**PENSION NOTES**

**No. 29 - September 2018**

# Unsustainability of the public PAYGO systems: The cases of Colombia, Argentina and Brazil


## Executive Summary

Ongoing population aging has put the PAYGO pension systems in check. The PAYGO systems are in crisis worldwide. In order to address their financial problems, countries have had to introduce a series of parametric reforms. According to FIAP (2018), within a span of 22 years, between 1995 and June 2018, a total of 78 countries increased the contribution rate in their PAYGO programs; 55 countries had to increase the retirement age; 61 adjusted the formulas for calculating benefits and cut or froze old-age pension amounts.

In this pensions note we will analyze the situation of the PAYGO systems in Colombia, Argentina and Brazil, because all these countries have shown serious problems with the sustainability of their PAYGO pension systems. In Colombia, a public PAYGO system coexists with an individually funded system. The PAYGO system is financially unsustainable, with a deficit that amounted to 4% of GDP in 2017. Ten years after having nationalized the pension funds (previously managed by private companies), Argentina faces a difficult fiscal situation, in which pensions account for almost half of the National Government's public expenditure. In fact, the deficit of the Argentine pension system is equivalent to 11.3% of GDP in 2017. In Brazil, the deficit of the public pension system was equivalent to 8% of GDP in 2016 and it is estimated that it will rise to 14% of GDP by 2040 if no reform is implemented.


## Introduction

Increased life expectancy with low birth rates make the PAYGO systems unviable. These were the unequivocal remarks of several experts participating in the 16th FIAP International Seminar/16th FIAP-ASOFONDOS Congress. The economist Xavier Sala-i-Martin, for example, described the operation and design of the PAYGO systems as a “Ponzi pyramid scam." According to the economist, the PAYGO systems operate as such because there was previously a broad base of young workers contributing for a few retirees, but due to increased life expectancy and declining birth rates, this base is disappearing, making such systems unsustainable. "*There has to be a time when all the money in the world will be paid to the previous generation. As this cannot occur, there will always be a time when it is no longer possible to continue with the* *pyramid,"* he said. He also added that *"all pyramid scams end up exploding: there comes a time when there is not enough money to pay the pensions of the previous generation."*

The demographics expert, Rafael Puyol, reached a similar conclusion, pointing out that the PAYGO systems are facing two main demographic hazards: low fertility and population aging, factors that currently have the Spanish PAYGO system in crisis mode. He pointed out that Latin America is headed in the same direction as Europe, i.e. lower birthrates, aging populations and PAYGO pension systems lacking the necessary resources for protecting the population. *"The difference I see compared to Europe, is that Latin America will take less time to age."* Puyol wound up his speech with the following reflection: *"With the demographics we have, it is impossible to maintain, or much less recover the PAYGO systems, because you cannot resolve a problem with another problem."*

In Latin America, demographic change has an additional challenge in high labor informality, due to which a significant percentage of the population does not contribute to social security, thus narrowing the "base of the pyramid" even more, using the analogy of Sala-I-Martin.

In this pensions note we analyzed three specific PAYGO pension systems in the region: Colombia, Argentina and Brazil, countries with the highest pension expenditure in the region.

**Colombia: Duality of the pension system is unviable**

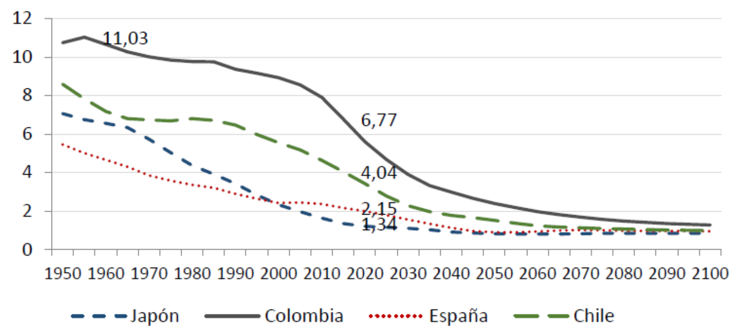
An individually funded pension system, whose funds are managed by AFPs, and a PAYGO pension system (known as the Average Premium Plan), managed by Colpensiones, operate parallel to one another in Colombia. These systems currently compete with one another, instead of complementing each other. However, the combination of the demographic transition with high levels of informality in the Labor market, amounting to 65% of the total workforce in Colombia, makes the existence of a PAYGO pension system in the country unsustainable. These issues are exacerbated by the existence of "special" pensions that provide disproportionate benefits to certain groups of the population.

