# Evaluation of Four Decades of Pension Privatization in Latin America, 1980-2020:

## Promises and reality

CARMELO
MESA-LAGO

FRIEDRICH EBERT STIFTUNG

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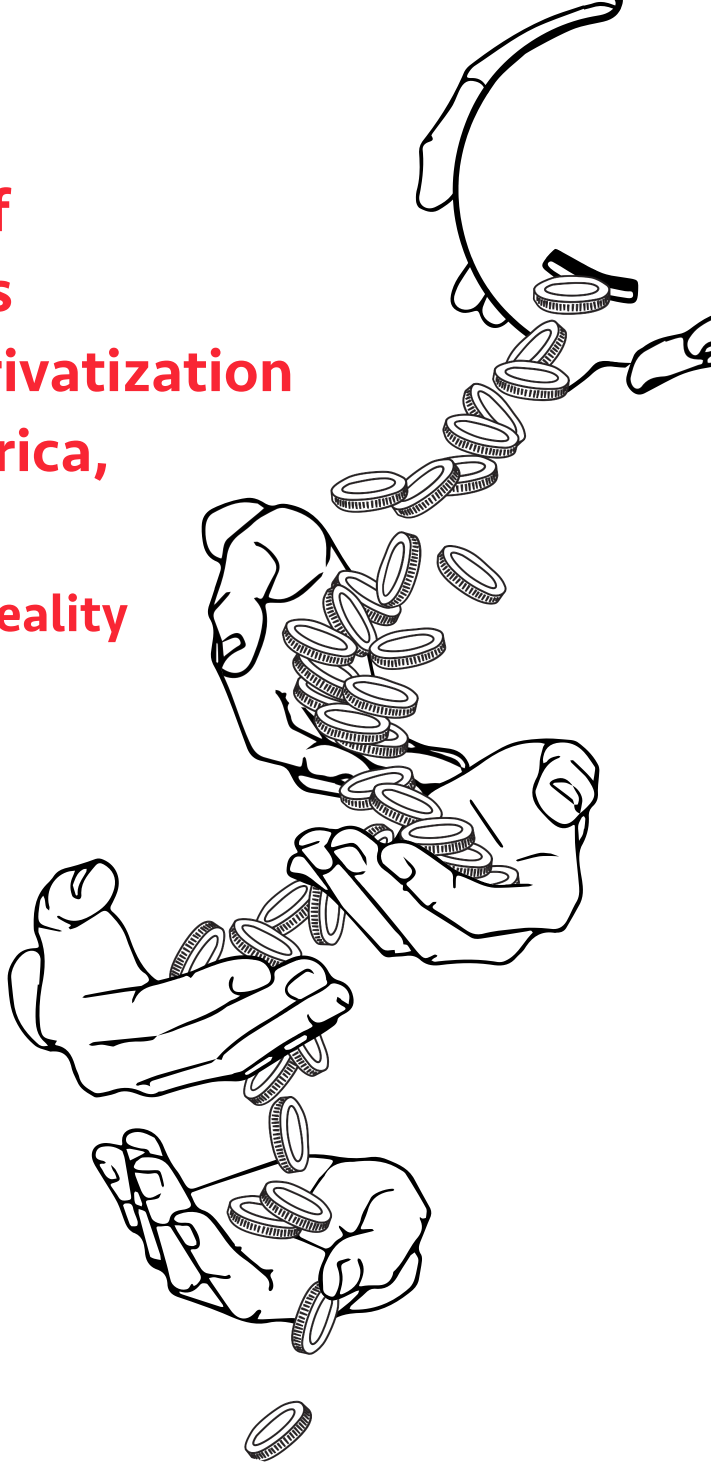

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Translation: Antonio Sarmiento - Marabotto Traducciones
Layout: Nodo Comunicación + Diseño
Layout in English: Enrico Gianfranchi

**ISBN: 978-607-8642-82-3**

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# Acknowledgments

I am the only person responsible for this monograph, however, I would like to thank Diego Valero, Professor of Economics at the University of Barcelona and CEO of Novaster Madrid, for his careful review and multiple helpful comments. Yesko Quiroga Stöllger, Representative of the Friedrich Ebert Foundation in Mexico and the Dominican Republic, Mexico City, proofread it, detected errors and made contacts. Also, I would like to acknowledge the valuable materials, comments, and clarifications shared by Alberto Arenas de Mesa, ECLAC Regional Advisor, Santiago de Chile; Nicholas Barr, Professor of Political Economy at the London School of Economics and Political Science, UK; Fabio Bertranou, Director for the ILO Southern Cone Office, Santiago de Chile; Alberto Bonadona Cossío, Emeritus Professor at Universidad Mayor de San Andrés and Professor at Universidad Católica Bolivariana, Bolivia; Pablo Casalí, ILO Social Security Specialist for the Andean Countries, Lima; María Amparo Cruz-Saco, Professor of Economics at Connecticut College, USA and Researcher at Universidad del Pacífico, Lima; Fabio Durán, ILO Chief Actuary Social Protection Division, Geneva; Eduardo Lora, IADB Former Chief Economist and Professor AT Universidad EAFIT, Colombia; Juliana Martínez Franzoni Catedrática de Ciencia Política Universidad de Costa Rica; Verónica Montecinos, Emeritus Professor of Sociology, Penn State University; José Francisco Ortiz, ILO Social Protection Office, Costa Rica, who also proofread the Introduction; Hernando Pérez-Montás, President of Consultores Actuariales SRL, Dominican Republic; Gustavo Picado Chacón, Dirección Actuarial y Económica (Actuarial and Economic Management) of CCSS, Costa Rica; Arlette Pichardo and Joan Guerrero, Researchers at the Observatorio de la Seguridad Social (Social Security Observatory), Dominican Republic; María Elena Rivera, Economist at the UN Resident Coordination Office, El Salvador; Rodolfo Saldaín, Former President of the Banco de Previsión Social (Social Welfare Bank) of Uruguay, Helmut Schwarzer, Former Secretary of Social Security of Brazil and Specialist in ILO Social Protection; and Luciano Fazio, Pension System Mathematician and Consultant. Joao Guedo Neto, my research assistant and a Ph.D. Candidate in Political Science at the University of Pittsburgh, provided valuable assistance in gathering information and creating figures, as well as compiling data on reforms in Brazil.

