

# Pension Notes

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## Main Trends in Pension Systems Worldwide



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## Executive Summary

The main long-term challenge facing pension systems is still the provision of financially and socially sustainable pensions. To meet this challenge and ensure compliance with the purpose of pension systems, reforms must be carried out to the structure, integration, and complementarity of contributory and non-contributory pension programs, regularly updating their parameters. These reforms must also adapt the systems to the reality and evolution of labor and financial markets.

Among the most significant pension reforms recorded in pension systems in the past few decades are the reforms of the PAYGO systems to address their lack of long-term financial sustainability. Countries with these systems have been forced to make continuous adjustments to pension amounts, contribution rates and official retirement ages. Despite these parametric and benefit reforms, pension expenditure and financial deficits in PAYGO systems will continue to increase due to population aging. Hence, benefits will have to decrease due to the reforms that link contributions more closely to pensions, which will severely affect future generations.

Traditional pension systems in Europe are transitioning towards multi-pillar pension systems. An increasing role of private pension programs with individual accounts has been observed in mandatory, quasi-mandatory and voluntary systems, aimed at complementing the deteriorating pensions of the PAYGO systems and resolving the lack of portability of accumulated savings. The same trend has been observed in the world's best pension systems. Even countries with ideological positions promoting a predominant state role, such as China and Belarus, are encouraging the development of market-oriented individual savings plans.

Total assets in private pension savings schemes in OECD countries have risen significantly over the past two decades, from 59.0% to 105.1% of GDP between 2001 and 2021. The three countries with the best pension systems in the world are also those with the highest levels of accumulated assets in private savings plans.

Furthermore, European countries and countries in other parts of the world, including Latin America, are also strengthening non-contributory pensions for lower-income pensioners, financed from public budget resources.

Occupational pension plans show a trend towards "collective defined contribution" type programs, as an alternative to collective defined benefit plans that have been in decline for many years. These new plans do not provide pension guarantees, but rather define a target pension level based on contribution rates, which are fixed as in defined contribution programs, and expected returns on investments. Plans must be fully funded. Moreover, the need to increase coverage of voluntary

pension schemes led twelve countries (USA, France, New Zealand, Italy, United Kingdom, Canada, Turkey, Germany, Lithuania, Poland, Gibraltar and Slovakia) to implement automatic enrolment between 1998 and 2023. Ireland will join them in 2024.

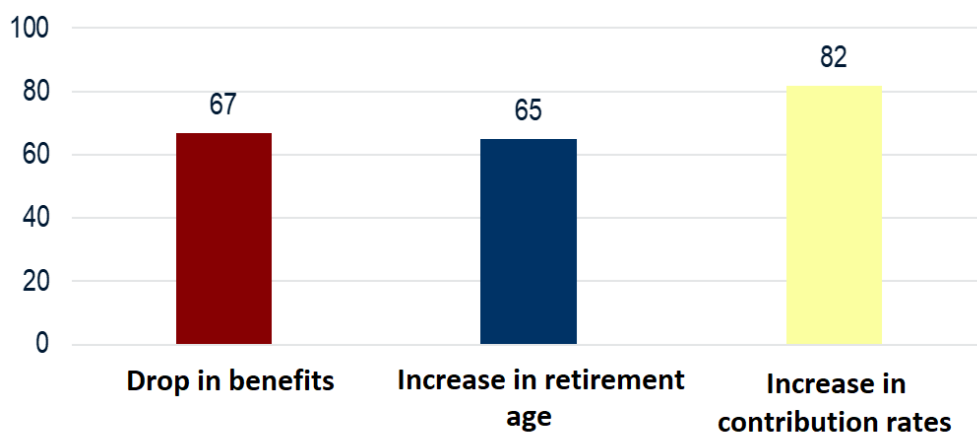
These international trends and experiences show that the creation or strengthening of PAYGO systems in Latin America would be a disastrous public policy. Moreover, our region has evidenced that PAYGO systems have failed and have been regressive and unsupportive, with significant risks, given their structural characteristics. Strengthening PAYGO systems and weakening individual savings systems would also have a negative effect on non-contributory pensions, because individual savings have freed up public resources that previously financed deficits in PAYGO systems and can be used to strengthen non-contributory pensions and other social programs.