In Graph No. 1 we can observe the sharp drop the country has experienced in the ratio of active workers to senior citizens. Up till 1950, there were 11 active workers for each senior citizen in Colombia, whereas that ratio is currently 6.7. The ratio is expected to be only 4 by 2030, and only 2 by 2060. Table No. 1 shows the contribution rate that balances revenue and expenditure in a PAYGO system, based on the number of active workers for every retiree. As can be seen, the required contribution percentages grow as the number of active workers for every retiree decreases, reaching 50% of taxable income when there are only 2 active workers for every retiree. This trend clearly makes any PAYGO system unsustainable over time.

However, as pointed out by Montenegro et al. (2017), these figures do not take labor informality into account. According to the authors, on correcting the informality statistics, instead of nearly 7 active workers per senior citizen today, there are really only 2 workers that actually contribute, hence the Colombian PAYGO system is already unsustainable (there is no need to wait until 2060). Thus, "young people today are supportive of senior citizens, but when these young people are old, there will be no one supportive of them." (Montenegro et al., 2017: 27).

Government expenditure for covering the pension deficit (Colpensiones and other special regimes) has grown at an accelerated rate. According to figures presented by Villar, Becerra and Forero (2017), government pension expenditure in 1990 was 0.6% of GDP, whereas in 2016 it rose to 3.4% of GDP, and it was estimated to be almost 4% of GDP in 2017 (see Graph No. 2). 90% of this expenditure corresponds to transfers to make up for the shortfall in Colpensiones and another three special regimes.

**Graph No. 1**
**Colombia: Number of active workers for every senior citizen**




**Source:** Montenegro et al. (2017) based on UN Population Division data.

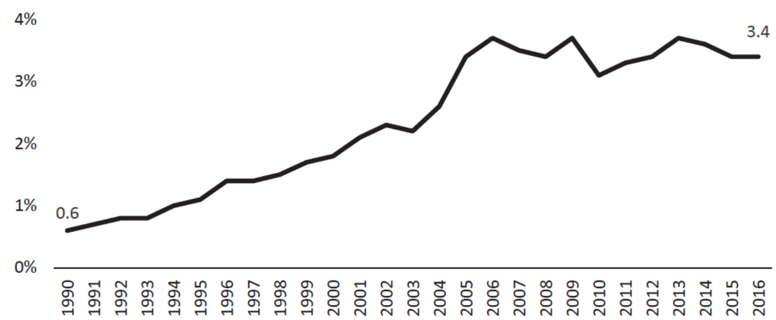
**Table No. 1**
**Colombia: Contribution rate that balances revenue and expenses of a PAYGO system, according to the number of active workers per retiree**

| Year | Number of active workers per retiree | Contribution rate that balances revenue and expenditure |
|---|---|---|
| 1950 | 11.03 | 9.06% |
| 2015 | 6.77 | 14.77% |
| 2030 | 4 | 25% |
| 2060 | 2 | 50% |