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Translator's Note: As this monograph will not only be read in the USA but in other countries, this English translation does not use the US system to name large numbers, but the European/Latin American system (i.e., 1 billion = 1,000,000,000,000; 1 trillion = 1,000,000,000,000,000).

# Abbreviations

| | |
|---|---|
| AFAP | Administradoras de Fondos de Ahorro Previsional—private (Uruguay) |
| AFORES | Administradoras de Fondos para el Retiro—private (Mexico) |
| AFP | Administradoras de Fondos de Pensiones—private (in most countries) |
| AIOS | International Association of Supervisors of Pension Funds |
| ANSES | Administración Nacional de Seguridad Social (Argentina) |
| APS | Aporte Previsional Solidario (Chile) |
| APS | Autoridad de Fiscalización y Control de Pensiones y Seguros (Bolivia) |
| BEP | Beneficio económico permanente (El Salvador) |
| BEPS | Beneficio económico periódico (Colombia) |
| BET | Beneficio económico temporal (El Salvador) |
| BL | Beneficio de longevidad (El Salvador). |
| BPS | Banco de Previsión Social (Uruguay) |
| CCSS | Caja Costarricense del Seguro Social |
| CGS | Cuenta de Garantía Solidaria (El Salvador) |
| CONSAR | Comisión Nacional del Sistema de Ahorro para el Retiro (Mexico) |
| CPC | Collective Partial Capitalization (in some public systems) |
| CPI | Consumer Price Index |
| CSS | Caja de Seguro Social (Panama) |
| CUSP | Comisión de Usuarios del Sistema Previsional (Chile) |
| DB + DC | Defined benefit plus defined contribution (mixed pension system) |
| DB and DC | Defined benefit and defined contribution (parallel pension system) |
| DB | Defined benefit (public pension system) |
| DC | Defined contribution (private pension system) |
| EAP | Economically Active Population (labor force) |
| ECLAC | Economic Commission for Latin America and the Caribbean |
| FES | Friedrich Ebert Stiftung |
| FGPM | Fondo de Garantía de la Pensión Mínima (Minimum Pension Guarantee Fund) |
| FGS | Fondo de Garantía de Sustentabilidad (Argentina) |
| FIAP | Federación Internacional de Administradoras de Fondos de Pensiones (International Federation of Pension Fund Administrators)—private |
| FUNDAUNGO | Fundación Guillermo Manuel Ungo (El Salvador) |
| GDP | Gross Domestic Product |
| IADB | Inter-American Development Bank |
| IDSS | Instituto Dominicano de Seguro Social |

| | |
|---|---|
| IFO | International Financial Organizations |
| ILO | International Labor Organization |
| IMSS | Instituto Mexicano del Seguro Social |
| ISSA | International Social Security Association |
| ISSS | Instituto Salvadoreño de Seguros Sociales |
| ISSSTE | Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (Mexico) |
| OECD | Organisation for Economic Co-operation and Development |
| ONP | Oficina de Normalización Previsional—public system (Peru) |
| OPC | Operadoras de Pensiones Complementarias (Costa Rica) |
| PAYG | Pay-as-you-go financing system |
| PBS | Pensión Básica Solidaria (Chile) |
| PBU | Pensión Básica Universal (El Salvador) |
| PGPM | Fondo de Garantía de la Pensión Mínima (Colombia) |
| RAIS | Régimen de Ahorro Individual con Solidaridad—private (Colombia) |
| RGPS | Regime Geral de Previdência Social (Brazil) |
| RPC | Regime de Previdência Complementar (Brazil) |
| RPM | Régimen de Prima Media—public (Colpensiones, Colombia) |
| RPPS | Regime Próprio de Previdência Social da União (Brazil) |
| RR | Replacement rate |
| SAP | Sistema de Ahorro Previsional (El Salvador) |
| SBSA | Superintendencia de Banca, Seguros y AFP (Peru) |
| SIACAP | Sistema de Ahorro y Capitalización de Pensiones de Servidores Públicos (Panama) |
| SIP | Sistema Integral de Pensiones—public (Bolivia) |
| SIPA | Sistema Integrado de Previsión Argentino—public |
| SIPEN | Superintendencia de Pensiones (Dominican Republic) |
| SMV | Superintendencia del Mercado de Valores (Panama) |
| SNP | Sistema Nacional de Pensiones—public (Peru) |
| SP | Superintendencia de Pensiones (Chile and El Salvador) |
| SPP | Sistema de Pensiones Público (El Salvador) |
| SPP | Sistema Privado de Pensiones (Colombia and Peru) |
| SUPEN | Superintendencia de Pensiones (Costa Rica) |
| UNDP | United Nations Development Programme |
| WB | World Bank |

# Foreword

Four decades of privatization of pension systems in Latin America also translate into four decades of an ongoing debate on whether the well-being of a better society can be promoted through the market, based on competition and profit concepts, or rather than through a social welfare state committed to the social security and justice objectives, implicitly involving the notion of solidarity to ensure the participation of all citizens in the development of political and social life. In this regard, the market is irrelevant, provided that we understand that well-being can only be the sum of individual efforts, but not a task of society as such.

A pension system is a significant part of social security and it guarantees the survival of a growing portion of the population that is no longer economically active. As in the case of health, education, and other basic services, there is an endless dispute about whether these services are public or commodities.

The Covid-19 pandemic has shown that robust public health systems offer better responsiveness than under-funded systems with a strong presence of restricted-coverage private bidders/providers. This actually applies more in Latin American countries, where at least half of the population works in the informal sector—most of them not being able to finance their social protection.

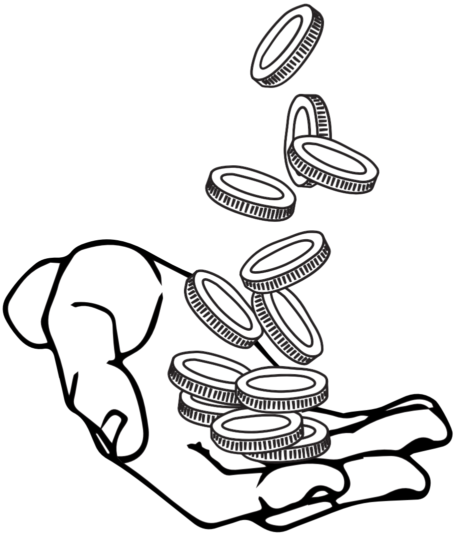
These countries have already experienced 40 years with privatized pension systems. A sufficient period of time to be able to evaluate the great promises made when structural pensions reforms were introduced replacing public pay-as-you-go (PAYG) systems, many times in crisis. Evidence is not optimistic, at least not from the perspective of most of the private system “clients”. Clearly, the introduction of private systems has defined winners and losers. Discontent is growing; therefore, several countries conducted re-reforms or are discussing them, aimed at cushioning the effects of the logic of their operation in an environment of social segregation based on the labor market and on the concentration of income that translates directly into insufficient old-age pensions for the great majority of people.