The main trends and reforms in worldwide pension systems are reviewed in more detail below.

*The PAYGO systems have broken the defined benefits promise and are financially unsustainable*

Among the most relevant reforms recorded in pension systems in the last decades, are those made to the PAYGO systems to address their lack of long-term financial sustainability, a consequence of the structural issues generated by demographic trends (higher life expectancy at retirement and lower birth rates). Countries with such systems have been forced to break the defined benefits promise by making continuous adjustments to pension amounts, contribution rates and official retirement ages. According to FIAP statistics (1), between 1995 and December 2022, eighty-two countries increased contribution rates, sixty-five increased the retirement age, and sixty-seven adjusted or reduced the benefits formula (see Graph 1).

Graph 1.  
Adjustments to pensions, access conditions and contribution rates in PAYGO systems:  
1995 - December 2022



Source: FIAP (2022).

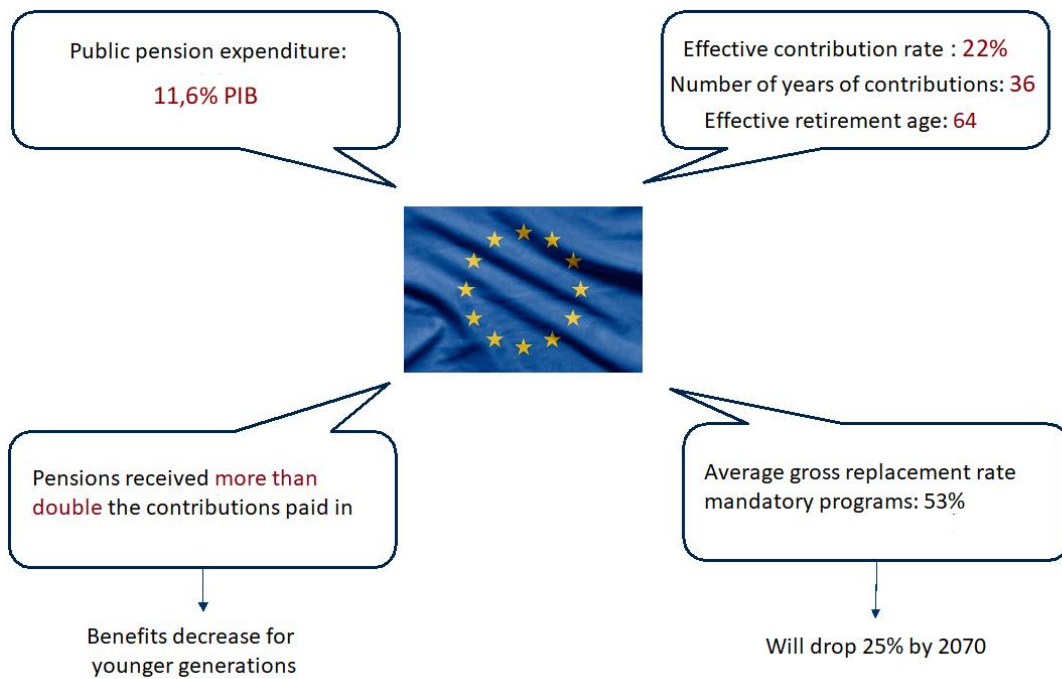
*Despite parametric reforms, pension expenditure and financial deficits in PAYGO systems will continue to rise and their benefits will continue to decline.*

Many European countries will increase pension expenditure and deficits in their PAYGO systems, which will remain at high levels in the coming decades (2). Public pension expenditure in the European Union averaged 11.6% of GDP in 2019 and is projected to rise to 12.6% by 2050 (3). This will be due to demographic trends, structural weaknesses in such systems and the generous pensions they still provide. According to the IMF (2), older generations that are already retired receive benefits that more than double their paid-in contributions, whereas younger generations will see this ratio reduced to levels of 1.5 to 1.7 times their contributions. Pensions in such systems should continue to diminish in future, given demographic trends and reforms that link contributions more closely to

pensions, which will severely affect future generations. In fact, the European Commission projects that the average replacement rate will drop by 25% by 2070, when pension expenditure as a percentage of GDP will stabilise in many countries (4). The only certainty that new generations enrolled in PAYGO systems will have is that the pensions they receive will have to diminish to avoid very substantial growth in financial deficits.

