



Brief

Strengthening Pension Savings in Emerging Markets: The Role of Behavioral and Technological Tools

Carolina Cabrita Felix, PhD
Seda Peksevim, PhD



**CFA Institute
Research
Foundation**

Strengthening Pension Savings in Emerging Markets: The Role of Behavioral and Technological Tools

Carolina Cabrita Felix, PhD

Pensión Research and Consulting, UniAbrapp

Seda Peksevim, PhD

Pensión Research and Consulting, ARC Centre of Excellence in Population Ageing Research (CEPAR)



CFA Institute
Research
Foundation

Statement of Purpose

The CFA Institute Research Foundation is a not-for-profit organization established to promote the development and dissemination of relevant research for investment practitioners worldwide.

© 2026 CFA Institute Research Foundation. All rights reserved.

Neither CFA Institute Research Foundation, CFA Institute, nor the publication's editorial staff is responsible for facts and opinions presented in this publication. This publication reflects the views of the author(s) and does not represent the official views of CFA Institute Research Foundation.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission of the copyright holder. Requests for permission to make copies of any part of the work should be mailed to: Copyright Permissions, CFA Institute, 915 East High Street, Charlottesville, Virginia 22902. CFA® and Chartered Financial Analyst® are trademarks owned by CFA Institute. To view a list of CFA Institute trademarks and the Guide for the Use of CFA Institute Marks, please visit our website at www.cfainstitute.org.

CFA Institute does not provide investment, financial, tax, legal, or other advice. This report was prepared for informational purposes only and is not intended to provide, and should not be relied on for, investment, financial, tax, legal, or other advice. CFA Institute is not responsible for the content of websites and information resources that may be referenced in the report. Reference to these sites or resources does not constitute an endorsement by CFA Institute of the information contained therein. The inclusion of company examples does not in any way constitute an endorsement of these organizations by CFA Institute. Although we have endeavored to ensure that the information contained in this report has been obtained from reliable and up-to-date sources, the changing nature of statistics, laws, rules, and regulations may result in delays, omissions, or inaccuracies in information contained in this report.

Photo credit: Merrill Images / Getty Images / Corbis Documentary

ISBN: 978-1-952927-70-6

CONTENTS

Introduction	1
Brazil	3
Chile	10
Colombia	17
Mexico	22
Turkey	28
India	36
South Africa	43
Kenya	51
References	59



CFA Institute

PROFESSIONAL LEARNING QUALIFIED ACTIVITY

This publication qualifies for 1.75 PL credits under the guidelines of the CFA Institute Professional Learning Program.

INTRODUCTION

Over the past two decades, the global pension landscape has undergone a profound transformation driven by aging of the population, technological progress, and behavioral insight. Emerging and middle-income economies—including Brazil, Chile, Colombia, India, Kenya, Mexico, South Africa, and Turkey—face a shared dual challenge: expanding pension coverage while ensuring adequate and sustainable retirement income. Increasingly, these countries are turning to innovation—both technological and behavioral—to improve participation, efficiency, and trust in their pension systems.

Traditional policy levers, such as tax incentives, employer mandates, and state contributions, remain important but are no longer sufficient to close coverage gaps, particularly among informal and low-income workers. As a result, digital infrastructure, fintech platforms, and behavioral design have emerged as critical tools to reshape how individuals engage with pension systems. Auto-enrollment, mobile micropensions, digital identity systems, and life-cycle default investment options are at the forefront of this transformation, thus making saving for retirement simpler, more intuitive, and more inclusive.

Across emerging economies, these innovations are converging toward a model of “smart inclusion.” In Mexico, digitalization has redefined voluntary pension savings: Applications such as *AforeMóvil* and *Millas para el Retiro* have enabled millions of workers to manage and grow their retirement savings directly through mobile platforms, connecting daily consumption with long-term financial goals. In India, Aadhaar-based electronic know-your-customer (e-KYC) and micropension schemes have reached vast numbers of informal workers. In Turkey, auto-enrollment combined with matching state contributions have leveraged behavioral anchoring to strengthen participation. Similarly, Chile and Colombia have expanded digital transparency and personalized communication tools to establish confidence in their systems, while Brazil has experimented with innovative products, such as the *Tesouro RendA+* retirement bond, to increase access to long-term savings. In South Africa and Kenya, mobile-based contribution systems and goal-tracking dashboards are overcoming short-term bias and liquidity constraints.

The shift toward behavioral and technological design extends to investment management. Pension funds are increasingly using data-driven allocation models, robo-advisory tools, and environmental, social, and governance (ESG) integration frameworks to improve risk management and member outcomes. These advances represent a broader transition toward tech-enabled, human-centered pensions, in which automation reduces complexity and behavioral insight ensures that default choices and incentives align with savers’ long-term welfare.

In this brief, we explore how eight emerging pension systems are navigating this transition. We analyze the interplay among structural reforms, behavioral design, and technological innovation to draw lessons for policymakers, regulators, and international development institutions. By comparing institutional frameworks, incentive mechanisms, and digital inclusion strategies, we highlight the fact that the success of pension reform depends not only on fiscal discipline or regulatory capacity but also on the ability to integrate human behavior and digital capability into pension policy.

Ultimately, the evidence shows that the future of pensions in emerging markets lies at the intersection of behavioral economics and technological innovation. Countries that embed these principles into their pension frameworks—such as Mexico, which has successfully merged mobile technology with behavioral nudges—are more likely to achieve sustainable coverage expansion, resilient investment performance, and stronger public trust in retirement systems.

BRAZIL

Population: 212.8 million

GDP per Capita: USD10,578

Purchasing Power Parity (PPP) GDP per Capita: USD23,310

Working Age Population/Total Population: 69.1%

Old-Age Dependency Ratio: 16.6%

Domestic Equity Market Cap/GDP: 30.2%

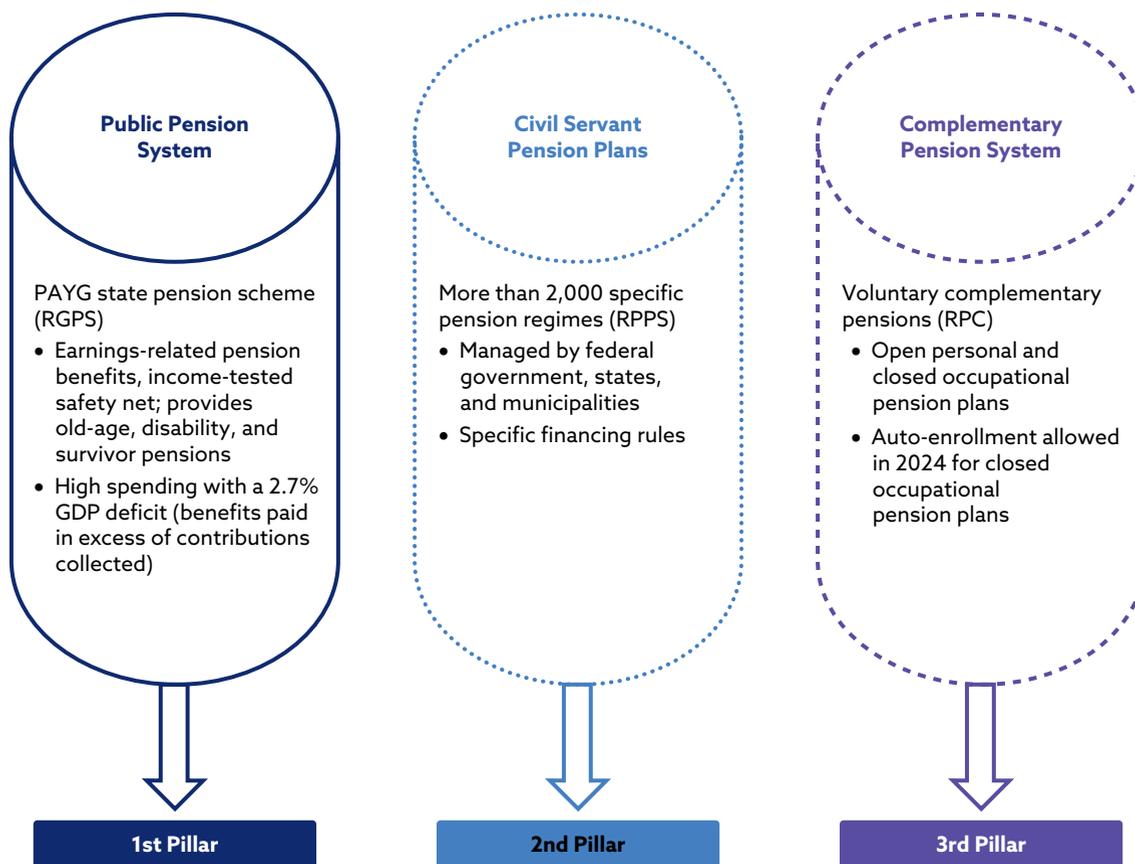
Pension Funds' Assets/GDP: 13.9%

Sources: United Nations Data Portal Population Division, International Monetary Fund (IMF) Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

The Brazilian pension system is structured around three main pillars: (1) a mandatory pay-as-you-go (PAYG) public pension scheme; (2) social security special regimes, which are dedicated to certain categories of public servants and the military; and (3) a voluntary complementary pension regime featuring occupational pension plans (closed pension plans) and private personal pension plans (open pension plans; see **Exhibit 1**).

- **General Social Security Regime (*Regime Geral de Previdência Social*, or RGPS):** The first pillar covers private-sector employees, self-employed workers, and some public-sector employees who do not qualify for civil servant pensions. The RGPS provides old-age, disability, and survivor pensions and other benefits to formal workers. As of 2020, approximately 56.4% of Brazil's economically active population was covered under this system. The minimum retirement age is set at 62 years for women and 65 years for men (55 years and 60 years for rural workers, respectively). The RGPS currently presents a 2.7% GDP deficit (RGPS benefits paid in excess of contributions), which includes the covered population subsidized by taxpayers because contributory pension deficits are financed by taxes (Zviniene and Tsukada 2023).
- **Public Sector Pension Schemes (*Regimes Próprios de Previdência Social*, or RPPS):** The second pillar includes more than 2,000 pension regimes managed by the federal government, states, and municipalities that have specific financing rules. Although each regime has a separate legal framework and financing structure, the majority of regimes operate on a PAYG basis (Silva 2025).
- **Complementary Pension Regime (*Regime de Previdência Complementar*, or RPC):** The third pillar is voluntary. Pension plans are offered on an individual (personal) or occupational (employment-related) basis. Open (personal) plans are managed by banks and insurance

Exhibit 1. The Three Pillars of the Brazilian Pension System



Source: All exhibits created by the authors.

companies and are purchased directly by individuals, whereas closed occupational pension plans are set up by employers, unions, or professional associations. In 2024, auto-enrollment was allowed for closed pension plans, with an average increase in enrollment of 6% among the pension funds that adopted it.

Defined Contribution Pensions Landscape in Brazil

Basic Characteristics

Brazil's RPC operates as a voluntary, mostly fully funded defined contribution (DC) scheme. Defined benefit (DB) schemes still exist but are being phased out. The DC scheme includes pension funds set up by employers, unions, or professional associations and managed by Closed Entities of Complementary Pension Provision (*Entidades Fechadas de Previdência Complementar*, or EFPCs), as well as personal plans purchased directly by individuals from

banks and insurance companies (*Entidades Abertas de Previdência Complementar*, or EAPCs). Closed pension plans currently include around 3 million participants and manage assets totaling approximately BRL1.34 trillion (about USD252 billion), while open pension plans include around 9.8 million participants and manage assets totaling approximately BRL1.69 trillion (about USD318 billion). There are 266 closed entities to support complementary pension provision, and 43 insurance companies and open entities provide personal pension plans.

The regulatory framework governing private pension entities differs significantly between open and closed plans. Closed entities are overseen by the National Superintendence of Complementary Pensions (*Superintendência Nacional de Previdência Complementar*), which operates under the Ministry of Social Security. Open pension entities are supervised by the Superintendence of Private Insurance, which is linked to the Ministry of Finance. The policy guidelines for these sectors are established by the National Board of Complementary Pensions (*Conselho Nacional de Previdência Complementar*) and the National Council of Private Insurance (*Conselho Nacional de Seguros Privados*), respectively (Silva 2025).

Asset Allocation

In the complementary regime, pension funds' investments can be managed by the pension entity or by an authorized third party (a mix of these two is also permitted). Open entities' investments represented 57.5% of total complementary pension investments as of March 2025. Federal government bonds (66.8%) and other fixed-income instruments (28.9%) prevail, while variable-income instruments (2.9%) and other investments (1.4%) constitute a minor part of the asset allocation.

The investment of closed entities is more diversified, although it is highly skewed toward fixed income. Federal government bonds represent 67.2% of reserves; the remainder of the asset allocation comes from variable income (9%), other fixed-income instruments (16.8%), real estate (2.4%), and other investments (4.6%) (Ministério da Previdência Social 2025).

Fee Structure

The Brazilian complementary pension system includes two types of fees: an administration fee and a loading fee. For EFPCs, the administration fee is a percentage levied annually on the amount of funds guaranteeing the benefit plans. The loading fee is a percentage levied on the sum of contributions and/or benefits of the plans to cover administrative expenses (it can be charged each time a contribution is received and/or a benefit is paid). Generally, EFPCs charge only the loading fee or only the administration fee, but both fees may be charged according to the funding plan defined for the plan. As of March 2025, the average annual administration fee at EFPCs was 0.28% (Ministério da Previdência Social 2025).

For EAPCs, the administration fee is the amount paid by all shareholders of an investment fund to cover its administration and the manager's work. It is a fixed annual amount, but the discount is applied every day during the term of the contract. The loading fee is a percentage calculated on each new financial transaction (incoming or outgoing) carried out for supplementary retirement plans. It is common for EAPCs to charge only the administration fee. As of March 2025, the average annual administration fee at EAPCs was 1.2% (Ministério da Previdência Social 2025).

Pension Reforms

In response to structural imbalances and fiscal pressures on civil servants' pension plans, the RPC was introduced in 2019 for new public servants. It required all public entities that operate their own RPPS to implement the RPC within two years. The key objective was to ensure the fiscal sustainability of public pensions by capping RPPS benefits at the ceiling of the RGPS and shifting additional benefits to a private capitalization model.¹ In this framework, additional retirement income depends on individual contributions and investment returns (i.e., the DC model), bringing civil servant schemes closer to private-sector standards. The RPC is mandatory for new entrants and optional for existing employees, who may migrate to the new plan. To increase participation, particularly among new entrants, the government recommends adopting auto-enrollment with opt-out provisions within the first 90 days of employment.

Auto-enrollment has played a significant role in the growth and consolidation of the Federal Public Servant Complementary Pension Fund (*Fundação de Previdência Complementar do Servidor Público Federal*, or FUNPRESP), one of the first closed entities created to manage complementary benefit plans for civil servants at the federal level. By March 2025, the fund had achieved a strong position in terms of both scale and financial stability, managing more than BRL11.88 billion (USD2.23 billion) in assets. Participant numbers also expanded substantially, exceeding 115,400—an outcome largely driven by exceptionally low opt-out rates.

In February 2024, auto-enrollment was formally authorized for all occupational pension plan sponsors, encompassing both public and private sectors, as a strategy to enhance participation rates. Early results show that 24 occupational pension plans have adopted auto-enrollment, for which affiliation rates have increased 6% on average, with a maximum increase of 13%.

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

The most popular plans in the open complementary pension segment are the Free Benefit Generator Plan (PGBL) and the Free Benefit Generator Life Plan (VGBL). The main difference between the two plans is their tax treatment. The PGBL has a tax benefit (deferral). It allows a deduction of up to 12% of taxable income from the income tax calculation base, and when the benefits are redeemed and received, income tax is levied on the entire amount paid. For the VGBL, contributions cannot be deducted from the participant's income subject to tax. Tax is levied on the income, however, only when it is redeemed and received.

State Contributions

Public servants who contribute to the RPC and earn more than the RGPS ceiling monthly (approximately USD1,531) are entitled to a matching state contribution of the same amount as their savings. This is the case for public servants who work for the Federal Government and

¹The ceiling of the RGPS is the maximum amount paid for pensions and benefits and serves as the maximum limit for contribution wages.

contribute to FUNPRESP, as well as state and municipality public servants who contribute to other complementary pension funds.

Employer Contributions

Closed plans are offered by companies only to their employees (sponsored plans) or by associations and unions to their members (institutional plans). In the case of sponsored plans, in addition to the contributions made by the participants to their pension plan, companies also make contributions at percentages predefined in the respective regulations.