From the outset, Carmelo Mesa-Lago devoted himself to the analysis of this privatization experiment that—in most cases—started without the participation of the future clients. If you review Carmelo's impressive résumé, you will easily understand not only his professional interest, but also his wide knowledge. Also, he has a long-standing collaborative relationship with the Friedrich Ebert Foundation of Germany. In many countries, the FES supported social actors' efforts to reform pension systems, maintaining and improving state systems or introducing multi-pillar systems according to social justice criteria. As we know today, we did not have much success, but in a certain way FES analyses did foresee the negative results of the political decisions made. The FES is very grateful for Carmelo Mesa Lago's cooperation and for his analyses and recommendations provided since 1992 in countries such as Brazil, Costa Rica, Dominican Republic, El Salvador, Guatemala, Nicaragua, Panama, Peru, and Philippines.

In this monograph, Mesa Lago gathers evidence on the performance of private pension systems and—based on the promises of their defenders in the nine Latin American countries that adopted these systems—he evaluates the results of the re-reforms in four countries and the current reform proposals in another two, as well as the situation of the largest PAYG system on the continent. Based on the conclusions of this analysis, he presents a series of recommendations with a flexible approach, and not from a single model approach, for a reform that meets the criteria of social security and justice.

The Friedrich Ebert Foundation is pleased to support this comprehensive, in-depth, and meticulous effort, the conclusions of which speak for themselves

Yesko Quiroga Stöllger



# I.

## INTRODUCTION

The controversy over fully-funded systems of privately administered pensions has existed for over three decades, but their antecedents are even older. The neoliberal ideas of Milton Friedman, Nobel Laureate in Economics and founder of the University of Chicago School of Economics, were antagonistic to the Keynesianism that had prevailed on the economic policy of nations since the Great Depression. In his most influential non-academic book, *Capitalism and Freedom* (1962), Friedman popularized the notion of the key role of the market (the state must refrain from intervening in the economy except when absolutely necessary; the market generates the best results and the state the worst failures), the basis of privatization and deregulation policies. As an advisor to Margaret Thatcher in the UK and Ronald Reagan in the US, his ideas had strong support in these countries and spread to the world. A group of students in Chicago—many of them Chilean—were disciples of Friedman and hence called the "Chicago Boys"; they played a crucial role in Augusto Pinochet policies. The so-called Washington Consensus supported the neoliberal policies of structural adjustment in Latin America that were implemented by the IMF and the World Bank (Williamson, 1990).

In the 1980s, the IMF and the World Bank—hereinafter WB—began to condition structural adjustment loans to pension reform (i.e., in Costa Rica and Uruguay), becoming powerful external actors in several heavily indebted Latin American countries. In 1994, the WB (1994), headed by Estelle James, published a report on the problems of public pension systems worldwide, aggravated by aging, with policy recommendations aimed at multi-pillar systems that led to privatization.[1] That same year I published my first book that compared the structural pension reforms in Latin America, examining their assumptions and, in 1996-2000, I published five other works contrasting the position of international organizations in the debate—WB-IMF versus ILO-ECLAC—, comparing the characteristics of private pension systems in the region, identifying their flaws, evaluating their performance, and measuring the high costs of the transition and the fiscal burden (Mesa-Lago, 1994, 1996, 1998a, 1998b, 2000a).

In 2001, Peter Orszag and Joseph E. Stiglitz (2001)—the latter received the Nobel Prize in Economics that year—identified ten "myths" in the public discussion on the benefits of privatization, which "had not been validated neither in theory nor in practice"; based on these myths, they developed a series of theoretical hypotheses that tore them down (p. 18, 42). Around the same time, the London School of Economics social welfare expert Nicholas Barr (2000), in an IMF paper, analyzed "myths, truths, and policy options" on pension reforms. In 2001, the WB published a book reproducing the above-mentioned essay by Orszag and Stiglitz, followed by a critical review by various Bank officials (including James) and by pro-privatization experts; only Peter Diamond—Nobel Prize in Economics in 2010—disagreed with the

1 Although the WB tried to apply the Chilean model and succeeded in several countries, others refused and introduced variants, as explained later.

majority and supported the position of Orszag-Stiglitz (Holzmann et al, 2001). Considering the growing controversy, I published a paper in which I verified the Orszag-Stiglitz hypotheses with statistics from Latin American private pension systems (Mesa-Lago, 2002). Subsequently, ECLAC published in Spanish my monograph on structural pension reforms, proving that they contradicted several social security principles developed by the ILO (Mesa-Lago, 2004); the updated and expanded English version was published later (Mesa-Lago, 2008). In 2005, two WB officials and one OECD official published a book acknowledging many of the criticisms (including mine) that had been made on the private pension systems in Latin America (Gill, Packard, and Yermo, 2005); I was the first to review this book (Mesa-Lago, 2005a) and was invited by its authors to comment on it in its presentation in Bogotá; however, the WB management board decided not to publish the Spanish version of that book. After 30 years of the reforms, I assessed them using comparative statistics from the nine countries (Mesa-Lago, 2009).

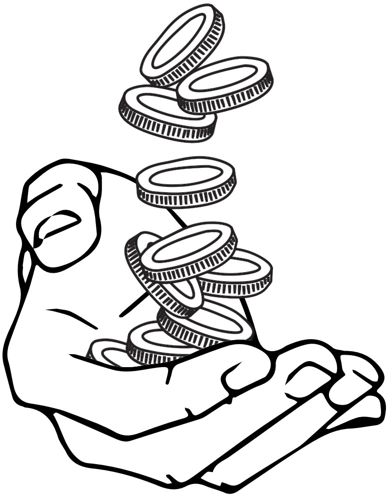
In 2008-2010, three Latin American countries that had privatized their systems (Chile, Argentina, and Bolivia, in that order), as well as many Eastern European countries, implemented "re-reforms," and I carried out the first comparison of them and of their effects (Mesa-Lago, 2012). In 2018, the ILO published a book on the reversal of pension privatization in the world to which I contributed with the case of Bolivia (Ortiz et al, 2017). In May 2019, the chairman of the International Organisation of Employers (IOE) sent a letter to Guy Rider, Director-General of the ILO, claiming the book as biased,[2] and accusing its authors (of the Social Protection Division) for exposing personal opinions. Also, the IOE demanded that the book was not used as a reference for ILO technical assistance activities in the field of pensions. Director Rider replied to such letter stating that the ILO has, consistently, pointed out that individual accounts do not correspond to the social security principles and model established by ILO standards and

2 In 2020, the *Federación Internacional de Administradoras de Fondos de Pensiones* (International Federation of Pension Fund Administrators: FIAP, 2020d) branded the book as "false and ideological information."

that they can only be offered as a supplementary protection mechanism and that in no case should they replace public social security systems. At the 2019 International Labor Conference, several employers representing their countries reiterated their censorship of the book and its authors.

