



## PENSION NOTES

No. 20, September 2017

### **Crisis in the public PAYGO systems: The Cases of Spain, Costa Rica 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 (2017), within a span of 21 years, between 1995 and June 2017, a total of 76 countries increased the contribution rate in their PAYGO programs; 54 countries had to increase the retirement age; 67 adjusted the formulas for calculating benefits, and cut or froze old-age pension amounts.

This document discusses the specific cases of Spain, Costa Rica and Brazil. In Spain, it is estimated that the pension reserve fund will be exhausted this year, due to which the government has had to resort to borrowing to cover the pension deficit. The measures implemented to give the system financial sustainability, appear to be to no avail.

Costa Rica is in a similar situation to Spain, although it still has a longer term for carrying out reforms to its pension system. It is estimated that by 2024 the revenues of the country's main fund will be insufficient to cover the benefits it grants, due to which its reserve will be exhausted by 2027. The only measure the country has taken so far is to increase the contribution rate, which is

insufficient for balancing the financial situation of the system.

Brazil, on the other hand, is promoting an in-depth pension reform, including a mandatory minimum retirement age of 65, and a reduction of the benefits granted, aimed at reducing the enormous tax burden that the payment of pensions entails. The pension system currently has a deficit of 4.8% of GDP, which accounts for half of the country's fiscal deficit.

The dire situation of the PAYGO systems highlights the need to incorporate individually funded systems, which are financially sustainable, and would also help to compensate for the loss of benefits experienced by pensioners due to the constant reduction in the benefits of the public PAYGO systems.

#### **INTRODUCTION**

One of the biggest challenges faced by countries with public PAYGO systems is the pressure that ongoing population aging will bring to bear on public finances. This situation has led several international agencies (OECD, IMF, the European Central Bank, among others) to encourage countries to implement reforms in their pension

systems, in order to guarantee their sustainability in the long term. Thus, many countries with PAYGO systems have already implemented reforms, by modifying the structural parameters that serve as a basis for the calculation of public retirement benefits. These measures include an increase in the number of years to be considered for calculating pensions, an increase in the official retirement age, or an increase in contribution rates.

In order to alleviate the negative impact that these measures would have on the pension amounts of their members, governments and international agencies have called for the introduction of private individually funded systems to complement the PAYGO systems, as has occurred in Germany, Norway and Switzerland.

This pension note examines three particular cases that have gained increasing press coverage in the past year, due to the serious financial situation faced by their public PAYGO systems: Spain, Costa Rica and Brazil.

## **GROWING CRISIS IN PUBLIC PAYGO SYSTEMS WORLDWIDE**

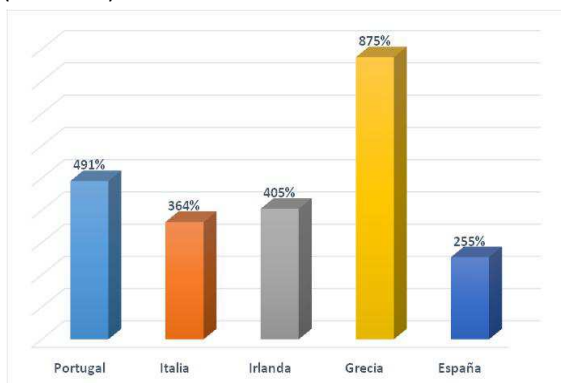
In order to address the financial problems of the public PAYGO systems, countries have had to implement a series of parametric reforms. According to FIAP (2017), within a span of 21 years, between 1995 and June 2017, a total of 76 countries increased the contribution rate in their PAYGO programs (e.g.: France, Norway, Russia, Portugal, Costa Rica); 54 countries had to increase the retirement age; (e.g.: Germany, South Korea, Denmark, Spain, France, Greece); and 67 adjusted the formula for calculating benefits,

and cut or froze old-age pension amounts (e.g.: Brazil, Belgium, Italy, Netherlands, United Kingdom, Viet Nam, Japan).