Behavioral and Technological Tools to Promote Pension Savings

Auto-Enrollment Reform

Auto-enrollment was first introduced in the RPC at FUNPRESP in 2015. Under auto-enrollment, federal public servants are automatically enrolled in FUNPRESP and can opt out within 90 days, receiving inflation-adjusted contributions back.

At FUNPRESP, total enrollment increased from 8% to 88% after auto-enrollment, and the opt-out rate is less than 10%. In 2023, the permanence rate at FUNPRESP reached a record level of 94%.

The successful experience of FUNPRESP led social security authorities to approve its use by all complementary pension sponsors, public or private, in February 2024. Employees would have a 120-day period to opt out, keeping the voluntary nature of the RPC. As of June 2025, the RPC regulator had already licensed auto-enrollment for 24 pension funds of 17 pension entities, with an average increase in enrollment of 6% (highest increase of 13%).

Tesouro RendA+

Brazil was the first country in the world to issue a retirement bond—an idea developed by Robert Merton and Arun Muralidhar. The main idea of this bond is to provide inflation-protected extra income for retirement in a simple way, so that almost anyone can invest and receive a complementary income for retirement.

The Brazilian government made these bonds available in 2023 through Treasury Direct (*Tesouro Direto*) and used behavioral insight for many features of the bond, including its main characteristics and its name. The bond pays retirement income for 20 years, thus not insuring retirees against longevity risk.

Tesouro RendA+: Innovative Retirement Bond in Brazil

Nobel Laureates Robert Merton and Arun Muralidhar proposed a retirement bond that would pay an inflation-protected monthly income for 20 years, as a way to guarantee an income stream in retirement that would both ensure its purchasing power and be easy to invest in.

The Brazilian National Treasury, in partnership with B3 and the Social Security Secretariat (*Secretaria de Previdência*), gave life to this idea and, in January 2023, launched Tesouro RendA+.

One can start investing in Tesouro RendA+ with any amount. The minimum purchase amount is 0.01 of a security, or 1% of the security's value, expanding access to a supplementary pension for everyone. There is no limit on asset purchases. Investors can purchase as many securities as they want from among the eight different Tesouro RendA+ securities available, up to a limit of BRL2 million per month (approximately USD373,490).

One of the advantages of Tesouro RendA+ is the exemption from custody fees for investors who hold the securities until maturity; that is, they pay a custody fee only if they sell their securities in advance or if, at the time of conversion of the accumulated securities into income, they receive a monthly income exceeding six times the minimum wage, with a fee of 0.1% per year being charged on the amount exceeding that cap.

If the investor decides to redeem the investment before the maturity date, the custody fee on the chosen amount will be regressive:

Redemption from 0 to 10 years: 0.50% per year

Redemption from 10 to 20 years: 0.20% per year

More than 20 years: 0.10% per year

Only on the maturity date: 0.00%

At the end of January 2025, Tesouro RendA+ had a record stock of BRL4 billion (about USD724 million), up 150% compared with the same period in 2024. Regarding the profile of investors in the product, 61% are in the 25–44 age-group.

Policy Recommendations

Introduce a Mandatory or Auto-Enrollment Savings Scheme for All Workers

Brazil's aging population and declining fertility have imposed a high degree of pressure on government spending for pension systems. The public PAYG pension system will have increasingly fewer active workers contributing to pension benefits, whereas the population of older adults is growing and also living longer. This combination of factors guarantees the need for future pension reforms.

Brazil should consider implementing a mandatory or auto-enrollment individual account pension system to increase funding for future pension benefits. It could require a low contribution rate in the beginning (considering the already high contribution rate for the PAYG system) and gradually increase it. Greece's experience with TEKA (Hellenic Auxiliary Pensions Defined Contribution Fund) and Turkey's experience with auto-enrollment might be interesting case studies for Brazil.

Broaden Complementary Pensions for Gig and Informal Workers

Brazil has an important sector of informal workers (38%) and gig workers, most of whom do not contribute to any pension scheme. A pension policy for these workers is urgently needed. Micropension schemes, like the ones implemented in India, are interesting examples for Brazil. These schemes are voluntary, allow for flexible and small contributions, and make use of behavioral insight and technology to ease worker contributions and improve their chances of engagement.

Introduce Life-Cycle Investment for Pension Funds

Life-cycle investment for savings schemes in Brazil could increase returns and improve future pension benefits. Life-cycle schemes adjust risk and return combinations as participants age, seeking higher returns with lower risks without the need for workers' involvement. Life-cycle investing is increasingly being practiced in emerging markets and has been included in the recent pension reforms in Chile, Colombia, Costa Rica, and Mexico.

Promote Financial and Pension Education

Promoting financial and pension education is fundamental to keep younger generations out of poverty in old age. With an aging population and an increasing old-age dependency ratio, Brazil will need future pension reforms and an increase in personal savings for retirement, either through formal pension schemes and/or personal choice. Therefore, financial and pension education is indispensable for building a better future for Brazilian retirees.

CHILE

Population: 19.9 million

GDP per Capita: USD17,181

PPP GDP per Capita: USD35,286

Working Age Population/Total Population: 68.9%

Old-Age Dependency Ratio: 21.2%

Domestic Equity Market Cap/GDP: 79.3%

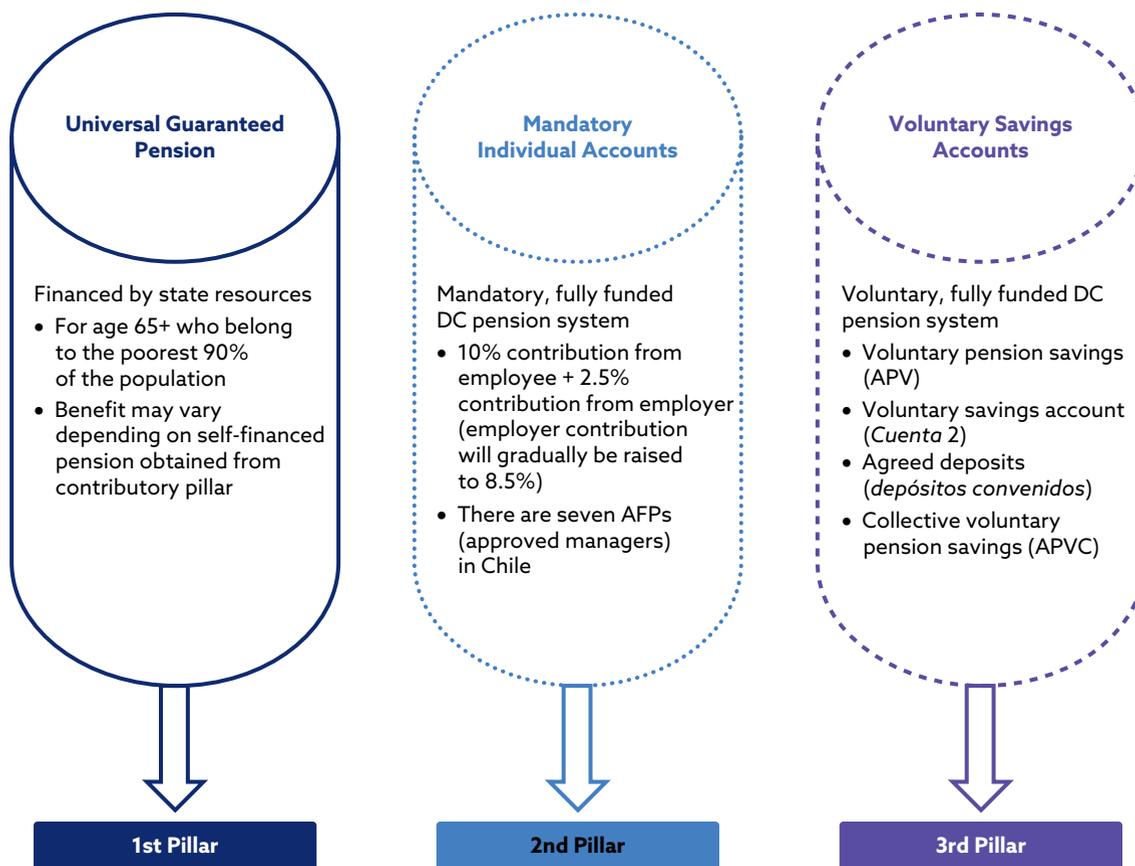
Pension Funds' Assets/GDP: 75.8%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

The Chilean pension system consists of three main pillars (see **Exhibit 2**):

- Universal Guaranteed Pension (*Pensión Garantizada Universal*, or PGU): Financed with state resources, this benefit is added to the self-financed pension for those 65 years or older who belong to the 90% of the population with the lowest incomes. In August 2025, a reform came into effect that gradually increases the PGU to CLP250,000 (approximately USD260 per month) for certain age-groups.
- Mandatory contributory pillar: Mandatory contributions are the main component for dependent and independent workers. Each person is required to contribute 10% of their taxable income to an individual capitalization account managed by a pension funds manager (*administradoras de fondos de pensiones*, or AFP). Employers currently contribute 2.5% (0.1% to the worker's individual account, 0.9% to a solidarity fund, and 1.5% to a disability and survivor insurance fund), but their contribution will gradually increase to 8.5% by 2033. The final pension benefit depends on the amount saved, the number of years contributed, and the return on the AFP's investments.
- Voluntary contributory pillar: Voluntary contributions allow members to save additional funds, to either raise pension benefits or retire earlier. It includes voluntary pension savings (*Ahorro Previsional Voluntario*, or APV) and the voluntary savings account (*Cuenta de Ahorro Voluntario o Cuenta 2*), both of which offer tax benefits. Agreed deposits (*depósitos convenidos*) and collective voluntary pension savings (*Ahorro Previsional Voluntario Colectivo*, or APVC) can be made through the employer.

Exhibit 2. The Three Pillars of the Chilean Pension System



DC Pensions Landscape in Chile

Basic Characteristics

Chile's DC pension system includes a mandatory pillar and a voluntary pillar. Chile was the first country in the world to fully replace its PAYG pension system with a fully funded savings scheme. As of July 2025, there were almost 5.8 million contributors to the system (fewer than 1% are self-employed workers).

Formal workers contribute 10% of their taxable income to an individual pension account, and a 2025 pension reform included an employer contribution that will gradually increase from 1% to 7%. Currently, employers also contribute approximately 1.5% to disability and survivor insurance.

The main change that comes with the 2025 Chilean pension reform is the establishment of a mixed pension system, in which workers' individual capital accounts with AFPs are maintained, a social security pension insurance system operates, and contributors make a loan to the state

to increase the pensions of those already retired, which is then repaid when they retire. Out of the current 1% contribution of employers, 0.1% goes to individual accounts and 0.9% goes to the Social Insurance (*Seguro Social*).

Asset Allocation

As of August 2025, Chilean pension funds' assets were invested mostly in domestic fixed income (38%), foreign equities (35.9%), foreign fixed income (14.9%), and domestic equities (8.9%). Investment in alternative assets is allowed in Chile.

The 2025 pension reform includes the implementation of target-date funds, which might alter the asset composition of investments. According to the approved reform, Chile is expected to implement at least 10 target-date funds, which will begin operating in 2027.

Fee Structure

Fees vary from 0.46% (AFP *Uno*) to 1.45% (AFP *Provida*) of the taxable income of workers (not of the amount invested), with an average fee of 1.08%. Since 2010, Chile has conducted tenders for the allocation of new affiliates among AFPs, with the objective of reducing the much-criticized high costs of AFPs' management. So far, eight tenders have been made, with winning fees varying from 1.14% in 2010 (AFP *Modelo*) to 0.46% in 2025 (AFP *Uno*).

Pension Reforms

A recent reform of Chile's pension system was approved on 29 January 2025, after more than two years of discussion in the National Congress (Law No. 21,735). This is the first reform in more than 40 years to introduce parametric changes to the contributory pillar. Some of its main measures are as follows:

- Gradual increase in the employer contribution rate to 8.5% (includes 1.5% contribution to disability and survivor insurance)
- Creation of a new social insurance that provides compensation to women for their higher life expectancy and a bonus for years of contributions that will mainly benefit current retirees
- Gradual increase in the amount of the Universal Guaranteed Pension to CLP250,000 (approximately USD260)
- Changes to the AFP system, such as bidding for members' stock and new players
- Introduction of target-date funds in place of current multifunds

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

According to the Organisation for Economic Co-operation and Development (OECD), contributions to voluntary accounts

are tax-exempt up to a certain limit. Regarding contributions to APV or APVC, there are two tax regimes available for members:

- Regime B: Contributions are tax-exempt, up to a limit of 50 UF (Unidades de Fomento) per month or 600 UF per year. Under this regime, voluntary contributions are deducted before taxation.
- Regime A: Contributions are not deducted [from taxable income], but individuals are entitled to a matching contribution by the government of 15% of yearly voluntary contributions, with a limit of 6 UTM [Unidad Tributaria Mensual].

Agreed deposits are contributions settled between the employer and the worker. These savings may only be withdrawn upon retirement, and they are not subject to taxation up to a maximum of 900 UF per year. Contributions above this limit are taxed at the individual's marginal rate of income tax. (OECD 2023, 23)

State Contributions

Regarding state contributions, the OECD explained,

Workers between 18 and 35 years old with an income lower than 1.5 times the minimum wage are entitled to a government matching contribution for the first 24 [monthly] contributions to the pension system. This contribution consists [of] two payments: a subsidy to employers for hiring this type of worker and a direct contribution to the worker's pension account of the same amount. The matching contribution is equivalent to 50% of the mandatory contribution of the worker if the wage is lower than or equal to the minimum wage or 50% of the mandatory contribution over the minimum wage if the wage is greater than the minimum wage and lower than 1.5 times the minimum wage. (2023, 24)

Employer Contributions

APVC allows employers to take out a plan for their workers, with contributions from both the employer and the employees, to improve pensions. This contract seeks to encourage pension savings, offering tax benefits to workers and contributing to their future pensions. APVC contracts, however, are limited and have not been widely used in the country.

Behavioral and Technological Tools to Promote Pension Savings

Pension Simulator (*Simulador de Pensiones*)

The Chilean Pension Simulator was launched by the Pensions Supervisor in 2012 and was updated in 2014, providing a tool that gives an approximation of the amount of pension that a member of an AFP will receive at the time of retirement. The tool shows three pension scenarios: expected, optimistic, and pessimistic, based on variables, such as average monthly taxable income, accumulated mandatory pension savings, voluntary savings, the number of annual pension contributions, the multifund in which contributions are deposited, and the member's

planned retirement age.² In addition to the official Pension Simulator from the Pensions Supervisor, other simulators from AFPs are generally exclusive to members. Both types of simulator (the one from the Pensions Supervisor and those from AFPs) include options to see how workers' pensions would change if they had a higher level of voluntary savings.

Pilot Initiatives Using Behavioral Economics or Technology

The Retirement Savings Laboratory of the Inter-American Development Bank (IDB) carried out four behavioral interventions in Chile focused on incentivizing retirement savings for low-income workers.

Using the principles of behavioral economics, the IDB and BancoEstado took advantage of the moment when BancoEstado customers completed their loan payments to offer the possibility of voluntarily saving for retirement. The idea behind this intervention was to take advantage of a moment of increased liquidity to offer the APV product to customers, in addition to reducing loss aversion, given that customers would not see their income reduced by saving because they had already been paying off a loan (Azuara Herrera et al. 2021). Text messages, emails, and pop-up messages on the BancoEstado website were used to offer this product to customers. The intervention, however, did not yield statistically significant results, possibly, according to researchers, because BancoEstado was already conducting a massive campaign with all its customers to promote APV. Nevertheless, customers who participated in the intervention significantly reduced their mortgage debt compared with customers in the control group.

Another behavioral intervention carried out in Chile by the IDB, with the support of the Association of Pension Fund Administrators and Puntaje Nacional, was a workshop for a group of high school seniors from technical-professional schools, with the aim of providing financial and pension knowledge, thereby reducing the impact of cognitive biases on their future financial and pension decisions.

To measure the impact of the "Save Now" (*Ahorra Desde Ahora*) workshop, students were surveyed about their awareness, knowledge, and confidence regarding long-term savings and the pension system two months after attending the workshop (Azuara Herrera et al. 2021). As a result, students who participated in the workshop answered 1.5 more questions correctly than the control group (6.1 and 4.6 correct answers, respectively, out of a total of 13 questions), a statistically significant difference. The researchers found that not only did the students' financial and pension knowledge increase, but so did their confidence in the pension system. The long-term effects on their financial decisions have not yet been evaluated.