The FIAP (2020b) has just published a book making a critical review to the aforementioned ILO book (focused on Central and Eastern Europe and, to a lesser extent, on Argentina, plus half a page on Bolivia, and one page on Ecuador, Nicaragua, and Venezuela); I managed to get it when this monograph was virtually finished. The purpose of the monograph, therefore, is not to respond to the FIAP book, as it is something that corresponds to the ILO. However, I will comment on some relevant aspects in that book, which does not directly disprove any of the main chapters on Latin America covered by the authors of the ILO book, and even omits any reference to them.

In the context of this controversy, and after four decades—reached in 2020—from the first structural pension reform in Chile, I wrote this monograph with the support of the Friedrich Ebert Foundation, which I have worked with as a consultant in Latin America since 1994. I integrate, expand, deepen, and update therein all my previous work developed on this subject for almost 30 years, reviewing, as well as, the main existing bibliography, and evaluating privatization promises made on the key aspects of social security, based on reliable statistics on the subject and on relevant academic literature. I undertake this difficult task on such a polarized topic with the utmost respect for opinions differing from mine, always striving to maintain academic objectivity, in the hope that this analysis will encourage a professional profound debate and that it will be useful to other countries in the world that are contemplating or that could consider making a reform of their pension systems, so that they may learn lessons from the diverse and rich Latin American experience.



# II.

## PUBLIC AND PRIVATE PENSION SYSTEMS, STRUCTURAL REFORMS, AND RE-REFORMS

A "public" pension system is characterized by a defined benefit (established by law), a pay-as-you-go (PAYG) financing (or partial collective funding), and public administration, while a "private" system is typified by a defined contribution (assuming no change over time), fully-funded individual accounts, and private administration. Between 1981 and 2008, eleven Latin American countries, most of them sponsored by the WB, implemented structural pension reforms, which closed or substantially reduced the public system. On the contrary, a parametric reform maintains the public system, but introducing changes to attain a better financial and actuarial sustainability; i.e., increasing the retirement age, changing the pension calculation formula, adjusting benefits, or a combination of these measures. Structural reforms replaced, in whole or in part, public systems with "private" systems (although they may have a public component), the reforms were not alike because they adopted three models: a) Substitutive, which closed the public system and completely replaced it with a private system (Chile, Bolivia, Mexico, El Salvador, and the Dominican Republic); b) Mixed, which maintained the public system as a pillar and added the private system as a second pillar (Argentina, Costa Rica, Uruguay, and Panama); and c) Parallel, which kept the public system and added the private system, the two systems competing with each other (Colombia and Peru) (Mesa-Lago, 2008). The structural reforms listed by the year of entry into force were as follows: Chile (1981), Peru (1993), Argentina and Colombia (1994), Uruguay (1996), Bolivia and Mexico (1997), El Salvador (1998), Costa Rica (2001), Dominican Republic (2003), and Panama (2008).

Table 1 shows the degree of privatization in the private system/pillar and the insured in the system/pillar or the remainder of the public system in the nine countries. In four of them, between 92% to 100% is in the private pillar (in the mixed models of Costa Rica, Panama, and Uruguay 100% is in the public pillar as all the insured must be there); in the parallel models of Colombia and Peru proportions are 71.3% and 65.7% respectively; and in Panama only 15.6% (see Figure 1).

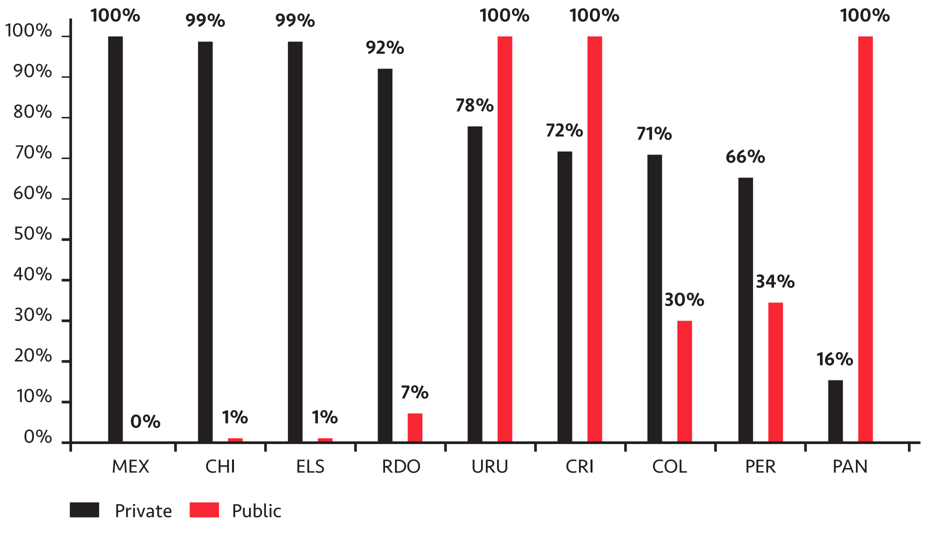
**Table 1.**
**Degree of Privatization in the Private System/Pillar in the Nine Countries, 2018-20**

| Countries[a] | % in the System/Pillar Regarding Total Coverage | |
|---|---|---|
| | Private | Public[b] |
| Mexico | 100.0 | 0.0 |
| Chile | 99.5 | 0.5 |
| El Salvador | 99.0 | 1.0 |
| Dominican Republic | 92.2 | 7.3 |
| Uruguay | 78.4 | 100.0[d] |
| Costa Rica | 72.0[c] | 100.0[c] |
| Colombia | 71.3 | 29.7 |
| Peru | 65.7 | 34.3 |
| Panama | 15.6 | 100.0[d] |

**a** Ranked from highest to lowest by the size of the private system/pillar. **b** Including the remainder of the closed public system, excluding separate public schemes (except in the Dominican Republic). **c** All the insured are in the public pillar and salaried workers are also in the private pillar, self-employed workers are not required to join the private pillar, therefore coverage is less than 100%. **d** All the insured must be in the public pillar, those exceeding a certain level of monthly salary must also be in the private pillar, including self-employed workers.