As opposed to the market risk faced by the individually funded systems, which can be diversified, there is no proven strategy for ensuring the financial sustainability of the PAYGO systems. The risk grows exponentially as populations age and the cost of PAYGO benefits increase, increasing the pressure on public finances. Graph No. 1 shows the undocumented pension debt of the PAYGO systems in 2009, for a number of European countries. The most dramatic case is that of Greece, where the undocumented pension debt was almost 9 times its GDP.

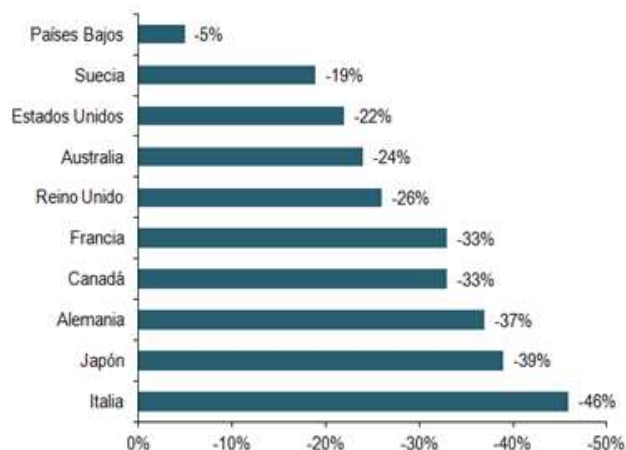
A growing number of countries have adopted reforms that reduce the future generosity of State pensions. In some countries, these reductions are very large. According to estimates by Jackson (2013), compared to a hypothetical scenario prior to the reforms (maintaining retirement ages and replacement rates), the benefits of State pensions would be reduced by 5% in the Netherlands; 19% in Sweden; 22% in the United States; 24% in Australia; 26% in the United Kingdom, up to a drop of 46% in Italy (see Graph No. 2).

**Graph No. 1: European countries: Undocumented pension debt, 2009**  
(% of GDP)



**Source:** Edwards (2010).

**Graph No. 2: Percentage reduction in existing PAYGO pension benefits for the elderly (60 or older) compared to the benefit prior to the 2010-2040 reforms\***



Projections of benefits prior to the reforms, assume that the retirement age and replacement rates do not change in the future.

**Source:** Jackson (2013).

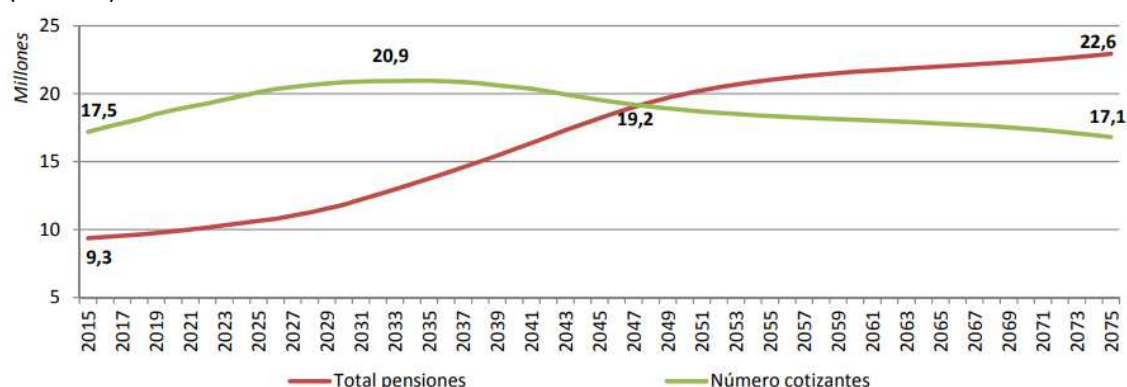
## **SPAIN: THE “PENSION PIGGY BANK” IS EXHAUSTED**

Increasing population aging, and the economic crisis that has affected the country in recent years, have put the Spanish PAYGO system in check. Added to this is the fact that Spain, together with Austria, is the OECD member country with the highest replacement rate of the public system (73.9% versus the OECD average of 40.6%). As can be seen in Graph No. 3, there is an

upward trend in the projection of the number of pensioners, while the total number of contributors is dropping. In 2047, the number of pensioners will equal the number of contributors. Subsequently, the number of pensioners will surpass the number of contributors by a ratio of almost two to one (two pensioners for every contributor). Given this scenario, there is an urgent need for a deep reform of the country's social security system.