The IDB Retirement Savings Laboratory conducted two other behavioral pilots in Chile, focusing primarily on low-income workers. For more information on these interventions, see Azuara Herrera et al. (2021).

²Multifunds have existed in Chile since 2002, and they vary depending on the degree of portfolio risk. Fund A is the riskiest, and Fund E is the most conservative. Funds B, C, and D are more balanced and have a decreasing level of risk.

Retirement Savings Laboratory of the Inter-American Development Bank

Over the past decade, several countries in Latin America and the Caribbean have tested initiatives aimed at promoting social security contributions or encouraging voluntary retirement savings using behavioral economics principles. The IDB has been particularly active in this area through its Retirement Savings Laboratory and its Behavioral Economics Group.

Although the IDB's Behavioral Economics Group works in different areas of public policy (education, gender, health, social security, and pensions, among others), the Retirement Savings Laboratory has spent five years exclusively focused on implementing "solutions in Chile, Colombia, Mexico, and Peru based on behavioral economics and supported by the possibilities offered by new technologies to facilitate savings for low-income citizens" (Azuara Herrera et al. 2021, 10).

In the work of the IDB's Behavioral Economics Group related to social security and retirement savings, the main behavioral barriers encountered in achieving the desired retirement savings behavior included present bias, cognitive overload, discomfort factors, and inertia (IDB 2022). In turn, the IDB's Retirement Savings Laboratory, in particular, highlights present bias, social preferences, and overoptimism as the main cognitive biases affecting long-term savings (Azuara Herrera et al. 2021).

In the space for trial and error of the Retirement Savings Laboratory, the project team designed and implemented 14 pilot programs to encourage voluntary retirement savings and improve knowledge about how pension systems work. The most pilot programs were implemented in Mexico (five), followed by Chile and Colombia (four each) and Peru (one).

Half of the interventions had positive effects on the retirement savings of low-income workers in Latin America. Three of them used messages and reminders (one in Mexico and two in Colombia), two were based on an active decision for an automatic debit (one in Peru and one in Chile), and two used financial education and simplification to incentivize savings for retirement (one in Chile and one in Colombia).

Policy Recommendations

Consider Auto-Enrollment for the Voluntary Savings Pillar

With the highest life expectancy at birth in the region (81.5 years in 2025) and a projected life expectancy at birth in the year 2100 of 91.3 years, Chileans have the important and difficult challenge of saving enough for retirement. The 2025 reform that increases the contributory rate

for the savings scheme is an important step toward increasing replacement rates in the country, but it might not be sufficient. An auto-enrollment design for the voluntary pillar might be particularly helpful for the portion of the population that has the means to save more but does not save because of cognitive biases, such as present bias, inertia, and loss aversion. The experiences of Brazil and Turkey with auto-enrollment for the voluntary savings pillar can be useful for Chile.

Update Pension Simulator with 2025 Pension Reform Features

In Chile, the Pension Simulator currently considers only sources of retirement income related to the second pillar of mandatory individual accounts and the third pillar of voluntary savings. With the pension reform approved in March 2025, which raises the employer's contribution to 8.5% (4.5% for individual savings, 1.5% to finance the "Contribution Years Bonus," and 2.5% for a new type of social security that compensates differences in life expectancy for women and disability and survivorship insurance), the Pension Simulator should evolve into a comprehensive panel that eventually shows all sources of income as established by law, including the Universal Guaranteed Pension.

Implement a Savings Scheme for Informal Workers

Since 2008, when a solidarity pillar was introduced in Chile, noncontributory pensions have played a significant role in the prevention of poverty in old age for informal and low-income workers. Noncontributory pensions, however, tend to be small. Furthermore, the rapid aging of Chile's population will considerably pressure pension expenses, which might limit increases in noncontributory benefits.

A savings scheme that uses behavioral insight as well as technological tools can significantly improve the quality of life of informal workers in old age. It should be accompanied by financial and pension education as well as financial incentives, if possible. The experience of India with its National Private System and the extension for informal workers to voluntarily save for retirement constitutes an interesting case study for Chile.

Promote Financial and Pension Education

Financial and pension education have been shown to significantly improve retirement outcomes and are especially important in a country such as Chile, with a high life expectancy and one of the highest old-age dependency ratios in the region. Furthermore, to incentivize voluntary savings for retirement, financial and pension education are fundamental for complementing other tools (such as auto-enrollment, behavioral insight, and technology) to maximize impact.

COLOMBIA

Population: 53.4 million

GDP per Capita: USD8,249

PPP GDP per Capita: USD22,396

Working Age Population/Total Population: 69.8%

Old-Age Dependency Ratio: 14.6%

Domestic Equity Market Cap/GDP: 17.4%

Pension Funds' Assets/GDP: 34.5%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

Colombia currently has a three-pillar scheme (see **Exhibit 3**), consisting of the following:

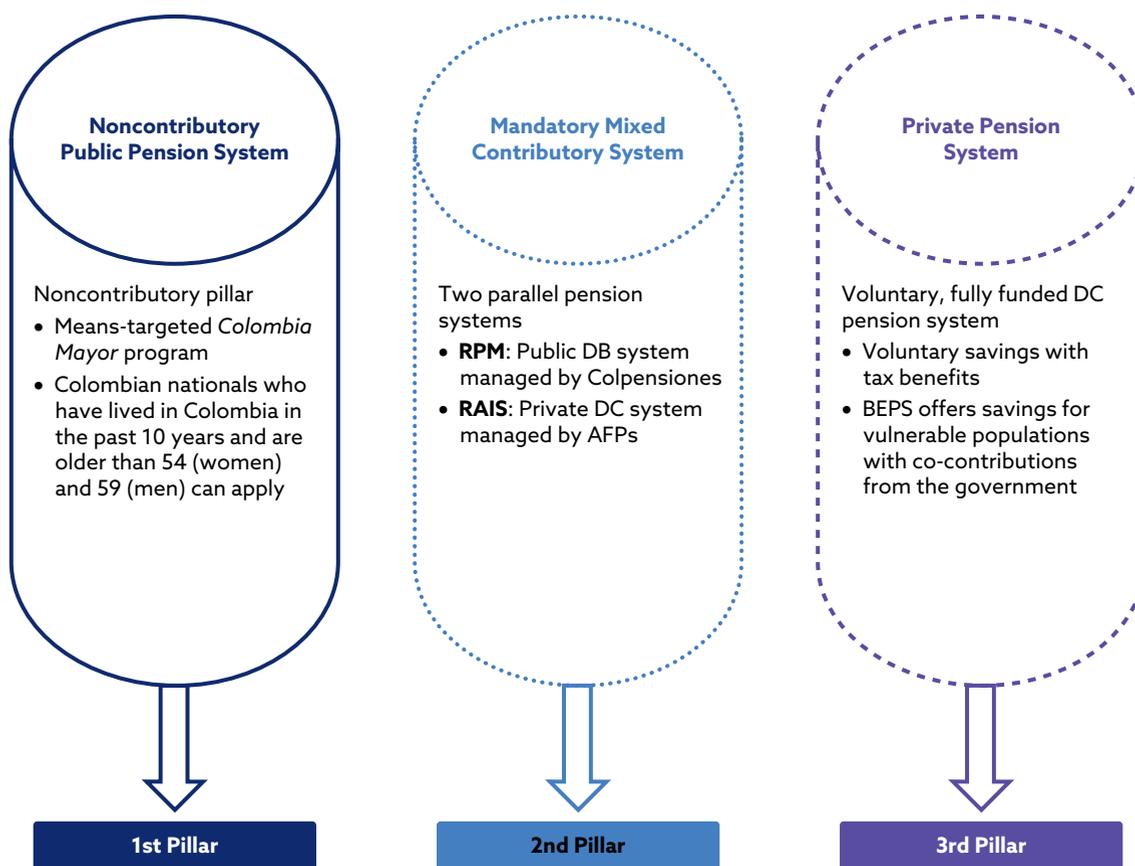
- *Colombia Mayor* program: This first pillar, a noncontributory public system, provides cash subsidies for older adults living in poverty.
- Mandatory mixed contributory system: The second pillar includes the Average Premium Regime (*Régimen de Prima Media*, or RPM; Colpensiones, public and DB) and the Individual Savings with Solidarity Regime (*Régimen de Ahorro Individual con Solidaridad*, or RAIS; AFP, private and DC). Workers can choose between these two regimes.
- Voluntary pension savings: The third pillar combines voluntary pension savings with tax incentives. In addition, the Colpensiones Economic Benefits program, administered by Colpensiones, offers savings for vulnerable populations with co-contributions from the government.

DC Pensions Landscape in Colombia

Basic Characteristics

Colombia's private pension system includes RAIS, a contributory mandatory scheme that competes with the public DB system RPM, as well as the voluntary pillar. RAIS has four pension fund managers (Colfondos, Porvenir, Protección, and Skandia). As of June 2025, RAIS had 19.2 million affiliates, and 940,185 affiliates contributed voluntary savings for retirement.

Exhibit 3. The Three Pillars of the Colombian Pension System



Asset Allocation

The mandatory fully funded scheme in Colombia has almost 51% of its total value in foreign assets (including government debt, financial institution debt, mutual funds, investment funds, alternative funds, and hedge funds), 35% is invested in government bonds, 7% is invested in the financial sector, 5% is invested in equity, and less than 2% is invested in other assets.

Fee Structure

Fees charged by pension fund managers in Colombia vary from 0.47% (Porvenir and Protección) to 2.05% (Skandia). Colfondos charges 0.97%. In Colombia, pension fund managers can also charge other types of fees, including management of unemployed workers' resources (4.5% of monthly returns), management of voluntary savings (0.75%–4% of annual balance), transfer of affiliates to another manager or to the RPM regime (1% of monthly income), and management of programmed withdrawal funds (1% of monthly returns).

Pension Reforms

A pension reform was approved in Colombia in 2024, which implements a pension system based on four pillars:

- **Solidarity pillar:** The first pillar is designed to support older people who have fewer resources. They will receive a monthly Basic Solidarity Income, equivalent to the minimum amount needed to overcome extreme poverty. This pillar will be administered by the Administrative Department of Social Prosperity.
- **Semicontributory pillar:** The second pillar offers an opportunity for those who, upon reaching the age of 60 for women or 65 for men, have not reached the minimum number of contribution weeks to obtain a pension but can access a life annuity. A key factor in improving this income is savings.
- **Contributory pillar:** The third pillar seeks to ensure that all formal workers, self-employed workers, public servants, and individuals with the ability to pay contributions receive an old-age, disability, or survivor's pension. If a worker earns up to 2.3 times the current legal monthly minimum wage (*Salario Mínimo Mensual Legal Vigente*, SMMLV; approximately USD849), contributions will be managed by the Average Premium Regime—that is, by Colpensiones. If, however, a worker earns more than 2.3 times SMMLV, contributions are divided as follows:
 - Income between 1 and 2.3 SMMLV: Contribution goes to the public fund managed by Colpensiones.
 - Income above 2.3 SMMLV: The surplus goes to the Complementary Individual Savings Component.
- **Voluntary savings pillar:** The fourth pillar seeks to enable those who have the means to do so to make voluntary contributions in addition to the mandatory ones to complete the weeks required for a pension, through an equivalence system, or to improve their monthly pension.

The pension reform law was passed in July 2024 and was scheduled to take effect on 1 July 2025, but its implementation has been halted because of questions about the legality of its passage through the Congress of Colombia.

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

The tax benefits of voluntary pension savings in Colombia include a deduction from the taxable income base of up to 30% of annual employment or taxable income. This can result in a reduction in the tax payable and is accessed by meeting certain requirements, such as maintaining contributions for at least 10 years, using them to purchase a home, or meeting the conditions for retirement or disability.

State Contributions

The Colpensiones Economic Benefits (BEPS) program for low-income workers includes a 20% matching contribution from the government to workers who opt to use their savings as an annuity that is paid every two months upon retirement.

Employer Contributions

Voluntary contributions made by the employer on behalf of an employee may also generate tax benefits.

Behavioral and Technological Tools to Promote Pension Savings

BEPS Program

For Colombians who are older than 18 years, earn less than the minimum wage, and cannot contribute to a pension, Colpensiones created the BEPS program. It is an easy-to-use, flexible, and voluntary program. Savings can be made in one of the collection points with just an identification number and date of birth. Savings with BEPS can also be converted into weeks to reach the 1,300 weeks required to obtain an old-age pension. Furthermore, the national government grants a 20% matching contribution benefit to those who, upon reaching retirement age, choose to receive a lifetime income every two months. Life insurance and funeral assistance are also available for contributors who reach a certain amount of savings.

At the end of July 2025, a total of 2,062,536 people were enrolled, of whom 1,191,804 are savers. Women account for 68% (1,396,085) of the total number of enrollments to date. The program has also benefited 54,670 Colombians with life annuities (53% of these grants are received by women, who receive this benefit every two months). This benefit, which increases each year according to the cost of living, includes, in some cases, a contribution from the national government of an additional 20% of the amount saved.

IDB Retirement Savings Laboratory Pilot Initiatives

To address problems associated with the high level of labor informality and the high number of self-employed workers in Colombia, one of the interventions of the IDB's Retirement Savings Laboratory sought to encourage social security contributions among self-employed workers affiliated with the Protección Pension Fund Administrator. The goal was to encourage, through email messages, mandatory savings among members who were not contributing and voluntary savings among members who were already making mandatory contributions (Azuara Herrera et al. 2021).

Two types of email messages based on behavioral economics principles were used. The first group of messages challenged the belief that self-employed workers do not contribute to the pension system (60% of them actually do so in Colombia). The second group of messages highlighted the difference in the pension received by a dependent worker and a self-employed worker, showing that self-employed workers are required to contribute on only 40% of their income, while dependent workers contribute on 100% of their income.

Although no statistically significant results were found for the total sample of 110,367 self-employed workers affiliated with Protección, positive and significant evidence was found that the emails encouraged voluntary savings among a subgroup of self-employed workers, particularly those with low and middle incomes (Azuara Herrera et al. 2021).

The IDB Retirement Savings Laboratory conducted three other behavioral pilot studies in Colombia, focusing primarily on low-income workers. For more information on these interventions, see Azuara Herrera et al. (2021).

Policy Recommendations

Consider Auto-Enrollment for the Voluntary Savings Pillar

Colombia's old-age dependency ratio is projected to more than double in the next 25 years (from 14.6% in 2025 to 31.7% in 2050). In 2100, an old-age dependency ratio of 67.5% is expected nationwide. The increasing number of older adults compared with active younger adults will increase fiscal pressure on Colombia's public pension fund. An increasing life expectancy at birth (78.1 years in 2025, 88.9 years projected for 2100) also requires higher savings to finance more years of retirement. Therefore, a well-designed auto-enrollment program for the voluntary pillar might be beneficial to the country. The experiences of other emerging markets with auto-enrollment, such as Brazil and Turkey, can inform policymakers in Colombia.

Consider an Increase in Retirement Age

Colombia's retirement age is one of the lowest in the region (57 for women and 62 for men), even though life expectancy at birth is one of the highest. Demographic transition will raise pressure on the public system and require higher savings to finance sufficient pensions for the elderly. Hence, raising the retirement age closer to the OECD average (63.6 for women and 64.4 for men in 2022) not only might be fiscally beneficial for the government but also might promote savings and incentivize workers to extend their working lives.

Improve BEPS for Low-Income and Informal Workers

The scope of the BEPS program could be broadened with the use of behavioral insights and technology. Even though BEPS has many collection points across the country, promoting savings through apps (such as WhatsApp) might increase the program's reach and capture important savers, such as younger workers. India's experience with the National Pension System could be an interesting case study for Colombia.

Promote Financial and Pension Education

Colombia is in the process of a pension reform, with structural changes that seek to replace its competitive pension model (in which a public DB scheme competes with a private DC scheme) with a multipillar system that includes a solidarity pillar, a semicontributory pillar, a contributory pillar, and a voluntary pillar. In this context, providing timely and complete information to Colombian nationals is key to guarantee they are better prepared for their future in retirement.