Source: Mexico from the structural reform law; Costa Rica from CCSS, 2020a; Chile from Superintendencia de Pensiones, 2020b; El Salvador from Mesa-Lago and Rivera, 2020; Dominican Republic from Pichardo, Guerrero, and Mesa-Lago, 2020; Uruguay from BPS, 2020b; Colombia from Superintendencia Financiera 2020b; Peru from SBSA 2019 and ONP, 2019; Panama from INEC, 2018 and AIOS, 2019).

**Figure 1.**
**Degree of Privatization Regarding the Total Coverage, 2018-2020**




Source: Table 1.

Thirteen years passed between the Chilean reform and the next one—the Peruvian reform—because the Chilean one was imposed without public discussion by the Pinochet dictatorship, which was considered spurious by democratic countries. It was not until after the restoration of democracy in Chile in 1990 that other nations in the region introduced variants of the Chilean structural reform. In Panama, only a small fraction of the labor force is affiliated with the private pillar, thus its figures distort the whole picture; however, these figures will be included.[3] After Panama no other structural reform has been made (twelve years).

The WB designed a multi-pillar model, i.e., there could be different combinations of protection pillars, one for mandatory savings, another voluntary, etc., but in practice it recommended the Chilean substitutive model to most countries. Many of these countries copied this model without having essential preconditions for success (others implemented variations). For example, Chile had a large formal labor sector and a considerable number of insured (making the operation of several private administrators easier), as well as a stock market founded at the end of the 19th century, a stable economic growth, and a fiscal discipline that led to a budget surplus. By contrast, in Bolivia and El Salvador most of the labor force was, and still is, informal and excluded from coverage; only two administrators—a duopoly with no competition—could operate due to the small number of insured; as there was no stock market, the pension fund was invested primarily in low-yield government securities or bank deposits; and low growth, combined with a lack of fiscal discipline, led to significant state debt.

The structural reforms, supported by the WB, were extended to twelve Eastern European countries: Bulgaria, Croatia, Slovakia, Estonia, Russian Federation, Hungary, Kazakhstan, Latvia, Lithuania, Poland, Czech Republic, and Romania (Ortiz et al, 2018).

The shortcomings of the Latin American private systems led to four "re-reforms" that have eliminated or substantially changed the private system. Argentina

3 When the structural reform took place, Panama closed the public system for new affiliates, but the insured who were over 35 years old remained in such system, as well as other insured who could choose; also, it established a public pillar to which all labor market newcomers must join—those earning salaries at a certain level contribute, for the amount exceeding such level, to the fully-funded pillar. It has three private administrators; there is also a closed savings program (voluntary in the beginning and mandatory since 2002) for public employees, managed by three other private administrators.

(2008) and Bolivia (2010) closed the private system/pillar and transferred all their insured and funds to the public system. Chile (2008, in the first administration of Michelle Bachelet's presidency) and El Salvador (2017) maintained the private system; the Chilean re-reform improved coverage, social solidarity, gender equity, and financial sustainability, while the Salvadoran re-reform transformed the private system into a mixed one with a PAYG component.[4] Section V comparatively studies the four Latin American re-reforms and their effects, as well as the re-reform proposals made in Colombia and Peru. Section VI examines Brazil's parametric reform and its failed attempt at structural reform. The taxonomy of the reform and re-reform of pension systems in Latin America is shown in Table 2.

The FIAP (2020b) has not yet defined what it considers a "re-reform" (while the ILO refers to "reversals"); it denies that a re-reform has been made in Bolivia and does not mention those of Chile and El Salvador. Apparently, the FIAP's criteria for defining a change as a re-reform (or reversal) is limited to that which closes the private system and transfers all the insured and their funds to the public PAYG system (Argentina). On the contrary, it does not consider a re-reform, when the individual accounts are maintained—although under state administration—in addition to other important changes to the system (as in Bolivia). In my previous works on this subject (Mesa-Lago, 2012, 2013, 2018a) I affirm, like other experts, that there is also re-reform when the private system is preserved but with significant modifications—for example, Chile's infusion in the private system of social solidarity and gender equity (which did not exist before), the expansion of coverage and the reinforcement of financial-actuarial sustainability. Also, this happens in El Salvador, where the private system has in fact become a mixed system with a PAYG component. Another common characteristic of all reforms, regardless of their type, is the expansion of the role of the state in the social security system. On the other hand, I agree with the FIAP that there were no re-reforms or reversals in Ecuador, Nicaragua, and

4 Currently in Latin America there are eleven public systems: Argentina, Bolivia, Brazil, Cuba, Ecuador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, and Venezuela.

Venezuela, because the private system was never implemented. We must try to overcome the semantic obfuscation and concentrate on clarifying the concepts to deepen the analysis, as this monograph does it in section V, which thoroughly examines the re-reforms of Argentina, Bolivia, Chile, and El Salvador, as well as the re-reform proposals in Colombia and Peru, while Mexico's substantial reform proposal is studied in section IV-6-b, and the Brazilian parametric reform in section VI.