**Source:** FIAP based on Montenegro et al. (2017).

**Graph No. 2**

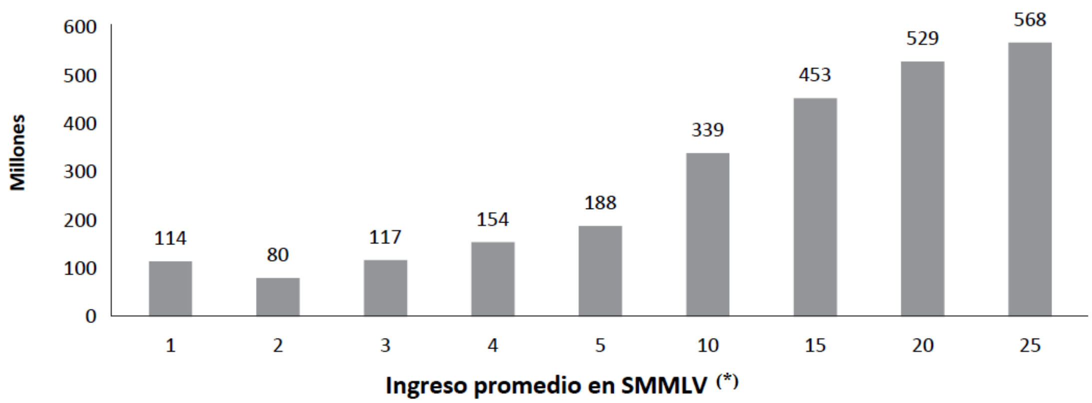
**Colombia: 1990-2016 National government pension expenditure** (% of GDP)




**Source:** Villar, Becerra and Forero (2017).

**Graph No. 3**

**Colombia: Present value of a pension benefit in the Average Premium Plan based on income**




(*) Legal Monthly Minimum Wage

**Source**: Cardona (2015).

Another major issue with the PAYGO system is that it is extremely regressive. Establishing a minimum of 25 years of contributions for accessing a pension results in less skilled and lower-income workers, who generally fail to meet this requirement and therefore do not receive a contributory pension, and end up subsidizing the pensions of higher income workers (Montenegro et al., 2017 and Cardona, 2015). As can be seen in Graph No. 3, the amount of the pension benefits received by pensioners in the PAYGO system increases as their income increases.

A possible solution to this duality of the Colombian pension system, put forward by Asofondos (2018), is for the existing distribution system to operate as a solidarity pillar complementary to the individually funded pillar. The proposal consists in eliminating the public PAYGO system (the Average Premium Plan) and switching all contributors to the individually funded system, which does not have sustainability issues.

The proposed system would be operated by public and private AFPs, with identical rules. It includes an enhanced PAYGO-type complement in which those who have contributed for at least 1,150 weeks, but do not have sufficient capital, can also retire, as currently occurs in the private pension funds through the so-called Minimum Pension Guarantee Fund.

It also proposes creating a special system for informal workers and disabled individuals. Finally, it proposes reinforcing the solidarity pillar to protect the poorest through the Colombia Mayor program, whose resources could come from existing subsidies to privileged pensions that come out of the country's budget. The reform thus proposed will benefit formal and informal workers and will be self-sustaining, without high pension subsidies.

The Expenditure and Public Investment Commission (2017) has also put forward a series of proposals for reforming the Colombian pension system. According to the Group of researchers that make up the Commission, the reform must seek three goals: (i) increase coverage; (ii) reduce the scale of public expenditure on pensions; and (iii) correct the regressivity of the PAYGO system. To achieve the above, they propose the following:

1. Adjust the parameters of the general pension system: (i) raise the retirement age, systematically and periodically linking it to demographic parameters every five years ; (ii) use the average wage throughout the working life of an individual, or at least in the last 20 years (instead of the last 10 used today to calculate the taxable base income in the PAYGO system); (iii) raise contributions to 18%, to ensure the financial sustainability of the system; and (iv) reduce the existing ceiling for pensions in the Average Premium Plan (it is currently 25 minimum wages, which is high).

2. Reform the architecture of the system. (i) Eliminate the arbitration between the Average Premium Plan and individual savings in the private funds; (ii) expand the scope of old age financial support mechanisms (Colombia Mayor and the Periodic Economic Benefits Program (BEPS), seeking to reinforce their effects on poverty.