These issues and lack of security persist despite the fact that the mandatory contribution rate to pension programs in European Union countries averages 22% (2); the average number of years of contribution is 36 (3); the effective retirement age from the labour market is 64 (3); and the gross replacement rate is on average 53% (4) (see Figure 1). With these savings amounts and spans, the replacement rates that could be financed with individual savings would be much higher<sup>1</sup>.

Figure 1



Source: FIAP based on European Commission.

<sup>1</sup> Gross replacement rate over 70%, assuming that individuals start working at 25; an annual real return on pension savings of 4.0%; an annual growth in real wages of 1.5%; and a discount rate on the capital needed per unit for the calculation of the annuity of 3.0% per year.

***Traditional pension systems are carrying out reforms that go beyond parametric changes***

Despite the fact that the PAYGO systems have serious structural financing issues, the European countries keep them running. Replacement by an individual savings system and the consequent diversion of contributions to this type of system would entail substantial increases in financial deficits in the short and mid term (but not in the long term), given the coverage and maturity of the programs.

To control the large present and future financial deficits of the PAYGO pension systems, European countries have been carrying out reforms that go beyond mere parametric changes since the beginning of this century. Reforms have also been carried out that incorporate individual saving system characteristics, reflecting the weakening of pension policies with “Bismarckian” approaches and the need to face the financial problems faced by these types of systems. This is how pensions have been reformulated, to strengthen the relationship between salaries and contributions paid and pensions received, and individually funded pension funds have been created or multiplied and invested in capital markets to improve the sustainability of the systems.

Furthermore, many countries have introduced automatic or semi-automatic mechanisms for adjusting the parameters of their pension systems, which are activated when certain demographic, financial and/or economic indicators change. Approximately two-thirds of OECD countries use these mechanisms, whether defined-contribution notional accounts; adjustments to conditions for qualifying for pensions based on life expectancy; modification of pension amounts according to demographic trends, payroll and life expectancy; or mechanisms that seek to restore the financial balance. The main purpose of these mechanisms is to improve the financial situation of the PAYGO systems, adjusting the parameters and pensions with more transparent processes less exposed to short-term political pressures and also less inequitable between generations (4).

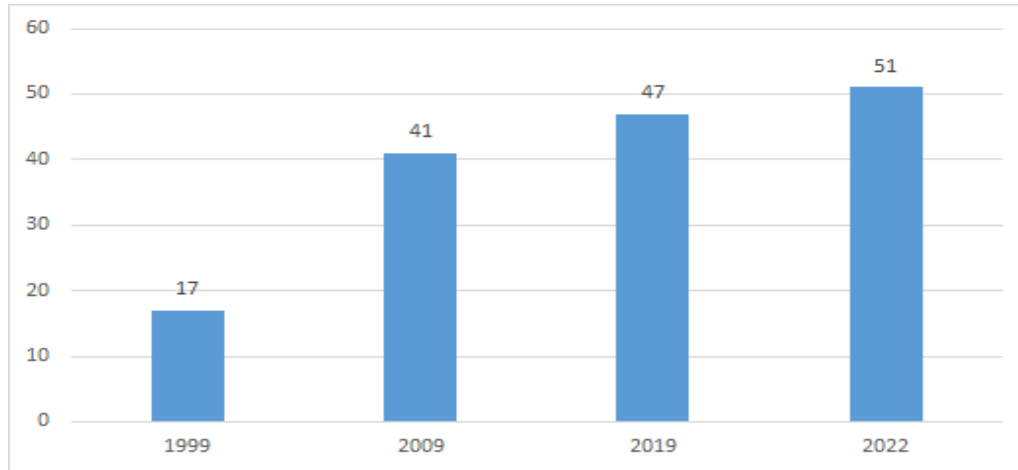
***The importance of defined contribution individual savings systems in pension systems worldwide is growing***

Private individual savings programs are assuming an increasing role in pension systems, to complement the declining benefits of the PAYGO systems.