MEXICO

Population: 131.9 million

GDP per Capita: USD13,967

PPP GDP per Capita: USD25,770

Working Age Population/Total Population: 67.4%

Old-Age Dependency Ratio: 12.6%

Domestic Equity Market Cap/GDP: 22.5%

Pension Funds' Assets/GDP: 20.4%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

Following are the four pillars of the Mexican pension system (see **Exhibit 4**):

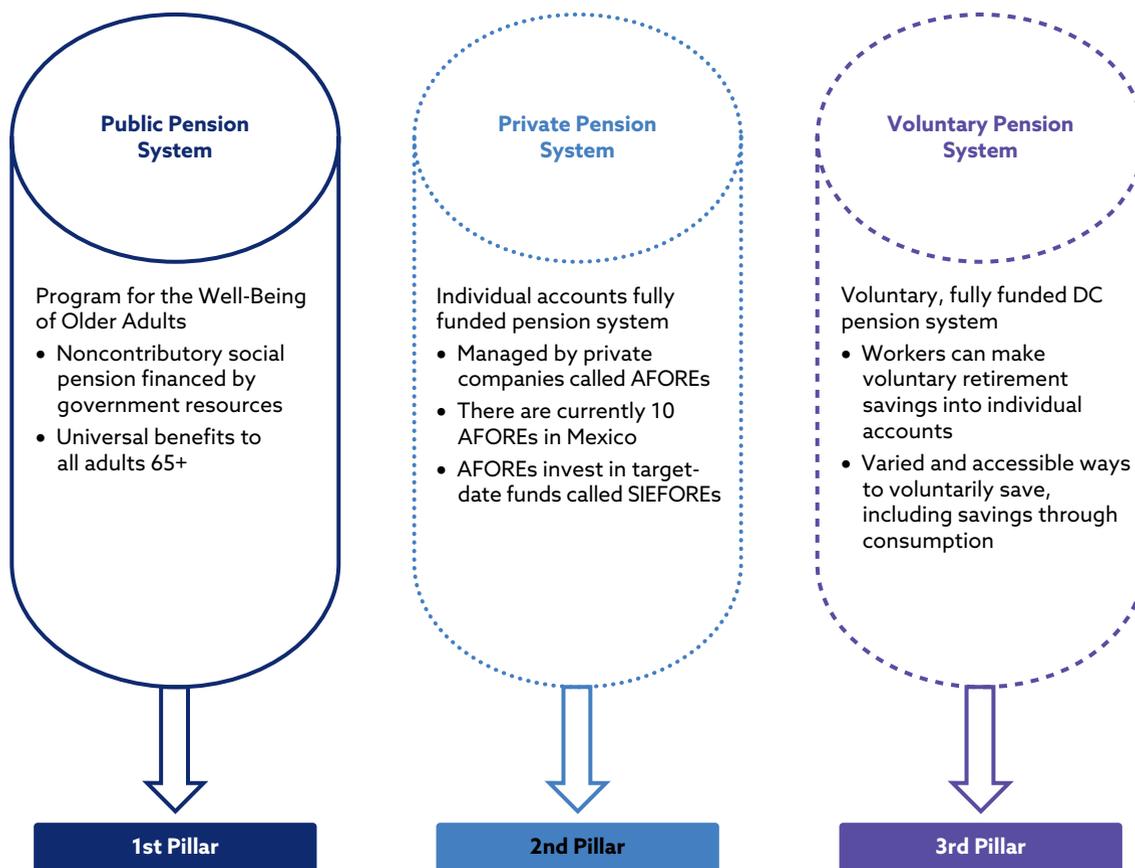
- Program for the Well-Being of Older Adults: The first pillar, a noncontributory social pension, is financed by the federal government, which provides universal benefits to all adults over 65 years.
- Retirement Fund Administrators (*Administradoras de Fondos para el Retiro*, AFOREs): The second pillar is a contributory individual capitalization system administered by private companies.
- Voluntary contributions: The third pillar features contributions made by workers to their individual accounts.
- Welfare Pension Fund (*Fondo de Pensiones para el Bienestar*): New in 2024, the fourth pillar provides a solidarity supplement to guarantee a 100% replacement rate for the pensions of workers earning less than the average Mexican Social Security Institute (*Instituto Mexicano del Seguro Social*, IMSS) wage (it applies to workers in the AFORE system who retire at age 65 years or older).

DC Pensions Landscape in Mexico

Basic Characteristics

AFOREs are private financial institutions that manage workers' individual savings accounts. The National Commission for the Retirement Savings System (CONSAR) regulates their operations. Under the current system, pensions are based on workers' individual savings,

Exhibit 4. The First Three Pillars of the Mexican Pension System



Note: A reform in 2024 introduced a fourth pillar to the Mexican pension system, the Welfare Pension Fund, which provides supplementary pension benefits for certain low-income workers.

supplemented by contributions from employers, the government, and returns on investments made by the AFOREs. Currently, Mexico has 10 AFOREs.

In 2030, contribution rates will be increasing from 6.5% to 15%, as part of the 2020 Mexican pension reform.

Asset Allocation

As of September 2025, AFOREs' portfolios were well diversified:

- Government bonds: 52%
- Domestic equities: 7%
- International equities: 13%
- National private equity: 12%
- Other investments: 16%

Sociedades de Inversión Especializadas en Fondos para el Retiro SIEFORES (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 allocation reduces behavioral risks, such as panic selling, and improves long-term adequacy.

Fee Structure

In Mexico, nine AFORES currently charge 0.55% of assets under management (AUM) and one (Pensionisste) charges 0.52%. Fees are determined by the pension regulator CONSAR, with a methodology that considers the fees charged in Chile, Colombia, and the United States. For 2026, CONSAR has established the maximum fee that can be charged by AFORES at 0.54%. Regulatory pressure has steadily reduced fees, increasing participants' net returns in Mexico.

Pension Reforms

The 1997 pension reform in Mexico replaced the PAYG scheme with a mandatory DC 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 have limited the effectiveness of the original design.

The 2020–2021 pension reform in Mexico addressed multiple structural weaknesses. The main elements of this reform were “a gradual increase in the percentage of contributions, particularly those made by employers, to workers' retirement accounts, from 6.5% to 15% of salary; a flexible scheme for obtaining the guaranteed minimum pension (GMP)”; a decrease in the number of weeks a worker must have contributed to be entitled to a payment “higher than the GMP prior to this reform; a reduction in the number of weeks a worker must have contributed to be entitled to a pension; and the establishment of a ceiling on the commissions charged by ... AFORES” (Federación Internacional de Administradoras de Fondos de Pensiones 2021, 1).

A 2024 pension reform implemented a solidarity system so that workers registered with the IMSS or with the Institute for Social Security and Services for State Workers (ISSSTE) could obtain a pension of at least MXN17,364 (approximately USD935) per month in 2025. This is achieved through (1) the creation of the Welfare Pension Fund and (2) the establishment of an average base salary each year to ensure that retirees receive a decent pension.

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

Voluntary retirement savings can be deducted from annual tax returns if savings are kept in an AFORE account until age 65. Depending on the type of voluntary savings, they may be subject to the following tax benefits:

- 10% deduction, up to 10% of annual income: This benefit is capped at MXN207,616.80 (approximately USD11,704).
- Tax benefit: This benefit subtracts the amount of contributions from the income tax rate applicable to the annual tax return, up to USD152,000 for each fiscal year. Savings must remain invested for at least five years. When withdrawing funds, the lowest income tax rate applicable within the five-year period on the amounts withdrawn is applied.

State Contributions

The government promotes voluntary savings through mobile applications and other mechanisms so that workers can supplement their pensions. It does not, however, contribute to workers' voluntary savings accounts.

Employer Contributions

Employers in Mexico can offer incentives for voluntary pension savings, mainly through tax deductibility and Solidarity Savings for government employees. Voluntary savings are tax deductible up to a certain limit, while Solidarity Savings are incentivized with an employer contribution of up to MXN3.25 for every MXN1 contributed by the worker (for ISSSTE employees). Other forms of support include corporate pension plans and digital tools to facilitate savings.

Behavioral and Technological Tools to Promote Pension Savings

Mexico offers several ways to save voluntarily for retirement: commercial networks (e.g., 7-Eleven, Walmart), available apps (e.g., AforeMóvil, Millas para el Retiro, and uLink), GanAhorro, AforeWeb, Afores' Portal, Afores' window, and the employer.

AforeMóvil

AforeMóvil is a smartphone app that allows users in Mexico to manage their AFORE account from their mobile device. It was officially launched in August 2017. It covers the mandatory individual savings pillar and the voluntary savings pillar of the pension system, facilitating retirement planning mainly through account management, a basic pension calculator, and the promotion of voluntary contributions. To date, the app has been downloaded more than 34 million times. In experiments with personalized interventions, this application has achieved a potential 16% increase in voluntary savings. Although AforeMóvil is a useful tool for keeping track of individual accounts, it works only for members (Federación Internacional de Administradoras de Fondos de Pensiones 2025).

AforeMóvil was promoted by the pension regulator and was supported by six AFOREs. This distinctive feature allowed resources to be pooled to carry out a mass publicity campaign and encourage downloads.

CONSAR also offers pension calculators on its website for members of the IMSS, members of the ISSSTE, and self-employed workers. Additionally, the AFOREs also offer their own pension calculators (Federación Internacional de Administradoras de Fondos de Pensiones 2025).

Millas para el Retiro

The *Millas para el Retiro* initiative is a financial program originating in Mexico that promotes voluntary retirement savings through everyday spending. It works as a mobile app that connects to the user's retirement savings account (AFORE), allowing a percentage of purchases made at participating merchants to be automatically deposited into their retirement account.

The most important features of *Millas para el Retiro* are as follows:

- Savings through consumption: Instead of receiving discounts, a percentage of the money that users spend on partner brands is credited to their retirement account.
- Integration with AFOREs: The app is connected to Mexican pension funds, so savings are allocated securely and without commissions.
- Voluntary contributions: Users can make additional and flexible contributions, even from very small amounts.

Policy Recommendations

Introduce a Flexible and Voluntary Savings Scheme for Informal Workers

With a high proportion of Mexico's labor force working in the informal sector (about 56%), the government could introduce a voluntary savings scheme focused on this group of workers. The Colombian BEPS scheme, which includes government matching contributions, could be an interesting case study for Mexico. Informal workers have different characteristics than formal workers, and any scheme directed at them should take these factors into account. Flexibility, the possibility of making small savings, liquidity, and financial incentives are desirable features for a saving-for-retirement scheme for informal workers.

Consider the Introduction of Auto-Enrollment for Voluntary Savings

A group of formal workers might benefit from an auto-enrollment scheme that would increase their savings for retirement and therefore contribute to receiving higher pension benefits in the future. Mexico, as well as most countries in Latin America, is experiencing a rising life expectancy at birth (75.4 years in 2025; 86.8 years projected for 2100), which requires an increasing amount of savings for financing more years of life. A well-designed auto-enrollment scheme, like the ones already implemented in Brazil and Turkey, could considerably improve pension benefits in Mexico.

Closely Monitor Poverty Rates of Older Adults

The poverty rate of Mexico's elderly population (19.8%) is higher than the total population's poverty rate (16.6%). Recent reforms in Mexico—which introduced a universal pension for adults age 65 years and older as well as the Welfare Pension Fund—are important for guaranteeing that

Mexicans avoid poverty in old age, but results should be continuously monitored to guarantee that objectives are being met.

Continue Work on Financial and Pension Education

Even though Mexico has been one of the most active countries in the region in promoting financial and pension education, it should continue improving this work in the context of increasing longevity and pension replacement rates that do not reach 70% (replacement rates were 62.4% in 2022). Programs focused specifically on informal and independent workers should be a priority.

TURKEY

Population: 87.7 million

GDP per Capita: USD18,198

PPP GDP per Capita: USD43,786

Working Age Population/Total Population: 68.4%

Old-Age Dependency Ratio: 15.5%

Domestic Equity Market Cap/GDP: 28.6%

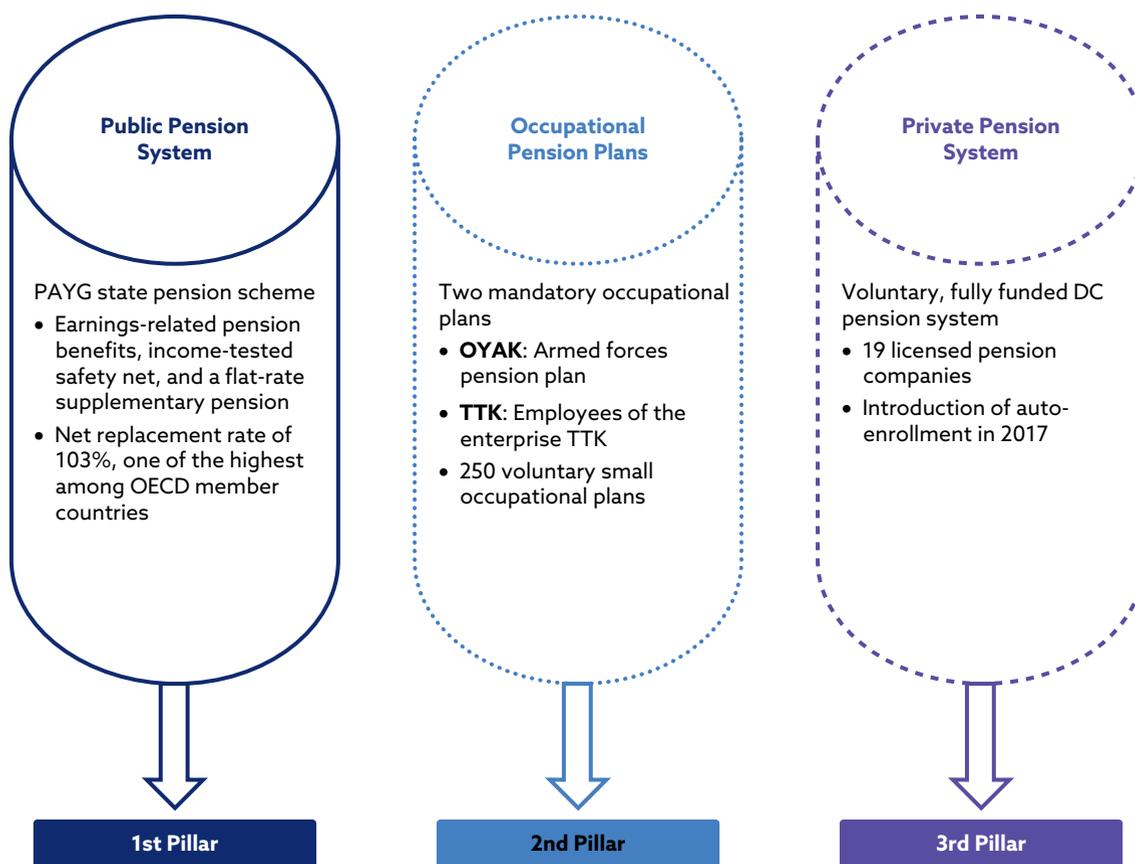
Pension Funds' Assets/GDP: 3.4%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

The Turkish pension system is structured around three main pillars: (1) a mandatory PAYG public pension scheme; (2) occupational pension plans, mostly DB in nature; and (3) a voluntary, fully funded DC private pension system (see **Exhibit 5**).

- **Public social security program:** The first pillar provides not only old-age pensions but also a broad range of social insurance benefits, including health care, disability, survivorship, unemployment, workplace injury, and life insurance coverage. It operates on an earnings-related DB model, supplemented by a means-tested safety net and a flat-rate pension. The minimum retirement age, currently set at 58 years for women and 60 years for men, is scheduled to rise to 65 for both sexes by 2048. Notably, Turkey's first pillar delivers a net replacement rate of around 103%, one of the highest among OECD and EU member states (OECD 2020).
- **Compulsory occupational pension schemes:** The second pillar includes two schemes: Ordu Yardımlaşma Kurumu (OYAK), which serves armed forces personnel, and the Türkiye Taşkömürü Kurumu (TTK) plan for workers in the state-run coal mining sector. Beyond these, there are around 250 voluntary occupational schemes, although most are small in scale and offer limited coverage.
- **Private Pension System (BES):** The third pillar was introduced in 2003 to increase national savings, enhance retirement income security, and ease the long-term fiscal pressure on the public PAYG scheme. It operates on a voluntary, fully funded DC basis, and since 2017, it has been supplemented by an auto-enrollment program that brings eligible employees into the BES unless they opt out.

Exhibit 5. The Three Pillars of the Turkish Pension System



DC Pensions Landscape in Turkey

Basic Characteristics

Turkey's private pension system operates as a voluntary, fully funded DC scheme. It currently includes more than 9 million participants and manages assets totaling approximately USD30 billion (Pension Monitoring Center 2024). A distinctive feature of the Turkish system is its two-tier intermediation structure: Pension companies are responsible for offering pension plans and collecting contributions, but they are not permitted to manage the funds themselves. Instead, they must appoint separate portfolio management companies to handle the investments. To prevent market dominance and potential governance risks, specific regulations guide the selection of fund managers.