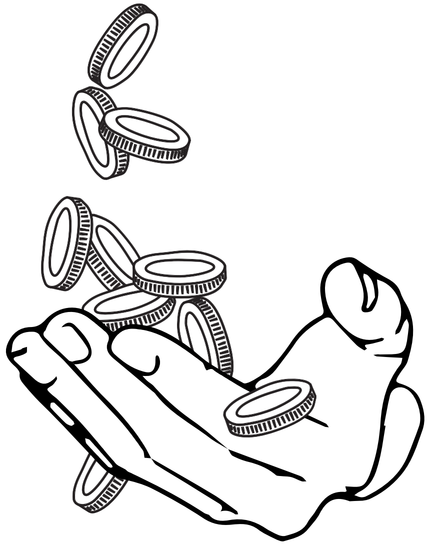
**Table 2.**
**Taxonomy of Pension Reforms and Private and Public Systems in Latin America, 2020**

| Model, Country, and Starting Year of Reform | System | Contribution | Benefit | Financing | Administration |
|---|---|---|---|---|---|
| **Private (Structural Reform)** | | | | | |
| **Substitutive Model**<br>Chile (1981)<br>Mexico (1997)<br>El Salvador (1998)<br>Dominican Republic (2003-)[a] | Private | Defined | Not defined | Full (individual accounts) | Private[h] |
| **Parallel Model**<br>Peru (1993)<br>Colombia (1994) | Public or Private | Not defined<br>Defined | Defined<br>Not defined | PAYG[g]<br>Full | Public<br>Private[h] |
| **Mixed Model**<br>Uruguay (1996)<br>Costa Rica (2001)[b]<br>Panama (2008) | Public and Private | Not defined<br>Defined | Defined<br>Not defined | PAYG[g]<br>Full | Public<br>Multiple[h] |
| **Former Private with Re-reform** | | | | | |
| Chile (2008) | Private and Solidarity | Defined<br>Not defined | Not defined<br>Defined | Full<br>PAYG | Private<br>Public |
| Argentina (2008)[c] | Public | Not defined | Defined | PAYGO | Public |
| Bolivia (2010)[d] | Public and Private | Not defined<br>Defined | Defined<br>Not defined | PAYGO<br>Full | Public<br>Public |
| El Salvador (2017) | Private<br>Solidarity | Defined<br>Not defined | Not defined<br>Defined | Full<br>PAYG | Private<br>Public |

| Model, Country, and Starting Year of Reform | System | Contribution | Benefit | Financing | Administration |
|---|---|---|---|---|---|
| **Public[e]** | | | | | |
| Brazil<br>Cuba<br>Ecuador[f]<br>Guatemala<br>Haiti<br>Honduras<br>Nicaragua[f]<br>Paraguay<br>Venezuela | Public | Undefined | Defined | PAYG[g] | Public |

**a** Only the contributory program has been implemented; the other two programs (contributory-subsidized and subsidized) were not in force in mid-2020. **b** All the insured are in both public and private pillars. **c** Argentina had a private pillar in the mixed system from 1993 to December 2008 with 54% of the insured contributors; the re-reform nationalized the private pillar, integrated it with the reminder of the public system. **d** As of 2010, Bolivia had a private system with 100% of the insured contributors; the re-reform brought it back to the public system, but maintained the individual accounts, which are managed by a public insurance company. **e** All public systems carried out parametric reforms in 2008-2020; including Brazil that also tried unsuccessfully to pass a structural reform; Costa Rica and Uruguay carried out parametric reforms in the public pillars; Colombia and Peru in the public systems; Mexico in the private system. **f** Ecuador and Nicaragua enacted privatization laws that were not implemented. **g** Collective partial capitalization in public pillars of Costa Rica and Panama, the parallel public systems of Colombia and Peru, and the public systems of Ecuador, Guatemala, Honduras, Nicaragua, and Paraguay. **h** Multiple (private, public, or mixed) administrators in Colombia, Mexico, and the Dominican Republic, as well as in the public pillar in mixed models.

Source: Mesa-Lago, 2008, 2012, updated with the legislation of the countries.



# III.

## THE POLITICAL ECONOMY OF STRUCTURAL REFORMS AND THE SOCIAL DIALOGUE

Most Latin American structural reforms were not preceded by a social dialogue. Two of these reforms were approved by authoritarian regimes with no social dialogue, whereas two others were approved under a democratic regime, but with significant manipulation and practically no social dialogue. The remaining reforms were developed under democratic regimes—most of them based on lengthy and heated debates, some manipulation, and a varied social dialogue approach (this section, unless specified, is based on Mesa-Lago and Müller, 2002).[5]

5 I have participated in the reform process in the nine countries (except in Colombia), with diagnoses, actuarial evaluations, and recommendations. I also took part in Argentina and Bolivia reforms, as well as in the reform attempts in Ecuador and Nicaragua (which later were annulled) and in Guatemala where I avoided the substitutive reform. My studies—published by the Friedrich Ebert Foundation and the ILO—are cited in the References.

## 1. Authoritarian or Manipulative Regimes under a Quasi-Democratic Regime or an Incipient Democracy

The structural reform processes that are discussed below are ordered according to the current political regime at the time of the reform, from the most authoritarian regime with absolutely no social dialogue to the least authoritarian, but with manipulation and little social dialogue.

### Chile

The Augusto Pinochet's dictatorship abrogated the constitution, dissolved the congress, repressed political parties, disbanded unions, and suspended civil and political rights. Under these autocratic conditions, the Minister of Labor, a neoliberal economist who had supported the new labor regulations (including limitations on the rights to form unions and to strike), prepared the substitutive system bill. The Military Junta imposed this system, with no public debate, through emergency decrees. Due to the political situation, there was little opposition to the reform by several pension-fund administrators, expert scholars, and some military who opposed privatization[6] (political parties and the unions were dissolved), therefore, there was no social dialogue.

### Peru

President Alberto Fujimori carried out a self-coup that dissolved the congress, suspended the constitution, and established an authoritarian government. The reform was opposed by the workers, the pensioners, and the employees of the public pension system (IPSS). In a political compromise, Fujimori proposed the parallel system (but with no parametric reform of the public system) that was approved by congress, where he had a large majority in 1992, without prior social dialogue. As very few insured had switched from the public to the private system, the government enacted additional legislation to promote the change: it eliminated the employer contribution, increased the worker contribution in the public system, and prohibited that

6 For a discussion on the various positions taken by the generals of the Military Junta see Matus, 2020.

the insured who had switched from the public to the private system could return to the former.

