveraging Behavioral and Technological Innovations

Behavioral and technological tools are powerful levers to improve participation and retention. Building on the success of Turkey's EGM and Mexico's AforeMóvil, governments can adopt innovative platforms and behavioral nudges:

- **Digital Micro-Pensions**
 - Allow small, flexible contributions via mobile apps.
 - Ideal for informal and gig workers.
 - Example: AforeMóvil (Mexico) enables micro-deposits in real-time.
- **Saving-Through-Consumption Platforms**
 - Encourage savings by rounding up daily purchases or channeling cashback into pensions.
 - Example: Millas para el Retiro (Mexico) partners with retailers to convert loyalty points and cashback into pension contributions.
 - Other references: Stash (US) and Acorns (US), which link consumption to micro-investing.
- **Blockchain-Enabled Transparency**

- Use blockchain-based recordkeeping to build trust in systems with historical skepticism, such as Greece and Turkey.
- Offers tamper-proof, real-time contribution visibility for participants and regulators.
- **Gamification and Behavioral Nudges**
 - Integrate progress trackers, mobile reminders, and reward badges in pension apps.
 - Example: India's APY (Atal Pension Yojana) uses SMS reminders to sustain contributions among informal workers.

4. Incentivizing Employer and Voluntary Contributions

Long-term adequacy depends on stable and sufficient contributions. Employer and voluntary incentives can strengthen accumulation:

- Portugal: Expand employer matching contributions in occupational plans.
- Turkey: Introduce mandatory or incentivized employer co-contributions for auto-enrolled workers.
- Greece: Provide initial seed contributions to TEKA for first-time enrollees to improve trust and participation.
- Mexico: Incentivize voluntary top-ups and micro-savings from informal workers with small state matches.

5. Aligning Funded Pensions with Capital Market and ESG Development

Environmental, Social and Governance (ESG) investing has become an integral part of long-term pension fund strategy worldwide. By incorporating ESG considerations into investment processes, pension funds can better manage long-term risks, capture opportunities in sustainable assets (e.g., renewable infrastructure, green bonds), and align portfolios with international initiatives such as the UN Principles for Responsible Investment (UN-PRI) and the EU Sustainable Finance Disclosure Regulation (SFDR). Evidence shows that well-governed funds integrating ESG factors may improve risk-adjusted returns while supporting sustainable economic growth (OECD, 2023; UN-PRI, 2022).

Funded pensions are long-term capital pools that can fuel domestic economic growth if properly channeled:

- Mexico already invests in infrastructure and private equity, supporting national development.
- Turkey could expand BES allocations into green bonds and ESG-linked infrastructure projects to align with long-term policy goals.
- Greece and Portugal should gradually reduce overreliance on government bonds, moving toward diversified and sustainable investments, consistent with EU Green Deal objectives.

While aligning funded pensions with capital-market and ESG objectives offers important opportunities, several country-specific constraints could moderate the pace and scale of these reforms. Economic disparities and elevated poverty rates—particularly in Mexico and Turkey—may limit workers’ ability to contribute steadily, reducing the investable base of pension funds. In Greece and Portugal, slow asset accumulation and historically high reliance on public PAYG schemes can delay the macroeconomic benefits of ESG-oriented diversification. Broader capital-market depth and liquidity also differ across the four countries, which may restrict the availability of high-quality sustainable assets. These factors underline the need for phased implementation, complementary social policies, and ongoing monitoring of distributional effects, rather than a one-size-fits-all approach.

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