The system is supported by various tax incentives across the contribution, investment, and retirement phases. To become eligible for full pension benefits, participants must have contributed for at least 10 years and reached the age of 56. Oversight is also dual layered: The Pension Monitoring Center under the Turkish Treasury acts as the main regulator for

pension companies, while the Capital Markets Board independently supervises pension funds and portfolio managers. This structure mirrors the dual-intermediation model, adding to the system's regulatory complexity.

Asset Allocation

The asset allocation of Turkish private pension funds is heavily skewed toward fixed-income instruments, which made up more than 80% of portfolios, including money market assets, in 2019. Equities accounted for only 12%–15%, with the remainder invested in alternative assets, such as precious metals and sukuk, or Islamic bonds (Kayhan and Togan Eğrican 2021). Compared with more developed pension systems, equity exposure in Turkey is significantly lower. This cautious stance can be explained by three main factors.

First, the legacy of the hyperinflationary 1990s has left fund managers and investors with a deep-seated distrust of equity markets. Second, public perception of the stock market is often distorted, influenced by misinformation and flawed reporting of market performance. Third, both industry participants and regulators tend to adopt a short-term focus in assessing fund performance, which discourages long-term investment strategies and further limits equity allocations.

Fee Structure

The Turkish private pension system includes three main types of fees: (1) an entrance fee, (2) an administrative management fee, and (3) a fund management fee. The entrance fee is a one-time charge applied when participants open their first account, while the management fee covers operational and administrative costs. Fund management fees vary depending on the risk level of the investment fund. The total fund expense ratio under the auto-enrollment scheme is regulated in favor of participants and cannot exceed 1.09% annually (Insurance Association of Türkiye 2024). One of the primary reasons for relatively high fees is the dual-agency structure of the system, in which pension companies are required to outsource fund management to separate portfolio management firms. This leads to fee-sharing arrangements that drive up overall costs for participants. Despite the high fees, the investment performance of many pension funds has been underwhelming and often lags behind passively managed benchmarks. To address concerns over cost and improve value for participants, the government introduced regulatory measures in early 2016 aimed at lowering the maximum allowable entrance and management fees to align with international standards.

Pension Reforms

Since the launch of Turkey's private pension system in 2003, the government has implemented two major reforms to expand pension fund assets: the introduction of government matching contributions in 2013 and the adoption of auto-enrollment in 2017. The 2013 reform replaced the previous tax deductibility of contributions with direct state contributions, offering a minimum of 25% of the employee's contribution or 25% of the annual minimum wage. This policy significantly increased participation, nearly doubling pension funds' assets within three years. Despite this growth, however, Turkey's ratio of pension assets to GDP remained low—only 2.5%—ranking as one of the lowest among OECD member countries. Additionally, the reform led to greater volatility in pension asset levels, potentially because of a moral hazard effect created by generous state matching combined with the ease of exiting the system. In response,

the government introduced auto-enrollment in early 2017 to further strengthen asset accumulation and broaden system participation.

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

Governments often provide tax advantages to encourage individuals to contribute to private pension plans.

- In Turkey, before 2013, employee contributions to the BES were tax deductible from gross income.
- Beginning in 2013, the system shifted to state matching contributions, eliminating direct tax deductibility.
- Investment income in pension funds is tax advantaged, with reduced withholding tax rates applied after certain holding periods.

State Contributions

The government may directly contribute to individuals' pension accounts to promote long-term savings.

- In Turkey, the state contribution rate is 30% of the individual's contribution. For example, if a person contributes TRY1,000, the government adds TRY300.
- This contribution is vested gradually, with full access typically granted after 10 years and at age 56.

Employer Contributions

Employers can contribute to employees' pension plans to enhance benefits and support retirement security.

- In Turkey, employer contributions to pension plans are voluntary, not mandatory.
- Some companies offer employer-sponsored pension schemes as part of their benefits package.
- These contributions may receive preferential tax treatment, such as partial exemption from social security premiums.

Behavioral and Technological Tools to Promote Pension Savings

Auto-Enrollment Reform

To encourage greater retirement savings and improve financial security for retirees, the Turkish government revised the Private Pension Savings and Investment System Law in January 2017

to introduce auto-enrollment into the private pension system. This reform extended coverage not only to new participants but also to those already enrolled voluntarily in the BES. As a result, more than 7 million employees have been automatically enrolled, with assets under this scheme amounting to around USD2.53 billion (Pension Monitoring Center 2024). These figures are expected to grow as the program expands. Unlike other OECD member countries, such as the United Kingdom and New Zealand, where auto-enrollment has seen sustained participation, Turkey has faced high opt-out rates (approximately 54%) casting uncertainty over the system's long-term effectiveness.

According to a 2018 report by the Insurance Association of Türkiye, the main reasons cited for opting out include participants' existing financial burdens (71%) and the unaffordability of additional pension contributions (56%). Other contributing factors were concerns about the long-term nature of investments (35%), preferences for alternative savings options (30%), dissatisfaction with pension fund performance (19%), and high associated charges (16%). Given the 14% contribution rate to the mandatory public pension system, many workers likely find it difficult to commit an additional 3% toward private pensions. A study by Prabhakar (2017) emphasizes affordability as a key driver behind opt-out decisions in several countries and suggests that introducing employer contributions could reduce opt-out rates and strengthen participation.

Key Elements of the Auto-Enrollment Program in Turkey

As of 1 January 2017, employees under the age of 45 years working in either the public or private sector are required to be automatically enrolled by their employers into private pension schemes. Although participation is mandatory at the outset, employees have the option to opt out within the first two months of enrollment. Even after this initial window, they retain the right to exit the system at any time. A regulatory amendment introduced in December 2018 stipulates that individuals who opt out will be automatically reenrolled in the system within a three-year period.

Currently, more than 7 million individuals are enrolled in private pension plans through this automatic mechanism. The enrollment process was phased in according to the size of the employer, beginning with companies with 1,000 or more employees in January 2017 and extending to those with as few as five to nine employees by January 2019, following a stepwise rollout schedule based on workforce size.

Contribution Rates and Financial Incentives

Under the auto-enrollment scheme, the minimum default contribution rate is set at 3% of an employee's gross salary. Employers are not required to make any additional contributions to their employees' private pension accounts. To encourage participation,

the government contributes an additional 25% of the employee's monthly contribution, subject to existing vesting rules. In addition, a one-time government bonus of TRY1,000 is provided after an employee is first enrolled in the system. An extra incentive is also offered at the retirement stage; if the accumulated savings are used to purchase a minimum 10-year annuity, the government grants an additional 5% contribution based on the total assets at retirement.

Default Fund Design

The auto-enrollment system in Turkey does not have a clearly defined default fund structure. According to Vakif Pension, one of the largest pension providers in the country, if an employee does not actively select a fund upon joining, the employee's contributions during the initial two-month opt-out period are invested in a default fund chosen by either the employee or the employer. If the employee does not opt out and still has not selected a fund, the employee's savings continue to be directed into this same fund for the next 10 months. After completing one full year in the system without making a fund choice, the accumulated savings are then transferred to a standard fund based on the participant's original preference for either interest-bearing or interest-free investment options.

Fee Structure

Within the auto-enrollment scheme, pension companies are permitted to charge only a fund management fee. Additionally, they may impose a performance-based fee if the fund's returns exceed inflation-adjusted thresholds for specific asset classes. These performance-linked fees are evaluated annually and added to the standard fund management fee. The total fee charged to participants, however, is capped at 0.85% of AUM per year.

Payout Phase

At retirement, participants can choose how to receive their accumulated pension savings—either as a lump sum, through programmed withdrawals, or in the form of a life annuity. Despite this flexibility, Turkey's annuity market remains underdeveloped, offering limited options to match the varying needs of retirees.

Moreover, participants have skepticism around the TRY1,000 government kick-start bonus. Although employees become eligible for this incentive after remaining in the system beyond the two-month opt-out period, the payment is only made at retirement (age 56). Many participants question whether this incentive will be reliably provided in the future, which undermines its perceived value and reduces its effectiveness in encouraging long-term participation.

Policy Recommendations

Improve the Design and Credibility of Auto-Enrollment

The auto-enrollment system in Turkey has faced high opt-out rates (around 54%) primarily because of affordability concerns and lack of trust in government incentives. To address this problem, the system should introduce a more flexible contribution structure, allowing workers to start at 1% or 2% of their salary, rather than the current flat 3%. Additionally, the TRY1,000 government kick-start incentive could be made more credible by disbursing it after one year of uninterrupted participation instead of deferring it until retirement at age 56. This change would likely enhance the perceived value of the incentive, reduce early dropouts, and support long-term participation.

Introduce Life-Cycle Default Investment Options

The absence of a standardized default investment structure is a major shortcoming in the current auto-enrollment design. Most contributions are passively directed into low-risk, low-return instruments, which may not suit young savers with long investment horizons. A well-designed life-cycle (target-date) default fund should be introduced, gradually reducing equity exposure as participants approach retirement. This approach would improve long-term return potential while managing risk more appropriately across life stages. It would also align Turkey with best practices in OECD member countries.

Reduce Pension System Costs and Increase Fee Transparency

The current fee structure in the Turkish DC system remains relatively high, partly because of the dual-layered intermediation model involving both pension and portfolio management companies. These overlapping roles contribute to inefficiencies and higher costs passed on to savers. Policymakers should consider lowering the maximum fund management fee cap, especially in the auto-enrollment segment, and promote fee structures that reward long-term performance. Requiring providers to publish simple, comparable fee disclosures would empower participants to make informed choices and increase trust in the system.

Mandate Modest Employer Contributions

To create a more balanced and effective incentive structure, employer contributions should be mandatory, even at a minimal level, such as 1%–2% of salary. Currently, Turkish employers are not obligated to contribute, which limits the perceived value of private pensions among employees and contributes to high opt-out rates. Mandating employer contributions would reduce the financial burden on workers, reinforce the idea of shared responsibility for retirement savings, and encourage broader participation, particularly among young and low-income employees.

Promote Technological Integration and Financial Education

To foster greater engagement and accessibility, the DC system should leverage digital tools, such as centralized pension dashboards, mobile apps, and real-time contribution tracking. These platforms can improve transparency and allow participants to monitor their savings progress and projected retirement income. At the same time, targeted financial education campaigns—especially focused on young workers and low-income earners—can help demystify pension concepts, correct misinformation about equity markets, and build long-term savings habits. Combining digital access with better communication is essential to improving trust and participation.

INDIA

Population: 1.464 billion

GDP per Capita: USD2,818

PPP GDP per Capita: USD12,101

Working Age Population/Total Population: 68.4%

Old-Age Dependency Ratio: 10.8%

Domestic Equity Market Cap/GDP: 131.1%

Pension Funds' Assets/GDP: 9.3%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

India's pension system is organized around three main pillars (see **Exhibit 6**):

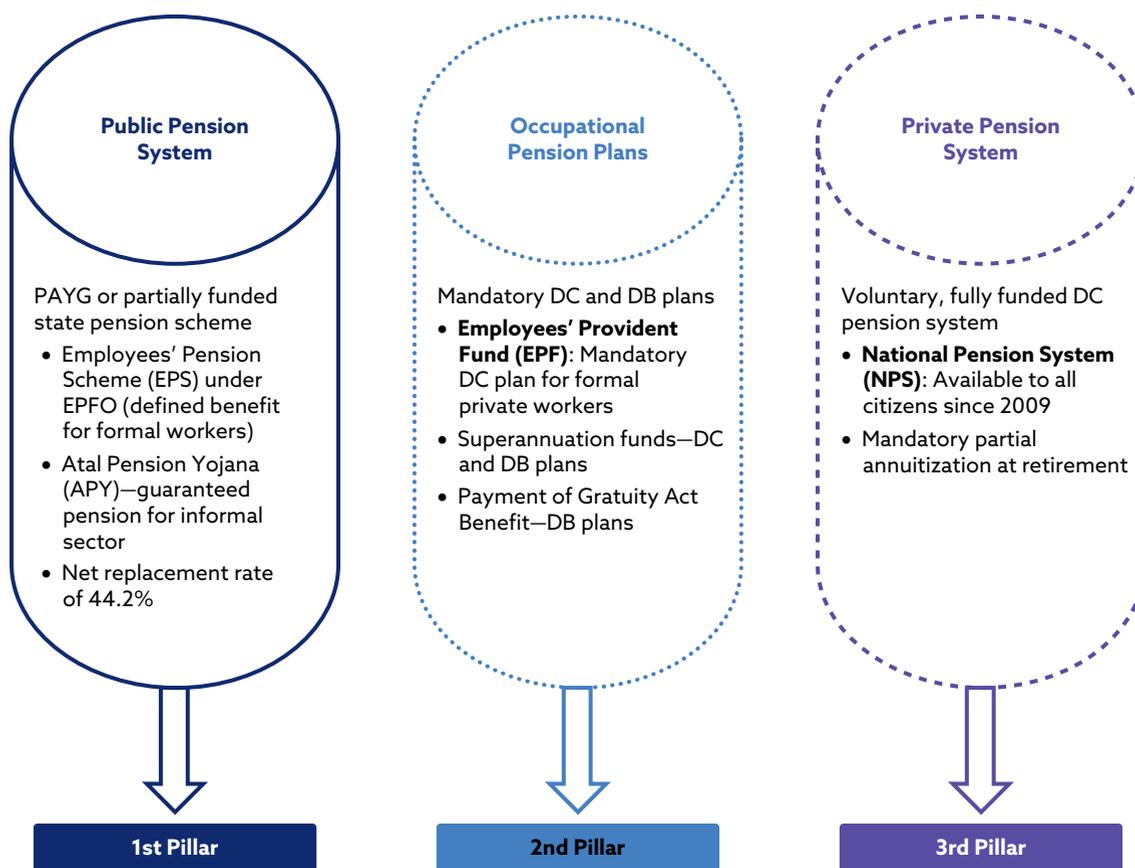
- **Mandatory public pension system:** This first pillar is a pension system that is available for government employees and formal-sector workers.
- **Occupational pension schemes:** The second pillar includes schemes, such as legacy DB plans for civil servants and the Employees' Provident Fund (EPF), for private-sector employees.
- **Voluntary DC schemes:** The third pillar features voluntary schemes, such as the National Pension System (NPS), which has become the cornerstone of India's retirement reforms.

DC Pensions Landscape in India

Basic Characteristics

India's voluntary DC system is centered around the NPS, introduced in 2004 for government employees and extended to all citizens in 2009. NPS is a fully funded, individual account-based scheme regulated by the Pension Fund Regulatory and Development Authority (PFRDA). As of 2024, NPS had more than 60 million subscribers, spanning central and state government employees, private-sector workers (through the NPS Corporate model), and informal-sector participants (through NPS-Lite).

Exhibit 6. The Three Pillars of the Indian Pension System



Under the NPS framework, contributions are collected and managed by point-of-presence (PoP) service providers, and funds are invested by licensed pension fund managers.³ Subscribers can choose from different investment options—equity, government securities, and corporate bonds—or use Auto Choice (life-cycle allocation), which adjusts asset mix with age. On retirement, participants must use at least 40% of their corpus to purchase an annuity, with the remainder available as a lump sum.

The system offers tax incentives at the contribution and withdrawal phases. Regulatory oversight is unified under PFRDA, which licenses intermediaries, sets investment guidelines, and monitors fund performance and service delivery standards.

³In India's NPS, a PoP refers to a registered intermediary or service provider that acts as the first point of contact between the pension subscriber and the NPS infrastructure.

Asset Allocation

NPS allows participants to allocate funds among four asset classes: equity, corporate bonds, government securities, and alternative investments. Under the Active Choice option, investors can select their own asset mix, subject to a cap of 75% equity allocation for tier I accounts. In Auto Choice, asset allocation is automatically adjusted according to age using a predefined glide path.

As of 2023, NPS portfolios for younger participants under Auto Choice include higher equity exposure, whereas older participants are shifted toward more conservative investments, such as government bonds. Compared with traditional Indian retirement schemes, such as the EPF (which is fixed-income dominated), NPS offers more diversified and market-linked exposure, improving long-term return potential. Risk aversion and limited financial literacy, however, still lead many participants to select conservative or default options with low equity exposure.

Fee Structure

NPS is designed to be a low-cost pension product, with some of the lowest expense ratios globally among DC systems. Charges include

- fund management fees, currently capped at 0.09% of AUM;
- PoP charges for registration and transactions (e.g., INR200 for account opening, and a small percentage for each contribution); and
- Central Recordkeeping Agency fees for maintaining pension accounts.