### Mexico

The corporate-type hegemonic political party (PRI) consisted of three sectors (workers, employers, and the state) traditionally co-opted by the party; any reform bill had to be made with their "consent." In 1990 the WB, an important external actor since the 1982 debt crisis, advised a structural pension reform. The *Secretaría de Hacienda* (Ministry of Finance) and *Banco de México* (Bank of Mexico), led by neoliberal economists, appointed commissions that formulated a substitutive reform bill, although different from the Chilean one. Such bill was rejected by the social insurance institute that covers private workers (IMSS) and at a certain point by the union federations including the largest confederation (CTM)—as they refused an increase in the worker's contribution and would lose their representation in the IMSS—, but it was accepted by the employers' association (USEM) provided that the employers' contribution was not increased. In 1994, the new neoliberal president Ernesto Zedillo ordered the IMSS to evaluate its own public system, as it would be left without reserves in 2004. Therefore, a structural reform was needed and the IMSS approved it. Later, the CTM and the USEM, without a true social dialogue, handed over the reform bill to the president, achieving the support of the worker and business sectors and the legitimization of the bill. For political reasons, the WB and the IADB were officially left out of the process, despite they granted substantial financial support. Left-wing (PRD) and right-wing (PAN) political parties, a few unions, and groups of pensioners and scholars opposed. The congress approved the reform in 1995, making concessions to all sectors of power: the contributions of workers and employers were not increased; the IMSS lost the old-age pension program (but not the disability and survivors programs); also, when retiring, the insured can choose between a pension calculated by the public program rules or based on individual savings from the private system; and multiple-nature pension administrators and investors: private, state, cooperative, etc.

### El Salvador

The incipient democracy that emerged from the peace agreements was dominated (both in the presidency and in congress) by the neoliberal ARENA party, whose first president created a reform commission that, with WB financing, recommended the substitutive model (after a parametric reform made in the two public programs). This proposal was neither published nor discussed with the unions and the opposition; the Guillermo Manuel Ungo Foundation (FUNDAUNGO) with the support of the Friedrich Ebert Foundation prepared a documented study that recommended a mixed model with lower transition costs than the substitutive model. The government agreed that an actuary from the U.S. Social Security Administration studied the two bills and render a verdict, but the government staff—whose managers were in Santiago de Chile at the time—did not meet with the actuary and thus he was unable to do his job. The government then hired, with WB financing, a Chilean firm (not an actuary) which concluded that the government's substitutive reform draft had lower costs than the mixed system draft. This study was not published either, despite the FUNDAUNGO and opposition leaders' requests. The privatization bill was quickly approved in 1996 by the large parliamentary majority of the ruling party.

## 2. Democratic Regimes with some Manipulation and Varying Degrees of Social Dialogue

In the remaining five countries there were democratic regimes and lengthy and tortuous discussion was common, as well as manipulation in a couple of countries and social dialogue, although to varying degrees.[7] The reform

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7 The structural reforms in Argentina and Bolivia (which later made re-reforms) were passed in democratic regimes by neoliberal governments. The Argentine pension system experienced a severe financial-actuarial disequilibrium. In 1989, Carlos Ménem—the Peronist leader of the conservative wing of such party—became president. In 1991, Ménem appointed a neoliberal politician as Minister of Economy, who in turn appointed a well-known expert as Secretary of Social Welfare. With UNDP financing, he conducted 40 studies on the system and its reform. In 1992, a dialogue was initiated with the political parties and social organizations such as unions, mutuals, cooperatives, and pensioners' associations, which mostly distrusted the Chilean model, resulting in a mixed-model proposal which was submitted to a debate that lasted 15 months, after which it was approved by Congress in 1993 (Bertranou et al, 2018). Bolivia also experienced a severe disequilibrium in its pensions and

processes are ordered from the one with the least transparency and social dialogue to the one with the most.

### Dominican Republic

In 1996, a Tripartite Reform Commission was created (representatives of workers, employers, and the state) which—advised by the ILO—prepared a consensus draft bill in 1998, which was approved by the executive branch and became a bill. This bill applied the mixed model combining a public pillar with a parametric reform that would pay a basic pension administered by the social insurance institute (IDSS), and a supplementary pension based on an individual fully-funded system and multiple types of administration (there was no strong defense of the substitutive model supported by the WB). The Senate prepared three bills. The first changed the reform model from mixed to substitutive. In 1999, the employers' association (CONEP) and the Central Bank hired the actuarial firm Hewitt Associates to conduct an evaluation of the two models (mixed and substitutive), especially regarding transition costs, which concluded that both models were similar in terms of contributions and benefits and that costs did not differ significantly from each other. Also, it identified weaknesses in the substitutive model that would force the state to play a crucial role (contrary to the principle of state subsidiarity maintained by the reformers, see section IV). The study commissioners expected a clear verdict in favor of the substitutive model hence the government kept Hewitt's report secret for more than a year. The second Senate bill, which continued with the substitutive model, was discussed with the main unions (CNUS) and employers (CONEP), who entered into a consensus agreement in 2000. The ILO analyzed this second version and

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had the second lowest coverage in the region. In 1991, the Ministry of Finance, with the assistance of the WB and USAID, prepared a reform bill based on the substitutive model, but the opposition by the Ministries of Labor and Health and by the unions, brought it to a halt. In 1993, the neoliberal president-elect Gonzalo Sánchez de Lozada created a "Capitalization" Ministry to manage pensions, thereby taking power away from the opposing ministries. Also, he connected the reform with the privatization of state companies (50% of their stocks was credited to two private administrators) and he established a universal non-contributory pension financed by such administrators; therefore, he obtained support from the majority of the population not covered by contributory pensions. Despite the strong opposition from unions and pensioners' associations, this bill was approved in 1996 with a strong majority in congress followed by a short debate (Mesa-Lago, 2018).

handed over a technical evaluation to the government reporting the problems of the substitutive model, but said report publication was delayed six months. The third bill also maintained the substitutive model, restructured the whole text, and made substantial revisions. The three bills pretended to follow the mixed model, but actually they lacked its two pillars; therefore, they tried to disguise the Chilean-type substitutive model. The third bill not only forbade the insured the right to choose, as in Chile, between remaining in the public system or switching to the new substitutive system, but submitted it to the age of the insured. The third bill was the subject of a report conducted by the Friedrich Ebert Foundation, which analyzed the strengths and weaknesses of the two models, opting for the mixed one. In 2001, congress approved the last Senate bill that included three programs, but only one of them (the contributory program) came into force; the other two programs (contributory-subsidized and subsidized) that were key to the reform and had a broad support were postponed and, so far, have not came into force (Mesa-Lago, 2000c; Pichardo, Guerrero, and Mesa-Lago, 2020).[8]

### Panama

In 1996, the government appointed a Contact and Follow-up Group comprised of representatives of all the parties involved, in order to facilitate an actuarial study. Such Group reached a consensus and agreed to request the ILO to carry out the financial-actuarial evaluation of the social insurance institute (CSS). The ILO actuarial team collaborated with the Group, which approved the projection model. The 1998 ILO valuation was the best one conducted throughout the 60-year history of Panamanian social security and the only one, among the nine countries, with an active participation from the sectors involved. This valuation showed that a financial and actuarial deficit would occur thus demanding a parametric reform. The Group produced a report based on the valuation and was subsequently dissolved. The Friedrich Ebert Foundation prepared a report—after compiling additional information, meeting with key sectors, and reaching