**Graph No. 3: Evolution of Contributors and Pensioners**

(Millions)



**Source:** Fundación Inverco (2017).

A series of reforms that contribute to the financial sustainability of the pension system were introduced in 2011 and 2013. A slew of reforms were approved in August 2011 (Law 27-2011), coming into effect as of January, 2013. The main changes include the following: (i) The official retirement age increased from 65 to 67, by one month per year until 2018, and 2 months per year until 2027 (ii) The minimum number of years of contribution required for a pension increases from 15 to 25, at the rate of 1 year per year until 2022; (iii) The number of years of contribution required for receiving a full pension increase from 35 to 38.5 years, by 6 months every 3 years until 2025 (workers can retire at age 65 if they meet these contribution requirements); (iv) The benefits for workers who remain in the labor market beyond the normal retirement age will increase between 2% and 4%, depending on the number of years of contribution. For workers with less than 25 years of service, the incentive will be 2%; for those with between 25 and 36 years of service, the incentive will be 2.75%; and for those with 37 or more years of service, the incentive will be 4%.

Furthermore, the "Sustainability Factor," (Law 23/2013), which will come into effect as of 2027, was introduced in 2013. This will automatically adjust all the relevant parameters of the system, based on changes in life expectancy, every 5 years. This measure, together with the previous ones, will improve the financial sustainability of the pension system, while at the same time significantly reducing the replacement rate, which will be 27% by 2050 (Fundación Inverco, 2017).

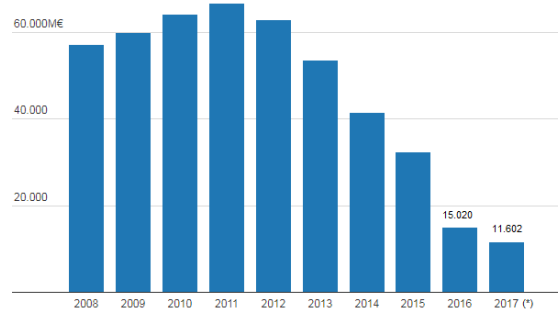
According to Fundación Inverco (2017), the two reforms introduced in 2011-2013 are insufficient for offsetting the impact of population aging. The system has to carry out reforms of the structural nature to ensure financial sustainability, while simultaneously providing adequate pensions for present and future generations.

Pensions are paid, in theory, with the contributions of workers to the public PAYGO system. However, since these are insufficient due to falling revenues and the increase in the number of pensioners, the Government has had to periodically withdraw amounts from the Social Security

Reserve Fund (also known as the "pensions piggy bank"), created by the Government in 2000 to guarantee the public social security system. As can be seen in Graph No. 4, the Pension Fund has been considerably reduced since 2012. In fact, in July 2017, the fund had a remaining balance of about EUR 11,600 million (USD 13,950 million), so it is highly probable that it will be exhausted in 2017. This is why the Government has had to resort to borrowing to be able to pay pensions.

**Graph No. 4: Spain: Evolution of the Pension Reserve Fund**

(millions of euros)



(\*) Data to July 2017.

**Source:** Ministry of Labor and Social Security.

The payment of public pensions will once again be the biggest item of government expenditure in 2017. Expenditure on public pensions in 2017 will be about EUR 140,000 million (USD 168,000 million), representing more than 40% of the total yearly budget.