Although the fee structure is transparent and modest, concerns have been raised about PoP commissions and service delivery, especially in the informal sector in which high-volume, low-balance accounts reduce provider incentives. Despite the low-cost nature, some critics argue that NPS lacks competitive pressure on performance and could benefit from more transparent benchmarking and peer comparisons.

Pension Reforms

India has undertaken several key reforms to expand coverage and strengthen the sustainability of its pension system:

- Launch of NPS (2004 for government employees, 2009 for all citizens): This shifted new public-sector employees from a DB pension to a DC model and opened a voluntary savings path for the broader population.
- Tax incentives and portability enhancements: Over the years, tax benefits were expanded and account portability was improved, especially for job changes and across sectors (e.g., EPF to NPS transfers).
- Corporate NPS model: This was introduced to encourage employer participation in DC pensions for formal-sector employees. Employers can contribute to NPS as part of salary structures with tax benefits.

- Atal Pension Yojana (APY): This complementary scheme targets informal-sector workers, offering government co-contributions and guaranteed minimum pensions (INR1,000–INR5,000/month), further expanding pension inclusion.

Despite these reforms, the ratio of pension assets to GDP in India remains modest. The DC system continues to grow, but coverage and adequacy remain major challenges, particularly for informal workers and those without employer support. Future reforms may include auto-enrollment mechanisms and stronger annuity market development to ensure lifetime income security.

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

The Indian government offers various tax advantages to encourage participation in pension savings schemes, such as the NPS:

- Contributions made by individuals to NPS are eligible for tax deductions under the following:
 - Section 80CCD(1): Deduction up to INR150,000, included within the overall limit of Section 80C.
 - Section 80CCD(1B): An additional exclusive deduction of INR50,000 beyond the 80C limit, introduced in Budget 2015.
- Investment returns within the NPS account are tax deferred (EET regime: contributions and investment returns are tax exempt; retirement benefits are taxed).
- At maturity, 60% of the corpus is tax free, while the remaining 40% used for annuity purchase is tax exempt from fiscal year 2020–2021 onward.

These incentives make NPS one of the most tax-efficient retirement vehicles available to Indian savers.

State Contributions

The Indian government provides co-contributions to certain pension schemes targeted at low-income and informal-sector workers:

- Under the APY, launched in 2015, the government offered a co-contribution of 50% of the subscriber's contribution (up to INR1,000/year) for eligible subscribers joining before March 2016.
- This incentive was meant to boost early adoption, particularly among unorganized-sector workers.
- In NPS-Lite (now largely merged under APY), similar co-contribution schemes were used to support low-income groups, although they have since been phased out for new entrants.

These state-supported contributions raised initial enrollment in the early years of these schemes.

Employer Contributions

Employers can play a key role in enhancing pension savings through contributions to NPS or other occupational schemes:

- In the corporate NPS model, employers can contribute up to 10% of an employee's salary (basic + Dearness Allowance: it is an extra payment added to basic pay to offset the impact of inflation) to the employee's NPS account.
- Such contributions are tax deductible for the employer under Section 36(1)(iv-a) and are exempt from income in the hands of the employee under Section 80CCD(2), without being subject to the INR150,000 80C limit.
- The EPF mandates employer contributions of 12% of wages, with part of this going toward the retirement pension (Employees' Pension Scheme).

These employer-linked schemes are well-established in the formal sector and offer significant tax advantages to both employers and employees but remain limited in coverage among informal workers.

Behavioral and Technological Tools to Promote Pension Savings

India has increasingly leveraged behavioral nudges and digital infrastructure to expand pension coverage—particularly among informal-sector workers who lack access to employer-based schemes. Fintech innovation, Aadhaar-linked identity systems, and mobile payments have enabled the rise of digital micropensions and tech-enabled outreach.

Digital Micropension Platforms

India has pioneered micropension solutions to reach low-income and informal-sector workers, many of whom lack stable incomes and formal employment contracts.

- MicroSave, SEWA, and Ujjivan have implemented models offering small, flexible contributions to retirement accounts through local agents or mobile platforms.
- Universal Pensions (formerly pinBox Solutions) is a standout example: It partners with governments, financial institutions, and telecom firms to deliver app-based micropension enrollment and collection services. It enables users to contribute as little as INR20 per transaction, with automatic reminders and goal-setting tools.
- Kosh, a newer fintech company, integrates savings, credit, and retirement tools within a single digital wallet designed for gig workers and daily wage earners.

These platforms are designed to align with behavioral patterns of informal workers—low and irregular income, high liquidity needs, and limited financial literacy.

Mobile Technology and Aadhaar Integration

India's strong digital public infrastructure has made it possible to simplify pension onboarding and improve saver engagement:

- Aadhaar-based e-KYC has significantly reduced barriers to NPS enrollment. Individuals can open NPS accounts in minutes using biometric or one-time password-based verification through platforms such as Protean CRA (2024) (formerly NSDL) and KFinTech.
- UMANG App, developed by the Indian government, allows users to check NPS balances and contribution history and even make voluntary top-ups directly from their smartphones.
- eNPS portal enables self-registration and online contributions, reducing dependence on employer facilitation or physical paperwork.

Behavioral Nudges and Auto Features

India's pension architecture has incorporated several behavioral features to improve savings persistence and trust:

- Auto Choice in NPS: This life-cycle investment option automatically adjusts asset allocation according to the subscriber's age, reducing decision paralysis and anchoring savers to an appropriate risk level.
- Text message and app-based nudges: Platforms such as Universal Pensions and eNPS send reminders, progress updates, and motivational messages to encourage continued contributions—even for very small sums.
- Goal-based savings prompts: Some fintech companies have introduced interfaces that allow users to set retirement savings goals with visual trackers, which reinforce long-term engagement through immediate feedback.

Scope for Further Innovation

Despite these advances, auto-enrollment mechanisms are still absent in India's voluntary DC pension structure. As formal employment grows and digital labor platforms mature, future reforms could include the following:

- Default pension enrollment for gig workers, tied to earnings on such platforms as Swiggy or Uber
- Employer-based nudges, such as opt-out NPS enrollment in salaried jobs
- Micro-incentives, such as digital cash-back or lottery entries, for maintaining regular contributions—tested in behavioral pilots by such institutions as IFMR and Dvara Research

Policy Recommendations

Introduce Auto-Enrollment for Formal and Platform-Based Workers

Despite growing adoption of NPS, participation remains voluntary, limiting its reach among young workers and those in the private or gig economy. Introducing auto-enrollment—with

an opt-out option—into NPS for formal-sector employees and platform-based workers (e.g., through payroll or app-based earnings) would significantly boost long-term coverage. This could follow a phased approach based on employer size or industry, similar to models in the United Kingdom and New Zealand.

Expand and Integrate Micropension Infrastructure for Informal Workers

To address India's large informal workforce, the government should support the expansion of digital micropension platforms, such as Universal Pensions, SEWA, and Kosh, through targeted partnerships, data access, and co-branding with national pension schemes. Integration with Aadhaar, UPI, and India Stack should be deepened to allow real-time microcontributions, reminders, and mobile dashboards for retirement planning. A public-private framework could ensure scale, standardization, and consumer protection.

Enhance Tax and Matching Incentives for Low-Income and Young Contributors

Current tax benefits under Sections 80CCD(1) and 80CCD(1B) are more beneficial to higher earners. Policymakers should consider introducing progressive matching contributions or fixed incentive bonuses (e.g., INR500–INR1,000/year) for first-time contributors in the 18–30 age-group and informal workers. A first-three-years-matching scheme could build the savings habit and reduce early dropouts.

Develop a Unified Pension Dashboard and Statement System

A central pension dashboard should be introduced for all Indian citizens—integrating EPF, NPS, APY, superannuation, and gratuity entitlements into a single digital interface. This would help individuals track retirement readiness across fragmented accounts, increase transparency, and improve trust. The platform could include projected income simulators and fund comparison tools, inspired by models in Sweden and Australia.

Strengthen the Annuity Market and Flexible Payout Options

At present, the limited variety and poor returns of annuity products in India discourage long-term savings. Regulatory support is needed to introduce inflation-linked annuities, deferred annuities, and variable payout products. Additionally, NPS should allow greater flexibility in combining lump-sum withdrawals with phased withdrawals or phased annuitization, giving individuals more control over postretirement income.

Promote Financial Literacy and Behavioral Nudges

Financial literacy campaigns tailored to regional languages and income groups should be scaled through schools, employers, and mobile apps. In parallel, behavioral nudges, such as default settings, contribution reminders, goal-based visual trackers, and rewards for consistent contributions (e.g., digital badges or micro-incentives), can significantly improve saving behavior.

SOUTH AFRICA

Population: 64.7 million

GDP per Capita: USD6,667

PPP GDP per Capita: USD16,050

Working Age Population/Total Population: 67.4%

Old-Age Dependency Ratio: 10.2%

Domestic Equity Market Cap/GDP: 246.3%

Pension Funds' Assets/GDP: 95%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

South Africa has one of the most developed pension systems in Africa, combining a large, prefunded private pension sector with a means-tested social grant system. The system is organized around three main pillars (see **Exhibit 7**):

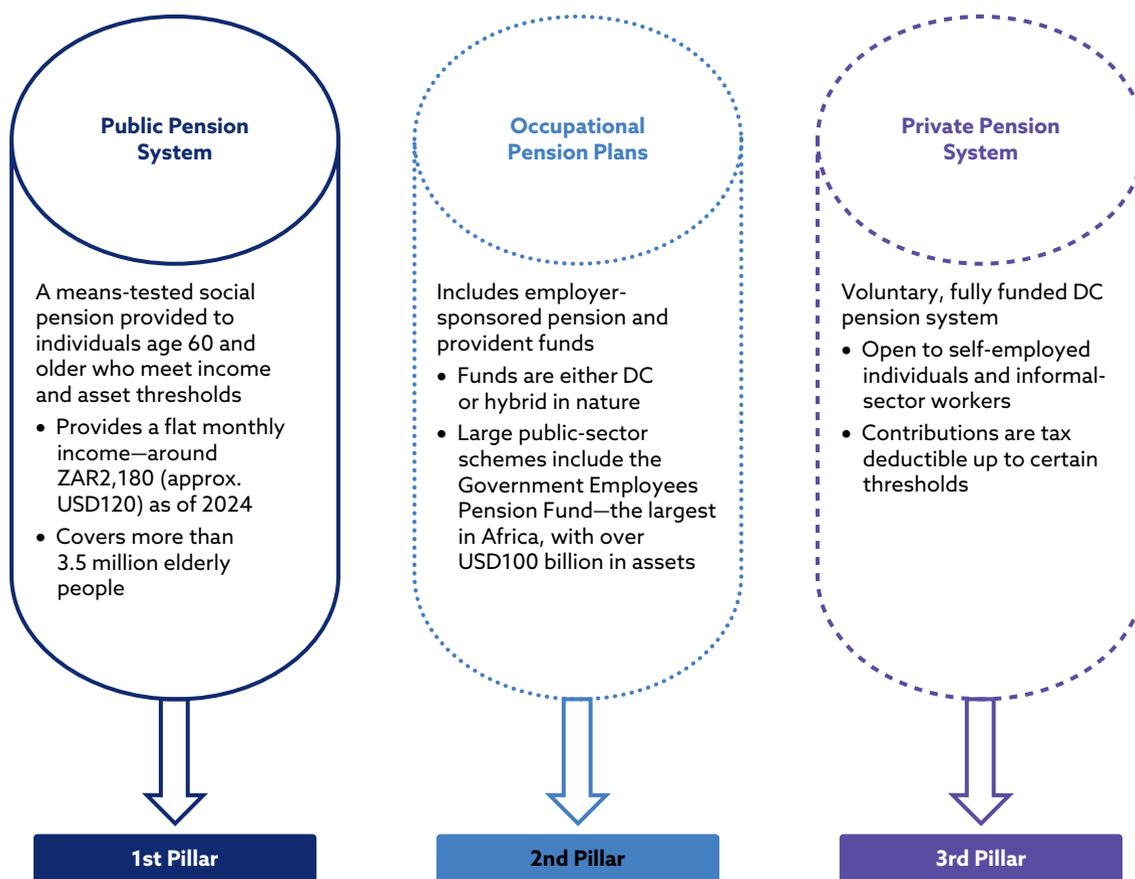
- Public pension system: This first pillar provides noncontributory public old-age grants to people 60 years and older.
- Occupational retirement funds: The second pillar features mandatory or quasi-mandatory funds for formal-sector employees.
- Voluntary retirement savings: The third pillar includes savings schemes that are available through private pension products, such as retirement annuities.

DC Pensions Landscape in South Africa

Basic Characteristics

South Africa's occupational and private pension arrangements are predominantly DC in structure. While public-sector employees participate in the DB Government Employees Pension Fund (GEPF), most other workers are covered by DC schemes. Pension contributions are usually deducted from salaries and invested through employer-affiliated funds or umbrella funds.

Exhibit 7. The Three Pillars of the South African Pension System



The regulatory framework has strengthened in recent years through the introduction of the default regulations under the Pension Funds Act, which mandate that retirement funds offer

- default investment strategies,
- default preservation upon job changes, and
- default annuitization at retirement.

These reforms aim to reduce leakage and ensure a smoother transition from accumulation to decumulation.

Asset Allocation

South African pension funds typically have diversified asset allocations, with a strong equity bias because of liberal investment rules and well-developed domestic capital markets. The typical allocation includes

- domestic and international equities (40%–60%);
- bonds and money market instruments (20%–40%);
- alternatives, including private equity and infrastructure (5%–10%); and
- real estate and offshore assets (subject to regulatory limits, recently raised to 45% of assets).

This diversified profile is supported by Regulation 28 of the Pension Funds Act, which sets prudential limits to ensure long-term stability and risk management.

Fee Structure

South Africa's pension industry has faced criticism for high and opaque fee structures, especially in retail products. Typical costs include

- administration and recordkeeping fees,
- investment management fees (average 0.75%–1.5% of AUM), and
- advice fees (for retail funds or annuities).

The Retail Distribution Review and Treating Customers Fairly frameworks enhance transparency, reduce unnecessary intermediation, and improve “value for money” for members.

Pension Reforms

Key pension reforms in South Africa have focused on improving preservation, reducing pre-retirement withdrawals, and increasing annuitization. Notable milestones include the following:

- Default Regulations (implemented in 2019): Mandated defaults for investment, preservation, and retirement products in occupational schemes
- Two-Pot Retirement System (to be implemented in 2025): Will split contributions into
 - a retirement pot (preserved until retirement),
 - a savings pot (accessible once a year for emergencies), and
 - a vested pot (holding pre-reform savings)
- Consolidation of funds: Encouraged through umbrella funds to reduce cost and complexity, especially for small employers

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

South African tax policy supports retirement savings through the following:

- Tax-deductible contributions up to 27.5% of the higher of remuneration or taxable income, capped at ZAR350,000 annually

- Tax-exempt investment returns during accumulation
- Tax-free lump sums on retirement (first ZAR550,000)

State Contributions

There are no direct state contributions to occupational or private pensions. The Old Age Grant, however, which is funded from general revenues, remains a crucial public transfer to support elderly individuals without adequate retirement savings.

Employer Contributions

Employer contributions to occupational retirement funds are widespread in the formal sector and usually range between 10% and 15% of salary, including both employer and employee contributions. Contributions are pooled and invested by licensed fund administrators, with fiduciary oversight by fund trustees.

Behavioral and Technological Tools to Promote Pension Savings

South Africa has begun leveraging both behavioral economics and digital technology to enhance retirement savings outcomes, especially in the DC segment. Although these developments are more pronounced in the formal sector, scalable innovations are gradually emerging that could also extend coverage to the informal workforce.

Default Investment and Preservation Rules

The Default Regulations of 2019, introduced under Section 36 of the Pension Funds Act, marked a significant behavioral shift in the retirement landscape by establishing standardized “nudge” mechanisms for all retirement funds. Three of these mechanisms are default investment portfolios, mandatory preservation on job change, and default annuity options.

Default Investment Portfolios

Funds are required to offer a default investment strategy to members who do not actively select their own portfolio. Typically, these default options are life-stage portfolios—such as Allan Gray’s Target Date Strategy or Alexander Forbes’ LifeStage model—which automatically adjust asset allocation based on the member’s proximity to retirement. Young savers are assigned higher equity allocations for growth, whereas older savers are transitioned into more conservative, capital-preserving portfolios. This reduces decision complexity and helps members avoid overly conservative strategies early in their careers—a common behavioral pitfall in unassisted pension choices.