Indeed, in order to cope with population aging, the decline in PAYGO system pensions and the lack of portability of accumulated savings, countries in Europe and elsewhere are introducing defined contribution and individual savings programs to their pension systems, in the mandatory, quasi-mandatory and voluntary pillars. This trend is evidenced by the growth observed in the number of countries that have incorporated individual savings worldwide, either as a substitute system, in

competition with or complementary to the PAYGO system, which have risen from seventeen countries in 1999 to a total of fifty-one countries in 2022 (5).<sup>2</sup> (see Graph 2 and Table 1).

**Graph 2.**  
**Countries that have incorporated individual savings systems in their different modalities:**  
**1999-2022**



Source: FIAP.

The same trend has been observed in the world’s best pension systems. For example, in the Netherlands (second in the 2022 Mercer CFA ranking) (6) a reform is being carried out that will involve the complete renewal of the second pillar occupational programs. The essential elements of the new programs will be defined contributions and the financing of pensions from accumulated individual savings, complemented by collectively shared risks and investments.

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<sup>2</sup> The Incorporation of the following countries had not previously been considered: (i) Malawi; (ii) Poland; (iii) Italy; (iv) New Zealand; (v) Gibraltar. Malawi did not join because it did not have sufficient background information to know whether the mandatory individual savings program had been effectively introduced in 2011 (this is now known to have been effective, so it has been incorporated into the statistics (more information on Malawi at this link). Poland, Italy, New Zealand and Gibraltar were incorporated into the statistics because they have individual, nationwide savings programs with mandatory automatic enrollment of workers by employers (employers must automatically enroll eligible employees in an individual savings program and employees may choose not to participate).

**Table 1**  
**Countries with fully funded mandatory or quasi-mandatory pension systems in 2022**  
**(the year of the reform in parentheses)**

Year	Single FF individual accounts	Mixed integrated: FF individual accounts & public PAYG		Mixed competitive: FF individual accounts v. public PAYG
2022	Malaysia (1951) Singapore (1955) Chile (1981) Australia (1992) Bolivia (1997) b Mexico (1997) El Salvador (1998) Kazakhstan (1998) b Hong-Kong (2000) China (2001) a Kosovo (2002) Dom. Rep. (2003) Nigeria (2005) Malawi (2011) Greece (2022)	Denmark (1995) Uruguay (1996) Poland (2019) c Sweden (1999) Tajikistan (1999) Costa Rica (2000) Panama (2000) Latvia (2001) Bulgaria (2002) Croatia (2002) Estonia (2002) Russia (2003)	Lithuania (2004) India (2004) a Slovakia (2005) Taiwan (2005) Macedonia (2006) Italy (2006) c New Zealand (2006) c d Netherlands (2007) Uzbekistan (2007) Romania (2008) Kyrgyzstan (2008) Israel (2008) Brunei (2010) Ghana (2010) UK (2012) c Honduras (2016) Turkey (2017) c Armenia (2018) Georgia (2019) Philippines (2021) Belarus (2022) Gibraltar (2022) c	Peru (1993) Colombia (1994)
<i>Total 2022: 51</i>				

<sup>a</sup> FF scheme operates only in some provinces of the country.

<sup>b</sup> FF scheme is managed by the government in Kazakhstan and Bolivia.

<sup>c</sup> The respective country is considered in this table for having an individual savings program, at national level, with mandatory automatic enrolment for employers (employers must auto-enrol eligible employees into an individual savings program and the employees can opt out).

<sup>d</sup> New Zealand is classified as a country with a pay-as-you-go scheme integrated into an individual savings system. However, it should be noted that the pay-as-you-go system referred to in this country is non-contributory (there is no contributory pay-as-you-go system).

**Source** FIAP based on OECD Pension Outlook data (several years); [International Update of the United States Social Security Agency \(SSA\)](#); Szczeptański, M- and J. Turner (Ed.) (2014). [Social Security and Pension Reform International Perspectives; Pension system profiles of IOPS member jurisdictions/territories; "Best practices and performance of auto-enrolment mechanisms for pension savings"](#) (European Commission); <https://irrationalretirement.com/2021/12/16/what-a-shocker-automatic-enrolment-in-retirement-plans-works-how-it-started-and-how-to-make-it-better/>.



In Denmark, third in the Mercer ranking, existing programs are individually funded and more than 90% of private occupational plans are defined contribution schemes. In Norway, fifth in the ranking, most mandatory occupational plans for private sector workers are defined contribution, and the government is looking to switch these plans to a personal pension account model that gives workers more control over retirement savings and improves return on investments.