The rise in Social Security expenditure makes the need to reform the existing pension system patently evident.

According to Fundación Inverco (2017), in order to achieve adequate future pensions, it would be necessary to complement the PAYGO system with an individually funded pillar, for which it puts forward three proposals:

1. Progressive transfer of non-labor contingencies (widowhood, orphanhood) to the General State budget.
2. Gradual transition of the current pension system to a notional accounts system, which would still be PAYGO, although improving its transparency.
3. Adoption of an individually funded system with default enrollment, and contributions of 2% of the wage by companies, and another 2% by workers.

## **COSTA RICA: EXHAUSTION OF THE PAYGO MODELS**

In Costa Rica there are two main public PAYGO systems: the Disability, Old Age and Death Fund (FIVM) of the Costa Rican Social Security Fund (CCSS) and the Judiciary Pension Fund (DPJ). Each Fund has different contribution and benefit systems (see Table No. 1).

**Table No. 1: Costa Rica: Main features of the public PAYGO systems**

	Disability, Old Age and Death Fund (FIVM)	Judiciary Fund (DPJ)
Contribution rates (% salary)	9.2%	21.2%
Average reference wage for calculating pensions (SPR)	Last 20 years (updated)	Best last 24 wages (updated)
Replacement rate (compared to ARW)	2017: 58% 2020: 50% 2030: 45% (*)	100%

(\*) According to UCR Actuarial Study, 2016

**Source:** Own construction based on data from Supen.

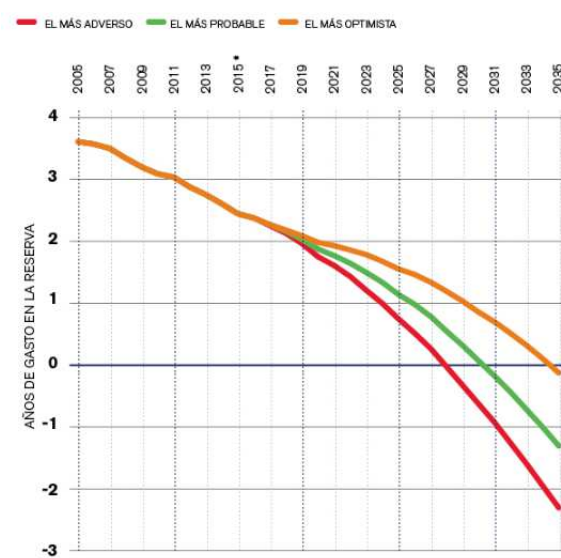
**The FIVM** is the most important collective fund in the country (1.4 million contributors, 238 thousand pensioners and US\$ 3,600 million in reserve). Since 2012, the contributions received by the fund for paying benefits have been insufficient, due to which the fund's reserve has been progressively diminishing. According to actuarial estimates, contributions and investments would be insufficient for covering the payment of pensions by 2024, and the systems reserve would be exhausted between 2027 and 2030 (see Graph No. 5). This puts the FIVM in a highly unstable situation.

In order to address the situation of the FIVM, the Government has implemented two main actions. First of all, the Board of Directors of the CCSS approved a 1% increase in workers' contributions as of June 2017, aiming to capitalize on the interests of the reserve while long-term actions are agreed on, thereby increasing the total contribution rate from 9.16% to 0.16% (worker 3.84%; employer 5.08% and State 1.24%). In July 2016, the State contribution rate had already increased from 0.58% to 1.24%. A discussion

"Round Table" comprising representatives of the government, labor groups, trade unions and employers was also installed, with the mission of proposing the changes to be applied in the Fund. Nonetheless, the Discussion Round Table has not made any recommendations to date.