3. Streamline the pension and retirement assignment systems of teachers and military personnel.

4. Streamline the jurisprudence on issues related to the pension system.

5. Advance in the labor market formalization process.

**Argentina: Social Security system structurally bankrupt**

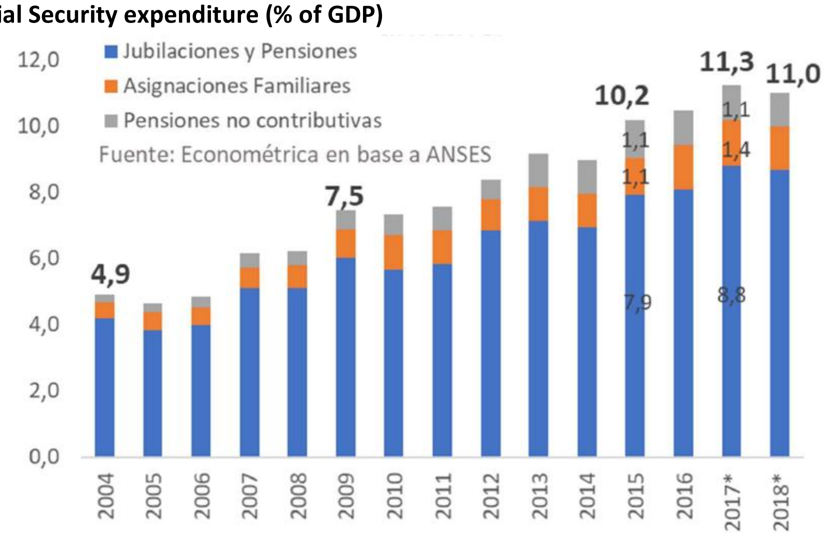
It is important to remember that in 2008, Argentina eliminated the private pension system created in 1994. All the funds deposited in the private companies called Retirement and Pension Fund Managers (AFJP) were transferred to the State system, the National Social Security Administration (ANSES). However, after 10 years of State management, ANSES began to reveal serious shortcomings.

In the last decade, the country more than doubled public expenditure on pensions, rising from 5% of GDP in 2006 to 11.3% of GDP in 2017. In fact, pension expenditure accounts for half of the expenditure of the national Government.

According to official data, in 2017, the social security system only had sufficient revenue to cover 60% of its obligations, resulting in a structural deficit equivalent to 4.7% of GDP. According to a recent report by the consulting firm Castiñeira (2017), "s*ocial security in Argentina is structurally bankrupt, with more expenses than income for decades, having increased its deficit over the last few years.*" The breakdown of the pension system is evident if one considers that contributors total 11.3 million people, and beneficiaries 8.3 million. I.e., there are only 1.4 contributors per retiree. This makes the pension system unviable only with contributions, even at exorbitant rates. Hence, the contribution from the Treasury for keeping the system afloat is continuously growing.

Due to the pressure on public finances entailed by pension expenditure, the changes introduced in the pension reform enacted by the Government came into effect in February, 2018. The main changes introduced by the reform include the modification of the formula for calculating pension and social security adjustments. From now on, pensions will be pegged to inflation and not the contribution rate, as was previously the case. The reform also raises the voluntary retirement age from 65 to 70 for men, and from 60 to 63 for women. Thus, companies can no longer require male employees over 65 and female employees over 60 to retire. Workers will be free to decide whether to continue working or not.

**Graph No. 4**
**Argentina: Social Security expenditure (% of GDP)**




**Source:** Castiñeira (2017) based on ANSES data.

## Brazil: The postponed pension reform

The Brazilian pension system comprises three regimes:

i. *General Social Security Regime (Regimen General de Previdencia Social - RGPS).* This is a mandatory public PAYGO system managed by the Social Security Institute (INSS) covering all private-sector workers up to a pension ceiling of approximately USD 800. Reform efforts have focused on increasing coverage and correcting actuarial distortions.

ii. *Pension Scheme for Government Employees (Regímenes Próprios de Previdência Social-RPPS).* Public servants are subject to specific pension provisions. Although eligibility criteria are the same for all government employees, there are more than 2400 special pension schemes managed by the federal Government, States and municipalities with specific funding rules. These are PAYGO systems facing serious financial sustainability issues. The Government has tried to reform the main parameters of the system: retirement age and replacement and contribution rates.

iii. *Complementary Pension System (Régimen de Previdência Complementar - RPC)*. This regime includes private and occupational pension plans managed by closed and open pension funds, as well as insurance companies. Enrollment is not mandatory and reform efforts have focused on modernizing the rules and extending the coverage of the system.