The “European Personal Pension Plans” were created in Europe and launched in 2022, seeking to incentivize voluntary cross-border private pension savings to complement the pensions of occupational plans and the reduction of the pensions of the PAYGO systems. Among its main advantages are portability, competition between different entities, flexibility to change suppliers, transparency and investment options. Extending these types of plans to occupational pension schemes is also being considered (7).

Greece introduced a structural reform that created a new mandatory individual accounts program for those entering the workforce as of 2022, which will gradually replace notional accounts. Some of the objectives of the reform are the sustainability of the system, the improvement of pensions for young workers, and the restoration of public confidence in the system.

***Even countries with ideological positions promoting a predominant role of the State are encouraging the development of individual savings plans with a market orientation.***

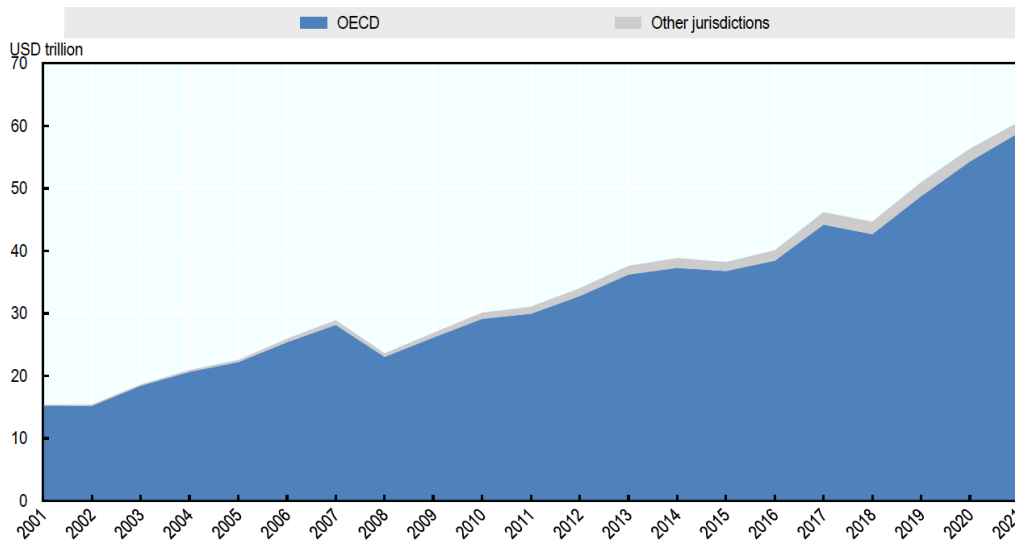
Countries such as China and Belarus are supplementing their pension systems with voluntary individual pension savings programs. China has actively developed and promoted several voluntary personal savings schemes with individual accounts, with market orientation and government support. The government is also promoting market-oriented operational and investment processes in the mandatory second pillar of occupational plans for public servants. Belarus created a new voluntary individual accounts program, in which employers must match workers' contributions, being able in turn to reduce contributions to the social security program to keep the total contribution rate unchanged.

*Total assets in individually funded private pension plans have risen significantly over the past two decades*

According to the OECD (8), individually funded private pension plans worldwide have accumulated a substantial level of assets to finance future pension benefits. In fact, the total assets in such schemes in OECD countries increased from 59% to 64% of GDP between 2001 and 2011. This trend accelerated significantly in the next decade, with these assets amounting to USD 59 trillion in 2021, representing 105% of GDP in the organization’s member countries (see Graph 3).

The three countries with the best pension systems worldwide, according to the Mercer CFA classification (6), are those with the highest levels of accumulated assets in individually funded private plans. The coverage achieved by these types of plans in mandatory or quasi-mandatory contribution programs is also very high in these three countries, fluctuating between 83% and 100% (8).

**Graph 3**  
**Evolution of asset amounts in individually funded private pension plans in the OECD and other jurisdictions over the last two decades (in trillions of USD)**



Source: OECD, 2023 (8).