**Graph No. 5**

**Costa Rica: Reserve Coefficient of the FIVM**



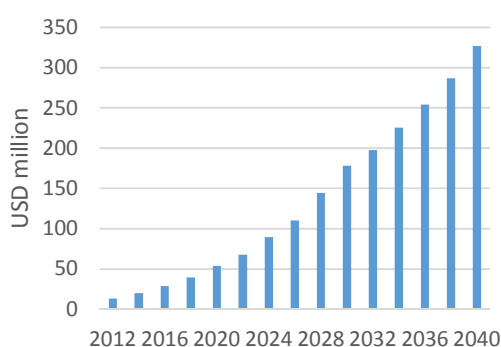
**Source:** UCR (2016).

It is worth mentioning that the last actuarial study carried out suggested three measures for improving the financial sustainability of the FIVM: (i) raise the retirement age from

65 to 70. (ii) Gradually raise the worker-employer-government contribution to 26.4% of the worker's salary. In the new distribution, the employer's contribution would be 13.99%, the worker's, 8.72% and the government's 3.69%. (iii) Reduction of the pension benefit from 60% to 40% of the average wage of retirees.

**The Judiciary Fund (DPJ)**, on the other hand, has 3,226 retirees and 12,055 actively contributing employees. A 2012 actuarial study determined the deficit between contributions and benefits (see Graph No. 6), and predicted that the Fund would be insolvent by 2027. According to the Superintendency of Pensions (SUPEN), the only way to balance the fund, maintaining the existing generous benefits (100% replacement rate), would be with contribution rates of nearly 70% of the wages of active employees, and with a contribution of 60% of the pensions of existing retirees.

**Graph No. 6**  
**Deficit between Contributions and Benefits**  
(2012 Projection)



**Source:** Melinsky Pellegrinelli & Asoc. (2012).

As a solution to the serious problem of insolvency the DPJ is facing, in March, 2017, SUPEN proposed liquidating the Fund and transferring the contributors to the FIVM,

with the government assuming the payment of pensions for at least 18 months. The proposal was widely rejected by the members of the judiciary, and no concrete measures have been taken to date to address the crisis it faces.

## BRAZIL: IN SEARCH OF SOLUTIONS

The Brazilian population over 65 years of age is currently 8.5% of the total population. However, it is projected to reach 25% by 2050, a situation that the existing pension system is not capable of addressing.

In addition to population aging, the existing PAYGO pension system is financially unsustainable, due to the generous replacement rates granted, and the fact that there is no minimum retirement age, since the only requirement for retirement is a certain number of years of contribution to the system (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.

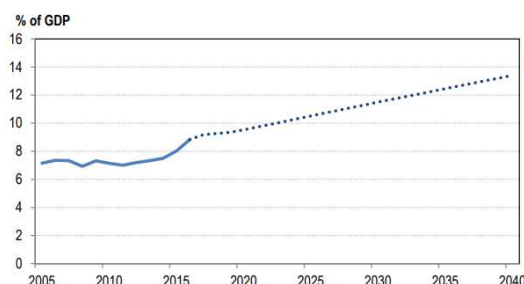
Moreover, those who contribute for part of their working lives, require only 15 years of contributions to access the minimum pension once they turn 60 or 65, (women or men), with the minimum pension being equal to the minimum wage.

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, if profound changes are not made to the existing system (see Graph No. 7). 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.7

#### Expected expenditure in pension

(% of GDP)



Source: OECD (2017).

Due to this complex situation, the government has announced the need for a profound pension reform, setting a minimum retirement age of 65 (for both men and women), and requiring workers to contribute for 49 years to be able to receive all of their retirement benefits. It also proposed increasing the number of years required for accessing a minimum pension from 15 to 25 (keeping the minimum pension the same as the minimum wage). 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.

The reform proposal also includes a sole pension system for government employees and private sector workers, and stricter conditions for heirs receiving pension 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 proposed reform is an important step in the right direction for improving the financial situation of the pension system, although it considers that it is a mistake to keep the minimum pension linked to the minimum wage, since the latter is subject to political pressure.

The approval of the changes to the pension system will require the support of at least three-fifths of the Congress and the Senate, with two rounds of voting in each one of the Chambers. The reform has not been approved to date.

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