Mandatory Preservation on Job Change

Historically, pre-retirement withdrawals concurrent with job changes led to large-scale leakage from South African pension funds. The Default Regulations now require that members’ savings remain preserved in the fund when they leave an employer, unless they make an active choice

to cash out. Fund administrators, such as Momentum Corporate and Sanlam Umbrella Fund, have developed automatic preservation options and rollover transfer mechanisms to facilitate this process.

The introduction of deferred preservation funds also provides flexibility, allowing members to maintain their savings in a tax-efficient vehicle while retaining the option to rejoin an employer scheme in the future.

Default Annuity Options

At the point of retirement, retirement funds must present a default annuity strategy. Most commonly, this involves a choice between

- a *life annuity* (e.g., offered by Just South Africa or Old Mutual) and
- a *living annuity* (market-linked drawdowns, often available through such providers as Ninety One or Coronation).

The default annuity must meet prescribed cost and risk standards and be communicated in simple terms. This nudges retirees away from withdrawing their entire corpus as a lump sum and supports lifetime income planning—a critical factor in addressing longevity risk.

Technological Advancements

Technological innovations in South Africa's retirement sector are helping address issues of engagement, access, and transparency. Although adoption varies among income segments, formal-sector platforms have pioneered several digital tools that could be scaled or adapted for broader use.

Mobile Apps and Online Portals

Leading administrators, such as Alexander Forbes, Allan Gray, Sanlam, and Old Mutual, offer robust digital platforms on which members can

- track balances and transaction history,
- view performance of individual funds,
- access retirement income projections,
- change their investment allocations, and
- update beneficiaries or contact details.

One example is Momentum's Smart Retire dashboard, which provides real-time, goal-based income projections and lifestyle modeling tools. Another example is Old Mutual's Retirement Benefit Counsellor chatbot, which offers digital advice and education on fund choices and retirement planning.

These tools leverage visualization to translate abstract numbers into relatable goals, reducing psychological distance from retirement and promoting better engagement.

Behavioral Dashboards and Predictive Tools

Some providers, such as 10X Investments and Sygnia, are experimenting with simplified mobile dashboards that display “retirement readiness scores” based on current savings and future targets. These interfaces often include green, yellow, and red traffic-light systems, which quickly signal whether a member is on track or falling short.

Some platforms offer predictive analytics. For instance, Sanlam’s Benchmark Tool estimates future pension income across multiple economic scenarios, helping members make informed trade-off decisions about contribution increases or asset allocation changes.

SMS Nudges, Emails, and In-App Notifications

Many administrators and umbrella funds use automated reminders to counter inertia. These include

- monthly nudges to increase contributions,
- annual prompts to review investment choices,
- reminders to nominate beneficiaries or update contact information, and
- countdown alerts as members approach retirement.

For example, Liberty Corporate’s MyLiberty platform uses in-app alerts to prompt users to adjust their contribution rates if they receive a salary increase, leveraging a behavioral tool known as “Save More Tomorrow” (inspired by Thaler and Benartzi 2004).

Emerging Mobile-Based Micropension Platforms

Although still limited in scope, South Africa is seeing early stage innovation in mobile-first savings platforms targeting gig workers, domestic workers, and small business owners. Notable examples include the following:

- *Strove*: This wellness platform integrates retirement contributions with employer wellness benefits, allowing employees to allocate rewards or bonuses to long-term savings.
- *Yalu*: Originally a credit life insurance fintech, Yalu has signaled plans to expand into digital retirement savings through app-based platforms tied to employment contracts.
- *SmartWage*: Although focused on early wage access, SmartWage offers a gateway to employer-linked financial wellness tools, potentially allowing future integration with portable pension products.

These platforms use Airtime-based logins, USSD interfaces, or WhatsApp chatbots to accommodate users who do not have consistent smartphone access or data.

Policy Recommendations

Accelerate the Two-Pot Reform Implementation

The Two-Pot Retirement System, implemented in 2025, represents a major structural change to South Africa’s retirement system. It divides future contributions into

- a *retirement pot* (preserved until retirement),
- a *savings pot* (accessible once annually for emergencies), and
- a *vested pot* (holding pre-reform savings).

To ensure its success, policymakers must

- finalize implementation guidelines and educational materials well in advance,
- establish robust rules to prevent misuse of the savings pot, and
- monitor behavioral responses to ensure it strengthens—not undermines—long-term retirement security.

This reform aims to strike a balance between liquidity needs and preservation, enhancing trust in the system by offering flexibility without dismantling its core purpose.

Expand Pension Coverage to Informal Workers

With more than one-third of South Africa's labor force employed informally, expanding pension access to this segment is critical. Drawing lessons from India's micropension innovations, South Africa could

- develop mobile-based, low-cost DC platforms tailored to informal workers, allowing flexible, small-value contributions;
- integrate platforms with national identity and mobile payment systems (e.g., e-wallets or QR codes); and
- pilot state-backed co-contribution schemes or tax incentives to encourage participation and persistence.

Public-private partnerships involving pension providers, fintechs, mobile operators, and trade unions could scale such initiatives while ensuring affordability and trust.

Improve Fee Transparency and Benchmarking

Despite reforms, many pension fund members remain unaware of the true cost of saving for retirement. The following measures would strengthen consumer protection and market discipline:

- Regulators should require simple, standardized disclosure formats showing total expense ratios, historical net returns, and fund comparisons.
- Trustees should receive enhanced training on benchmarking provider performance, especially in umbrella funds with multiple portfolios.
- An independent public fund comparison tool, modeled after platforms in Chile and Sweden, would empower both employers and individuals to make better choices.

These measures would reduce information asymmetry and enhance competition on value—not just price.

Support Annuity Market Development

South Africa's annuity market remains underdeveloped, with limited product variety and low uptake among retirees. The following measures could provide more robust postretirement options:

- Encourage the development of inflation-linked, deferred, and flexible annuities that adapt to retirees' spending needs.
- Consider allowing pooled risk-sharing products, such as tontine-style group annuities, which offer longevity protection without traditional insurance costs.
- Streamline tax and regulatory approval processes to promote innovation in payout structures—including phased withdrawals combined with annuities.

Improved access to better decumulation tools would help secure lifetime income for the growing cohort of retirees.

Promote Financial Education in Schools and Workplaces

A critical barrier to pension adequacy in South Africa is low financial literacy, particularly among younger workers, first-time savers, and lower-income earners. The following steps could address this problem:

- Integrate *retirement planning modules* into secondary school and technical and vocational education and training (TVET) curricula, building early awareness of compound interest, inflation, and saving discipline.
- Require employers and pension administrators to offer annual financial education sessions—either in person or digitally—as part of employee onboarding or payroll services.
- Leverage mobile platforms, social media, and behavioral prompts to deliver “bite-size” pension education, including myth-busting information about fund performance, preservation, and fees.

When combined with the right defaults and incentives, financial literacy can greatly improve savings behavior and trust in the pension system.

KENYA

Population: 57.5 million

GDP per Capita: USD2,549

PPP GDP per Capita: USD7,556

Working Age Population/Total Population: 60.7%

Old-Age Dependency Ratio: 5.0%

Domestic Equity Market Cap/GDP: 12%

Pension Funds' Assets/GDP: 13.3%

Sources: United Nations Data Portal Population Division, IMF Data, World Development Indicators (World Bank), and Global Financial Development (World Bank).

Kenya has one of the more developed pension systems in sub-Saharan Africa, although it is still modest compared with those of OECD member countries. The system is structured around three main pillars (see **Exhibit 8**):

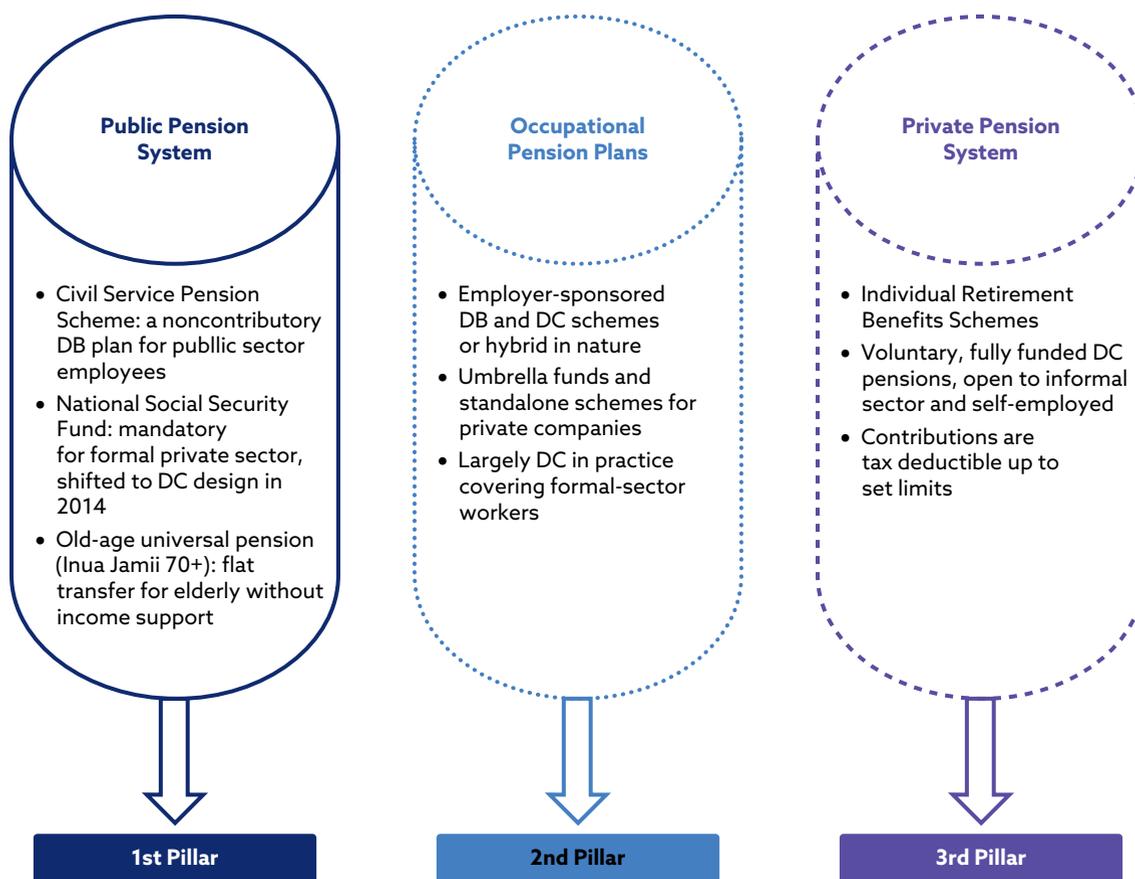
- The noncontributory public pension: The first pillar includes civil service and universal old-age schemes.
- Occupational retirement benefit schemes: The second pillar features mandatory schemes for certain formal-sector employees.
- Voluntary, fully funded DC schemes: The third pillar includes DC schemes regulated by the Retirement Benefits Authority (RBA).

DC Pensions Landscape in Kenya

Basic Characteristics

Kenya's DC system is regulated by the RBA, which was established in 1997. The sector includes occupational retirement schemes, umbrella funds, and individual pensions. Since the National Social Security Fund Act reforms were implemented in 2014, the national pension has moved toward a DC model with tiered contributions. Coverage, however, remains skewed toward the formal sector, which makes up less than 20% of the labor force. The informal sector—about 80% of workers—is underrepresented, although voluntary Individual Retirement Benefits Schemes products aim to close this gap.

Exhibit 8. The Three Pillars of Kenya's Pension System



Asset Allocation

Kenyan pension funds typically invest in

- government securities (approximately 40%–45%),
- equities (25%–30%),
- property (15%–20%), and
- alternative assets and offshore investments (still limited, capped at about 15%).

This diversified allocation reflects relatively well-developed domestic capital markets (e.g., Nairobi Securities Exchange, government bond market) but with constraints on international exposure.

Fee Structure

Fees vary by scheme type. Occupational and umbrella schemes often charge

- administration or recordkeeping fees (fixed or a percentage of AUM),
- investment management fees (0.5%–1% of AUM), and
- custodian fees.

The RBA has sought to enhance transparency by requiring quarterly reporting and benchmarking of fund performance.

Pension Reforms

Pension reforms in Kenya include the following:

- *The National Social Security Fund Act* (implemented 2014) shifted the National Social Security Fund from a flat-rate DB scheme to a tiered, earnings-related DC structure.
- *Tax harmonization* (from 2019 onward) aligned limits on contributions and benefits.
- *Inua Jamii 70+*, a universal social pension introduced in 2018, provides KES2,000/month to older citizens without formal pensions
- Ongoing reforms aim to expand coverage to informal-sector workers, supported by mobile money platforms (M-Pesa integration).

Traditional Policy Tools to Promote Pension Savings

Tax Incentives

- Contributions to registered schemes are deductible up to the lower of KES20,000/month or 30% of salary.
- Investment income is tax exempt.
- Lump-sum withdrawals at retirement have partial tax exemptions, with thresholds adjusted annually.

State Contributions

- There are no direct matching contributions.
- State support mainly occurs through the Inua Jamii universal pension.

Employer Contributions

- In occupational schemes, employers commonly contribute 5%–10% of salary (often matched by employees).
- Participation is concentrated in larger formal-sector employers.

Behavioral and Technological Tools to Promote Pension Savings

Kenya stands out in sub-Saharan Africa for its integration of fintech, behavioral nudges, and regulatory innovation in pension provision. Although coverage remains limited—fewer than 20% of workers are enrolled in any formal retirement arrangement—the country's heavy reliance on mobile money (e.g., M-Pesa, Airtel Money, T-Kash) has created opportunities to design inclusive, low-cost solutions tailored to the needs of informal-sector workers.

Mobile Pension Platforms and Microsavings Models

- *Mbao Pension Plan* (launched 2009)
 - It allows contributions as low as KES20 (approximately USD0.20) per day, directly through M-Pesa.
 - It specifically targets informal-sector workers, who make up about 80% of Kenya's labor force.
 - By 2023, it had more than 200,000 registered savers, although most accounts still have low balances.
 - In terms of behavioral design, the name *Mbao* (slang for 20 shillings) ties into a cultural reference, making saving tangible and relatable.
- *Zimele Personal Pension Plan*
 - Plans are accessible through mobile and banking agents.
 - Minimum contribution are KES100 (approximately USD0.80).
 - Plans appeal to small and midsize enterprises, self-employed traders, and diaspora remittances.
- *Safaricom M-Pension Pilot*
 - Integrated contributions can be made directly into mobile airtime accounts.
 - The pilot aims to reduce enrollment friction and to create a seamless link between daily mobile usage and long-term savings.
- *Diaspora-Linked Pensions*
 - Some providers are experimenting with platforms in which Kenyans abroad can remit directly into family members' retirement accounts.
 - These pensions would turn remittances into long-term capital.

These models highlight how Kenya is adapting the India-style micropension approach (e.g., Universal Pensions, previously pinBox Solutions) to an African context.

Default Investment and Preservation Rules

Kenyan occupational and umbrella funds regulated by the RBA must provide a default investment portfolio.

- Most defaults are balanced funds combining equities, government bonds, and property.
- A growing number of providers (e.g., Enwealth, Octagon Pension Services) are introducing life-cycle funds:
 - Young members are defaulted into portfolios with 50%–60% equity exposure.
 - Allocation shifts automatically into bonds and cash as members approach retirement.

Leakage remains a problem:

- Many members cash out their savings when changing jobs, undermining long-term adequacy.
- The RBA has proposed stronger preservation requirements, inspired by South Africa's Two-Pot Retirement System.

Digital Tools, Apps, and Dashboards

- Mobile apps from such providers as Britam, CIC Group, and ICEA Lion allow members to
 - track balances, contributions, and projected retirement income;
 - simulate what-if scenarios (e.g., raising contributions by 5%); and
 - switch funds online, reducing administrative friction.
- Behavioral dashboards
 - Some platforms use traffic-light systems (green, yellow, and red) to show “retirement readiness,” which enables savers to quickly gauge whether they are on track.
 - SMS nudges, such as regular mobile reminders sent to contributors, are used. For example, “Save KES100 today, and grow your retirement balance by KES30,000 over 20 years.”
 - Behavioral framing highlights the long-term benefits of small daily savings.