*Occupational pension plans worldwide are transitioning to fixed defined contribution programs with collectively shared risks*

These new occupational plans are of the “collective defined contribution” (CDC) type. They are being created as an alternative to collective defined benefit plans, which have been in decline for many years. These new plans do not provide pension guarantees, but rather define a target benefit level based on fixed contribution rates, as in defined contribution programs, and expected returns on investments. Plans must be fully funded, and risks are collectively shared. If returns on investments or other factors evolve unfavorably, pensions are adjusted to keep the plans fully funded.

The information provided to plan members is expressed in terms of pension amounts, and not accumulated capital in individual accounts. Many of these plans pay pensions directly, rather than taking out annuities with insurance companies. Self-insurance can be taken out to protect against the risk of longevity within the groups comprising the pension plans. Pension amounts vary over time depending on the effective return on investments and the aggregate longevity experience for the group. This seeks to increase the expected returns by investing pension funds in less conservative investment portfolios and reduce costs in the absence of guarantees on returns or longevity.

The design of these plans may also include solidarity and financial risk-sharing mechanisms among their members, as in the plans proposed in the Netherlands' occupational programs, for example. However, solidarity is limited in these plans by restricting the resources allocated to them to a certain percentage of the total assets. Other more flexible plans with individual accounts and generational pension funds have also been considered.

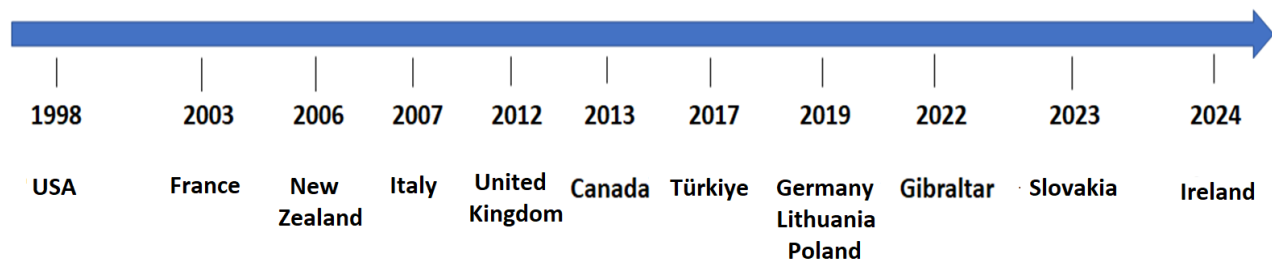
The UK, Canada, Iceland, Israel and Japan are in favor of developing these defined contribution schemes.

*Many countries have implemented automatic enrollment because they need to increase the coverage of voluntary pension plans*

According to the OECD, voluntary private personal and occupational pension plans had more than 40% coverage in the organization’s member countries (4). The need to expand the coverage of these plans and ensure adequate income during retirement has increased interest in introducing automatic enrollment.

According to existing literature, automatic enrollment in pension savings plans will be launched or incentivized in at least thirteen countries by 2024 (see Figure 2), starting with the US in 1998 and then France in 2003. According to the OECD (4) and the European Commission (9) eight countries chose to do so between 2006 and 2019: New Zealand (2006); Italy (2007); United Kingdom (2012); Canada (2013); Turkey (2017); Germany (2019); Lithuania (2019); and Poland (2019). Subsequently, Ireland and Slovakia also introduced programs with automatic enrollment in 2022-2023<sup>3</sup>, and Gibraltar and Turkey expanded the groups of workers to which this type of enrolment applies. Lithuania and New Zealand stand out among the countries that have achieved the highest coverage, as a percentage of the working-age population, reaching over 75% and 80% in 2021, respectively.

**Figure 2**  
Automatic enrolment in pension plans:  
One of the main levers for boosting individual savings internationally



Source: FIAP based on “Best practices and performance of auto-enrolment mechanisms for pension savings” (European Commission); <https://irrationalretirement.com/2021/12/16/what-a-shocker-automatic-enrolment-in-retirement-plans-works-how-it-started-and-how-to-make-it-better/>; Social Security USA; and OECD Pensions Outlook 2022.