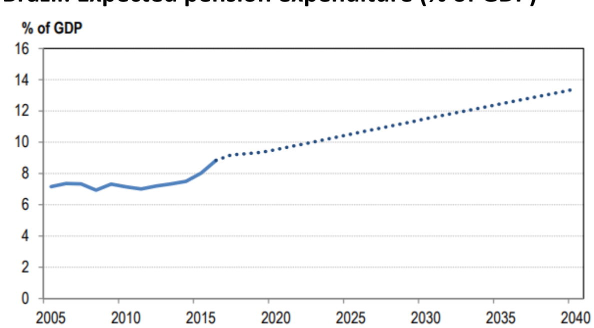
The Brazilian population over 65 is currently 8.5% of the total population. It is expected to rise to 25% by 2050, a situation that the existing pension system would not be able to deal with. In addition to population aging, the existing public PAYGO pension system is financially unsustainable due to the generous replacement rates granted and the fact that that there is no minimum retirement age, since only a certain number of years of contribution to the system are required for retirement (35 for men and 30 for women). Thus, a man (or woman) entering the labor market at the age of 20, could retire at 55 (or 50) with a replacement rate of 70% (or 53%) of their income.

Moreover, those who contribute for part of their working lives, require only 15 years of contributions to access the minimum pension once they turn 60 or 65, (women or men), with the minimum pension being equal to the minimum wage.

It is estimated that current pension expenditure in Brazil exceeds 8% of GDP, a figure that the OECD projects will grow to about 14% of GDP by 2040, unless far-reaching changes are made to the existing system (see Graph No. 5). The current deficit of the pension system is 4.8% of GDP, which accounts for half of the country's fiscal deficit (The Economist, 2017).

**Graph No. 5**

**Brazil: Expected pension expenditure (% of GDP)**




**Source:** OECD (2017).

Due to this complex situation, the Government attempted to reform the pension system in 2017, introducing a number of changes to the existing PAYGO system. These include:

i. Establishing a minimum retirement age of 65 (for both men and women).

ii. Increasing the number of years of contributions required for accessing a full pension to 49, for both men and women, and the number of years of contributions required for accessing a partial pension (which would still be equal to the minimum wage) from 15 to 25.

iii. The formula for calculating pension benefits will be also adjusted, so that at least 10 more years of contribution would be required to access the same benefits as prior to the reform.

iv. The reform proposal also includes a sole pension system for government employees and private sector workers, and stricter conditions for heirs receiving pensions after the death of a worker, and in particular, the minimum survival pension could be less than the minimum wage.

According to the OECD (2017) the reform proposed by the Government was going in the right direction for improving the financial situation of the pension system, although it considers it a mistake to keep the minimum pension linked to the minimum wage, since the latter is subject to political pressure.

Despite the urgency of the reform, the Government suspended its processing in February 2018 due to lack of support in congress. The Fitch and Moody's rating agencies downgraded Brazil's rating after the failure of the pension reform.

Despite the long history of complementary pensions in the country (created in the 1960s), they still have very low coverage. Under the complementary system, occupational and personal pensions are provided on a voluntary basis, and can be offered through closed or open plans.

Closed private pension agencies are non-profit organizations that may be established by single or multiple employers, as well as trade unions. Accumulated assets are legally separated from the sponsor company. This mode is principally chosen by large companies.

Open pension plans are not necessarily related to employment. Open pension institutions offer their services to employers, employees, self-employed and even unemployed individuals. Small and medium-sized enterprises mostly opt for this scheme.

According to information from the Brazilian Association of Closed Entities of Complementary Pensions (ABRAPP), closed funds clearly dominate the market, with managed assets of USD 239 billion, representing 12.8% of GDP in 2016. The assets managed by open private pension funds, in turn, were USD 3.87 billion, representing 0.2% of GDP in 2016. Altogether, the complementary pension funds had total assets under management of about USD 242 billion, equivalent to 13% of GDP in 2016. However, the total coverage of complementary pensions is still very low: only 2.3% of the labor force was covered by a complementary pension plan.

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