Community and Group-Based Savings Integration

Kenya has a rich tradition of *chamas* (community savings groups). Pension providers have started bundling pension contributions into chama savings cycles, creating peer pressure and social accountability. For example, a women's savings group in Kisumu partnered with the Mbao Pension Plan to set aside part of its monthly contributions toward members' retirement. The behavioral advantage in such cases is that collective commitment reduces the number of dropouts, while rotating savings traditions are reframed as “future security pools.”

Targeted Education and Financial Literacy

The RBA has prioritized financial literacy, recognizing that lack of awareness is one of the top barriers to pension participation. Initiatives include the following:

- Radio programs in local languages explaining pension benefits
- Pension education days at universities and TVET institutions
- Integration of retirement planning modules into workplace wellness programs

Despite these efforts, surveys suggest that more than 60% of Kenyans in the informal sector are unaware of available pension options, reinforcing the need for ongoing literacy efforts.

Emerging Behavioral Experiments

Kenya is beginning to test more advanced behavioral tools:

- *Lottery-linked contributions*: Some pilot schemes consider rewarding consistent savers with lottery entries (similar to Mexico's lottery bonds or behavioral pilots in India).
- *Save More Tomorrow pilots*: These payroll-based schemes nudge workers to commit part of future salary increases toward pensions.
- *Digital goal setting*: Some apps now allow members to set retirement targets (e.g., "KES5 million at age 60") and provide progress trackers with motivational messages.

Policy Recommendations

Kenya's pension system has strong foundations—in particular, a well-regarded regulator (i.e., RBA) and vibrant fintech innovations—but it faces three key challenges: (1) limited coverage, especially among informal workers; (2) inadequate preservation of retirement savings; and (3) shallow decumulation options. To strengthen adequacy and inclusiveness, Kenya should pursue the following reforms.

Expand Pension Coverage to the Informal Sector

With nearly 80% of Kenyan workers employed informally, extending pension participation beyond the formal sector is critical. One key priority is scaling up mobile-based micropension schemes, such as the Mbao Pension Plan, which should be elevated into a nationally endorsed platform and fully integrated with mobile money systems, such as M-Pesa. With government branding and outreach, participation rates could easily triple.

At the same time, the state should consider co-contributions for low-income workers—for instance, a 20%–30% match on contributions up to KES500 per month. This design, modeled after India's APY, has proven effective in boosting adoption among informal workers while remaining fiscally sustainable.

Another promising avenue is platform-based automatic deductions, in which gig workers employed by companies such as Uber, Bolt, Jumia, or Glovo are enrolled by default into portable DC schemes, with contributions deducted directly from digital wallets. This model is already being piloted in Nigeria's Micro Pension Plan and could be replicated successfully in Kenya. Finally, Kenya should formalize diaspora-linked pensions, enabling remittances to flow directly into relatives' retirement accounts, thereby transforming short-term transfers into long-term capital formation.

Strengthen Default Fund Design and Preservation

To improve long-term retirement outcomes, Kenya should strengthen the design of default funds and enforce stronger preservation rules. Occupational and umbrella schemes should be required to offer life-cycle (target-date) funds that automatically adjust portfolio allocations over the life cycle. For example, a 25-year-old driver could default into a portfolio with 60% equity exposure, which gradually reduces to 20% near retirement.

Preservation is another area of weakness, as many Kenyans withdraw their benefits when changing jobs. To address this issue, Kenya could adopt a Two-Pot Retirement System similar to South Africa's 2025 reform, in which contributions are divided into a preserved retirement pot, locked until retirement, and a smaller savings pot, accessible once a year for emergencies. Such a model balances liquidity needs with long-term security. Moreover, at the decumulation stage, pension schemes should provide default annuity options rather than leaving lump-sum withdrawals as the dominant path, ensuring better protection against longevity risk.

Improve Fee Transparency and Consumer Protection

Improving transparency and consumer protection is essential to build trust in the pension system. The RBA should mandate standardized, one-page disclosure reports in which members can clearly see the total expense ratio, net-of-fee historical returns, and a comparison against relevant benchmark indexes. To complement this information, the RBA could establish a public "league table" ranking pension schemes by net returns and costs, modeled on Chile's Consulta AFP platform, which has successfully improved competition and accountability in the pension sector. Governance standards also require strengthening, particularly in small occupational schemes in which fiduciary risks are higher. Trustee training programs should be mandatory to ensure that all pension schemes are managed in the best interest of members.

Develop the Annuity and Payout Market

Kenya's decumulation phase remains underdeveloped, with most retirees opting for lump-sum withdrawals that are often depleted within a few years. To address this problem, insurers should be encouraged to develop inflation-linked annuities, which protect purchasing power in an environment in which inflation risk is significant. Hybrid payout models could also be introduced, such as deferred annuities starting at age 75 or phased annuity products that combine programmed withdrawals with lifetime annuity streams. Another option would offer tontine-style group pensions, which pool longevity risk at a low cost without the need for heavy insurance loadings. Regulatory processes should also be streamlined to make it easier for providers to introduce innovative decumulation products, provided they include clear, standardized disclosures of costs and risks.

Promote Financial Literacy and Behavioral Nudges

A strong financial literacy agenda is necessary to support better pension outcomes. Retirement planning modules should be integrated into secondary schools, TVET institutions, and universities, ensuring early awareness of saving and compounding benefits. In the workplace, large employers should be required to conduct at least one annual pension education session, supported by RBA-approved materials.

Behavioral nudges should also be expanded across the system. SMS reminders can highlight the long-term benefits of small contributions (e.g., "Save KES100 today, retire with KES30,000 more"), while mobile dashboards using green, yellow, and red indicators can provide a quick snapshot of retirement readiness. Kenya should also pilot "Save More Tomorrow" programs, linking contribution increases to future salary growth. Finally, pension providers should partner with community savings groups (chamas) to integrate pension contributions into group

savings cycles, building on the trust and accountability already embedded in these grassroots institutions.

Strengthen Integration with National Development Goals

Finally, pension reforms should be aligned with Kenya's broader economic development strategy. Pension funds can play a catalytic role in financing long-term projects, and regulations should allow higher allocations to domestic infrastructure through well-regulated vehicles that balance risk and return. Green finance is another promising area, with targeted incentives for pension funds to invest in renewable energy projects aligned with Kenya's climate commitments. At a regional level, Kenya should work with the East African Community to establish cross-border pension portability, enabling mobile workers to retain retirement savings across borders and improving labor mobility in the region.

REFERENCES

Azuara Herrera, Oliver, Mariano Bosch, Gustavo Caballero, Fabián Cofré, Stephanie González, Anne Hand, Lukas Keller, et al. 2021. "Saving Without Barriers: Lessons from the Retirement Savings Laboratory's Pilot Projects" (April). <https://publications.iadb.org/en/saving-without-barriers-lessons-retirement-savings-laboratorys-pilot-projects>.

Federación Internacional de Administradoras de Fondos de Pensiones. 2021. "Reform of the Mexican Pension System." Pension Note No. 54 (June). www.fiapinternacional.org/wp-content/uploads/2016/01/PN_54_Reform_of_the_Mexican_pension_system_June_2021.pdf.

Federación Internacional de Administradoras de Fondos de Pensiones. 2025. "The Role of Digital Tools Designed to Help Workers Clearly and Personally Visualize Their Pension Situation: The Case of Individual Pension Dashboards." Pension Note No. 88 (August). www.fiapinternacional.org/wp-content/uploads/2025/10/NP-88-ING-1.pdf.

IDB. 2022. *Nudging Latin America and the Caribbean: A Decade of Improving Public Policies through Behavioral Economics*. <https://publications.iadb.org/es/publications/english/viewer/Nudging-Latin-America-and-the-Caribbean-A-Decade-of-Improving-Public-Policies-through-Behavioral-Economics.pdf>.

Insurance Association of Türkiye. 2018. *Annual Report on the Turkish Private Pension System (BES)*. Türkiye Sigorta Birliği.

Insurance Association of Türkiye. 2024. *Annual Report on the Turkish Private Pension System (BES)*. Türkiye Sigorta Birliği.

Kayhan, F., and A. Togan Eğrican. 2021. "An Overview of Voluntary Private Pension Funds in Turkey." *Finansal Araştırmalar ve Çalışmalar Dergisi* 13 (25): 586–607. doi:10.14784/marufacd.976622.

Ministério da Previdência Social. 2025. "Relatório Gerencial de Previdência Complementar."

OECD. 2020. *Pensions at a Glance 2020: OECD and G20 Indicators*. OECD Publishing.

OECD. 2023. "Annual Survey on Financial Incentives for Retirement Savings: OECD Country Profiles 2023" (4 December). www.oecd.org/en/publications/annual-survey-on-financial-incentives-for-retirement-savings_2154cc08-en.html.

Pension Monitoring Center. 2024. *Annual Statistical Report on Turkey's Private Pension System (BES)*. Emeklilik Gözetim Merkezi.

Prabhakar, R. 2017. "Why Do People Opt-Out or Not Opt-Out of Automatic Enrolment? A Focus Group Study of Automatic Enrolment into a Workplace Pension in the United Kingdom." *Journal of European Social Policy* 27 (5): 447–57.

Protean CRA. 2024. *National Pension System: eNPS and Digital Onboarding Statistics*. Protean CRA.

Silva, F. 2025. "The Brazilian Pension System." Paper prepared for the 2025 Abrapp International Seminar, Lisbon, Portugal, May.

Thaler, R. H., and S. Benartzi. 2004. "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving." *Journal of Political Economy* 112 (S1). doi:10.1086/380085.

World Bank. 2023. *World Development Indicators Database: Labor Markets and Social Protection*. World Bank Group. <https://data.worldbank.org>.

Zviniene, A., and R. Tsukada. 2023. "Brazil's Social Security and Pension Reform: Fiscal Sustainability and Coverage Challenges." World Bank Social Protection and Jobs Discussion Paper.

Named Endowments

CFA Institute Research Foundation acknowledges with sincere gratitude the generous contributions of the Named Endowment participants listed below.

Gifts of at least US\$100,000 qualify donors for membership in the Named Endowment category, which recognizes in perpetuity the commitment toward unbiased, practitioner-oriented, relevant research that these firms and individuals have expressed through their generous support of CFA Institute Research Foundation.

Ameritech	Miller Anderson & Sherrerd, LLP
Anonymous	John B. Neff, CFA
Robert D. Arnott	Nikko Securities Co., Ltd.
Theodore R. Aronson, CFA	Nippon Life Insurance Company of Japan
Asahi Mutual Life Insurance Company	Nomura Securities Co., Ltd.
Batterymarch Financial Management	Payden & Rygel
Boston Company	Provident National Bank
Boston Partners Asset Management, L.P.	Frank K. Reilly, CFA
Gary P. Brinson, CFA	Salomon Brothers
Brinson Partners, Inc.	Sassoon Holdings Pte. Ltd.
Capital Group International, Inc.	Scudder Stevens & Clark
Concord Capital Management	Security Analysts Association of Japan
Dai-ichi Life Insurance Company	Shaw Data Securities, Inc.
Daiwa Securities	Sit Investment Associates, Inc.
Mr. and Mrs. Jeffrey Diermeier	Standish, Ayer & Wood, Inc.
Gifford Fong Associates	State Farm Insurance Company
John A. Gunn, CFA	Sumitomo Life America, Inc.
Investment Counsel Association of America, Inc.	T. Rowe Price Associates, Inc.
Jacobs Levy Equity Management	Templeton Investment Counsel Inc.
Jon L. Hagler Foundation	Frank Trainer, CFA
Long-Term Credit Bank of Japan, Ltd.	Travelers Insurance Co.
Lynch, Jones & Ryan, LLC	USF&G Companies
Meiji Mutual Life Insurance Company	Yamaichi Securities Co., Ltd.

Senior Research Fellows

Financial Services Analyst Association

For more on upcoming CFA Institute Research Foundation publications and webcasts, please visit www.cfainstitute.org/research/foundation.

**CFA Institute
Research Foundation
Board of Trustees
2025-2026**

Chair

Jeffery V. Bailey, CFA

Vice Chair

Susan Spinner, CFA

President and CEO, CFA Institute

Margaret Franklin, CFA

*Emeritus

Giuseppe Balocchi, PhD, CFA

Aaron Brown, CFA

Cheng Sung, PhD

Bill Fung, PhD*

Will Goodhart

Philip Graham, CFA

Joanne M. Hill, PhD

Aaron Low, CFA*

Lotta Moberg, PhD, CFA*

Kurt D. Winkelmann, PhD

Research Directors

Luis Garcia-Feijóo, CFA, CIPM

Lionel Martellini

Gary P. Brinson Director of Research Emeritus

Laurence B. Siegel

Staff

Treasurer

Alicia Martinez, CTP

Secretary

Lydia Ooghe

Strategic Operations Manager

Stacie Shure

Research Foundation Review Board

William J. Bernstein, PhD

Elroy Dimson, PhD

William N. Goetzmann, PhD

Elizabeth R. Hilpman

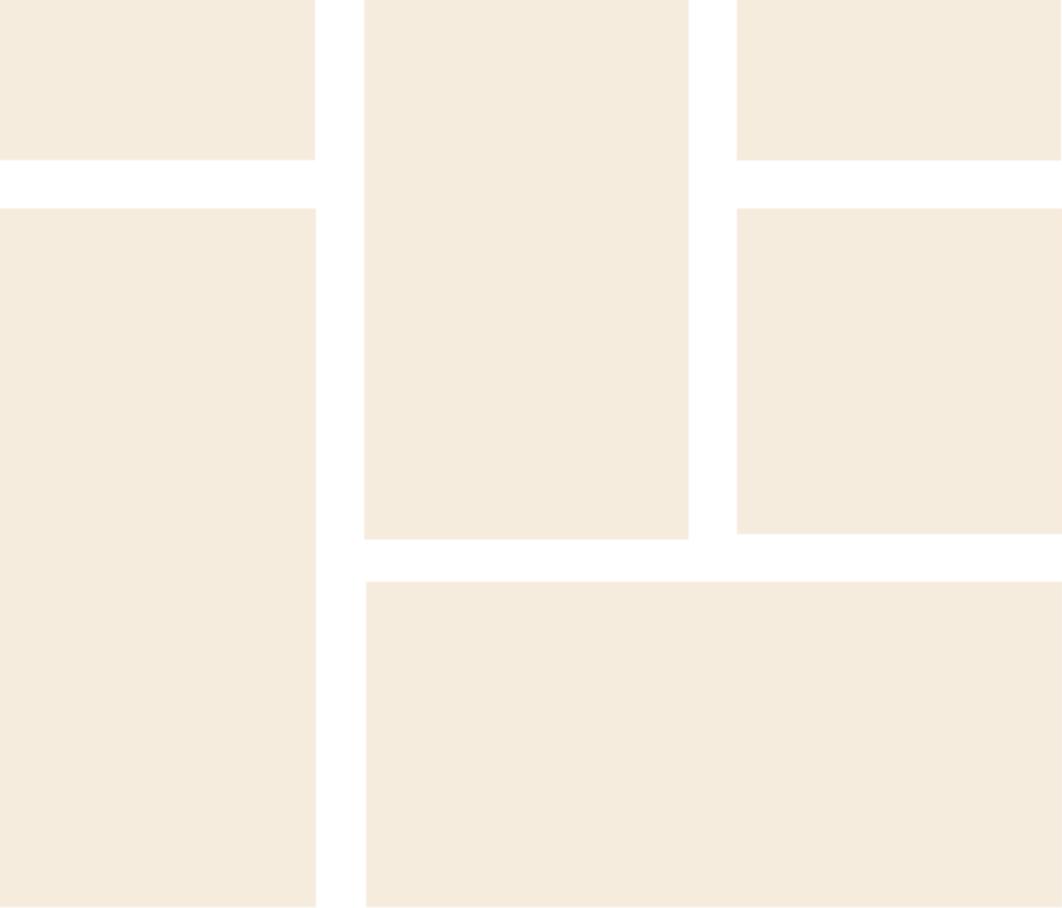
Paul D. Kaplan, PhD, CFA

Robert E. Kiernan III

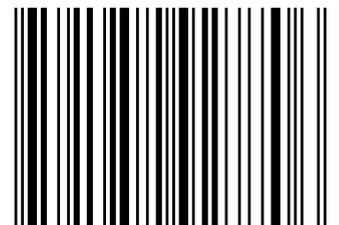
Andrew W. Lo, PhD

Stephen Sexauer

For more information on members of the CFA Institute Research Foundation Board of Trustees, please visit <https://rpc.cfainstitute.org/research-foundation/trustees>.



ISBN 978-1-952927-70-6



9 781952 927706 >

Available online at rpc.cfainstitute.org