The European Commission believes that automatic enrolment is a policy tool that can be used in combination with others (tax and tax incentives) to increase the coverage of complementary pension programs. Systematic savings can also be encouraged with less expensive pension products that invest in diversified portfolios. This therefore contributes to one of the European Commission’s key

<sup>3</sup> In Ireland, the plan will be operational as of 2024.

goals, namely to improve the diversification of household financial savings and the adequacy of pensions through the capital market. The Commission also notes that people should be encouraged to complement public pensions with long-term savings and investments, in order to achieve better pensions and finance the long-term growth of economies (9).

***International and Latin American experience shows that the creation or strengthening of the PAYGO systems in the region would be a disastrous public policy***

The trends observed in many countries worldwide contrast with the proposals made by certain political sectors in Latin America, which seek to undermine individual savings systems and strengthen or revive the PAYGO systems with centralized public administration, which have already failed in our region.

Individual savings systems can provide better and safer long-term pensions than PAYGO systems. The funds available for paying pensions have multiplied several times thanks to individual savings, because the returns on investments are added to their financing, whereas only contributions are available in the PAYGO systems. A 2020 FIAP study (10) estimated that the high returns obtained in Chile's AFP system quadrupled the contributions made to individual accounts by the first generations of workers. In Mexico and Peru, the returns obtained by the fund managers have increased individual account balances, enabling the doubling or tripling of contributions of workers, employers and the State. Empirical evidence and studies also show that the return on capital obtained in individual savings systems exceeds the growth of the wage bill in the long term, which determines revenue in a PAYGO system.

Individual savings systems also boost the growth of GDP, employment and productivity, with the positive effects that this entails for the formalization of the labor market and coverage and contributions to the pension system. SURA studies conducted for different Latin American countries (11) concluded that individual savings systems explained between 6.2% and 12.9% of the annual GDP increase in the period they analyzed, generating an increase in labor income and contributions to individual accounts, and increasing the balances available for financing pensions. A study conducted for the Dominican Republic in 2022 (12) highlights that 22% of the average annual growth of GDP over the last two decades is explained by the introduction and operation of the individual savings system.

A fundamental reason for not reviving the PAYGO systems is that they will be strongly affected by population aging, the reduction in birth rates, and higher life expectancies. While these trends will

also affect the individual savings systems, via life expectancies, they will be of much lower magnitude (less than half, according to a study by FIAP – 2022) (13) and will not affect their financial balance.

***In Latin America, the PAYGO systems have failed and have been regressive and unsupportive***

The Latin American experience shows that the PAYGO systems have been regressive and unsupportive. First, a high percentage of participants reach the official retirement age without meeting the requirements for accessing a pension, thus losing part or all their contributions. The vast majority are lower-income, vulnerable and female workers. Consider the examples of the former pension funds in Chile, or the PAYGO system managed by the Pension Standardization Office in Peru, or the former PAYGO system in El Salvador, in which between 50% and 66% of participants did not obtain a pension and lost part or all their savings. The situation in Peru has only recently been partially corrected, granting pensions to members with less than 20 years of contributions.

Moreover, an IDB study (14) shows that, in most countries with defined benefit PAYGO systems, subsidies are granted to members who manage to access a pension, i.e., the pensions actuarially exceed the paid-in contributions. These subsidies favor the sectors that need them least, because they usually grow with people's income levels, i.e., they are regressive. What is even more critical is that the State must spend considerable resources to finance these subsidies that do not reach the people who cannot access a pension or do not participate in the system because of their informality status, or other reasons, a very serious phenomenon in our countries.

***Latin American experiences also show that the PAYGO systems have significant risks given their structural characteristics***

These risks go beyond the effect of demographic trends, affecting their financing and the inability to deliver on defined benefit promises.

Collective funds are initially accumulated with part of the contributions. However, the risks of collective ownership become apparent as systems mature. Pension funds are exposed to the hazard of being destined to purposes other than pensions, because they belong to everyone and no one. This is what happened to the Sustainability Guarantee Fund in Argentina's PAYGO system, which was invested in loans to provinces and subsidized social organizations with doubtful repayment capabilities.

Furthermore, collective ownership generates incentives to provide benefits beyond what is actuarially reasonable and sustainable in the long term, as occurred in Europe. This generates significant intergenerational transfers, in favor of older generations (grandparents), but to the detriment of future generations (their children, grandchildren and great-grandchildren), which has

attractive short-term political dividends, but entails enormous damage to pension systems in the long term.

The collectivization of funds is also contrary to the accumulated evidence in our countries of a greater awareness and valuation of individual ownership by members.

The ex-ante definition of long-term benefits, such as pensions, on the other hand, entails the risk that the resources necessary to grant them vary depending on the evolution of demographic trends, among other variables. This is precisely why European countries have decided to move away from defined benefit collective funds in occupational programs, towards defined contributions with individual savings.

The Latin American experience also shows that there is a risk that benefits will be disconnected from the contributions made by workers, generating incentives to press for better returns by those who have that power, avoid contributions and falsify rights to benefits.

Since the political risk of changing pensions cannot be minimized, the promise of defined long-term pensions is an illusion, especially for younger, lower-income workers.

Added to all the above are the inefficiency derived from a centralized public administration that legalizes a monopoly, with members losing their freedom of choice, with the risk that the public institution does not have incentives to improve the quality of its services and reduce administrative costs and is subject to significant conflicts of interest when the State assumes the role of administrator, regulator and auditor. These risks are heightened when there are significant public budget deficits. This occurred with the long-term Social Security Manager in Bolivia, which started operating a monopoly in the administration of the individual accounts of the pension system in May 2023.

***Strengthening PAYGO systems and weakening individual savings systems would also have a negative effect on non-contributory pensions***

Non-contributory pensions can be improved by the introduction of individual savings systems, because of their positive impact on the public budget. Although their creation generates greater fiscal deficits in the short term, public resources that previously financed the deficits of the PAYGO regimes are released in the mid and long term and can be used to strengthen non-contributory pensions and other social programs. This has happened in countries such as Chile, where this release of funds has helped to finance the pensions of the Solidarity Pension System. This reality contrasts with what occurs in other countries, such as Colombia and Peru, where the PAYGO system is still running and competes with the individual savings system. Colombian government expenditure to cover the deficit of the PAYGO systems grew rapidly to levels close to 4% of GDP. Transfers to cover these deficits favor sectors with more stable employment that manage to retire, and harm a significant percentage of the population that is informal and cannot access these benefits because they do not participate in the pension system or meet the pension requirements.

As our population ages and the numbers and percentages of people in the passive stage increase, this issue will become increasingly important, because many of these people will not be entitled to a pension, or the pensions received will be insufficient. This is due to the shortcomings of our labor markets and their effects on the coverage and contribution density of pension systems, the low contribution rates and official retirement ages and the massive mandatory savings withdrawals authorized in some of our countries (Chile and Peru).

***Non-contributory pension programs must be strengthened***

Faced with this reality, our region faces the challenge of strengthening non-contributory pension programs and increasing the financing allocated to them, increasing their coverage and ensuring that the pension amounts provided will reduce poverty levels in old age. Pensions must also be affordable and sustainable in the long term, and their design must minimize the disincentives to contribute to contributory programs. Funding should be progressive and come from the public budget and not a tax on labor, to make it as undistorted as possible for the economy in general and for the labor market in particular. The development of this pillar is important because of the low levels of savings in our countries, and because the increase in the coverage of contributory programs will be gradual over time and any reforms will be fully effective only in the long term.

With the exception of Bolivia, Brazil and Chile, our region currently allocates few resources to the financing of non-contributory pensions. According to ECLAC information, expenditure on this type of



pension varies between 0.1% and 0.6% of GDP for a group of selected countries, excluding the three already mentioned (15). In Chile, the creation of the Solidarity System in 2008, the sharp increase in its benefits since the end of 2019 and the creation of the Universal Guaranteed Pension in 2022 strongly increased spending on non-contributory pensions. In 2020 this expenditure was equivalent to 1.2% of GDP and it is estimated that by 2022 additional expenditure was added that will approach 2.0% of GDP and will continue to grow in relation to output by 2050.

Other countries in the region are making efforts to increase the coverage and amounts of non-contributory pensions, which will increase their relative weight in the total amount of pensions paid in the system. For example, Mexico made non-contributory pensions universal for senior citizens, lowering the age for eligibility and significantly increasing spending on them. The Colombian government has expressed its intention to strengthen the non-contributory pension program.

Countries in Europe and elsewhere are also strengthening non-contributory pensions for low-income pensioners financed from public budget resources.

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