8 The social insurance institute (IDSS) was dissolved by congress in July 2019 and its functions and resources distributed among various public entities

some consensus among them—summarizing the unions, employers, and government proposals/positions. This report also made specific recommendations to conduct a parametric reform to balance and improve the pension system. In 1999, the caucus of the Social Democratic Party (PRD), which had a legislative majority, agreed to promote a national agreement on the reform, however, that same year Julio Bustamante, the AFP Superintendent in Chile and pension privatization activist, was invited by the Panamanian Minister of Planning, and he claimed that social security should be transferred to the private sector. In 2001, due to the severe aggravation of the CSS financial deficit, the government opened a *Diálogo Nacional por el Seguro Social* (National Dialogue for the Social Insurance Institute) that requested the ILO to update the previous actuarial study, which it actually did and handed it over to the government that same year. Surprisingly, the Director of the CSS discredited the ILO actuarial update and the CSS actuarial team developed a different simulation model; the National Dialogue was called off before the elections. Martín Torrijos of the Social Democratic Party was elected, who immediately rekindled the discussion on the reform. The Friedrich Ebert Foundation prepared a second report with a detailed parametric proposal that the president approved and submitted to congress—but the unions organized public demonstrations against the bill because they disagreed with some reform measures. Then, in 2005, the congress approved a mixed system, with a small individual fully-funded pillar that left virtually unchanged the generous conditions of the public system/pillar, which have continued to aggravate the financial-actuarial disequilibrium of the CSS (Mesa-Lago, 2000b, 2005b, 2019).

## Colombia

The 1991 constitution stipulated that pensions were a public service led and controlled by the state, but it did authorize private participation. Three reform proposals were prepared the following year: maintaining the public system subject to a strong parametric reform, establishing a mixed system, and adopting the Chilean substitutive model. The mixed model got the most support, but the substitutive one was endorsed by both the President and neoliberal economists who controlled the three key institutions (Ministry of Finance, Planning Directorate, and Central Bank) in addition to the patronage of international financial organizations. President César Gaviria presented the substitutive bill, which was harshly criticized by unions, civil servants, congress, and scholars alleging that it violated the constitution as it did not allow a private pension system. This opposition succeeded in having the bill canceled in 1992. This was followed by a negotiation that led to a political compromise and to the approval by congress of the parallel model which was acceptable by the constitution. In contrast to Peru, the public system was submitted to a parametric reform to make it more competitive to the private system. Likewise, the reform allowed the insured to choose between the two systems and to switch between them every three years.

### Uruguay

This country had the oldest pension system and the oldest population in the region, which caused a strong financial-actuarial disequilibrium and the need for reform, but it was hindered by the power of the pensioners' associations and their coalitions with unions and political parties. After the restoration of democracy, in 1985 the neoliberal government of president José María Sanguinetti entered into an agreement with the IMF that, among other measures, proposed to reduce the cost of pensions, but left-wing parties and pensioners' associations, as well as the Ministry of Labor and Social Welfare defeated it. In 1987, there was an attempt to pass a substitutive reform with the help of the WB, but it was also opposed by a coalition—unions, left-wing parties, and pensioners' associations—that demanded a constitutional referendum they won with 82% of the votes. The next neoliberal government of Alberto Lacalle submitted three reform bills: one of which sought an inter-party consensus but was rejected by congress; the executive branch secretly designed another bill that managed to pass in 1992 as part of the budget law, however, it was opposed by a second referendum that also won with 82% of the votes. In 1995, the two traditional parties (*blancos* and *colorados*) formed a coalition that elected Sanguinetti president for a second term. He organized a commission with representatives of the political parties that supported the mixed model; the coalition of left-wing parties Frente Amplio opposed it and resigned from the commission, but the bill was approved by congress with the support of the two most powerful political parties. Two subsequent attempts to repeal the law by a plebiscite and a referendum were rejected by the Electoral Court (Saldaín, 2020).

## Costa Rica

In 1996, the Board of Directors of the Social Insurance Institute (CCSS), supported by the employers and the neoliberal government, introduced a parametric reform with no prior negotiation with social organizations, as was the custom for decades. These organizations took over the CCSS headquarters and managed to suspend the reform. Then, a broad social dialogue that lasted more than two years took place focusing on seven reform proposals: five structural proposals followed the mixed model, another structural one copied the substitutive model (supported by the WB), and another one was parametric (for further detail see Martínez and Sánchez-Ancochea, 2019). The actuary of the CCSS proved that the substitutive proposal endured significant methodological flaws and shortcomings in its actuarial projections, in addition to the fact that it was contrary to social solidarity and that it would lead to an even greater opposition than the parametric reform of 1996. In May 1998, the new social democratic government called for a National Dialogue Forum that included a Pension Commission made up of 30 members representing all the sectors involved. President Oscar Arias prepared a proposal that incorporated virtually all the requests made by the members of the Commission and delivered it to the latter. This proposal was evaluated by a technical study conducted by the Friedrich Ebert Foundation and the Commission decided to support the mixed model that was approved by congress. This process was the best example of broad social dialogue among all the countries that passed structural reforms.

## Conclusions

The comparative analysis of the structural pension reform processes shows that among their promoters (especially of the substitutive model) were neoliberal parties and presidents, neoliberal economists who controlled the Ministries of Finance and Economy (in some countries the Central Bank or the Planning Directorate), International Financial Organizations (IFOs), employers' associations, the financial sector, insurance companies, neoliberal foundations, and external consultants in favor of the Chilean substitutive model. The opposition forces included social-democratic and left-wing parties, social security employees, powerful unions, pensioners' associations, and in some countries the Ministries of Labor, Social Security, and Health (except in Chile where the Ministry of Labor was the promoter of the substitutive reform). World social organizations (such as the ILO and the UNDP),[9] international foundations (such as the Friedrich Ebert Foundation), some local foundations, as well as scholars and consultants acted as technical arbitrators. The room for maneuver of these actors was influenced by institutional standards (such as the Constitution that stipulated that social security should be state-owned or allowed the participation of the private sector), as well as by political factors and economic conditions, a long tradition of consensual decisions and social solidarity, the degree of control of the executive branch over the congress, party coalitions, the ties of employers' associations and trade unions with the government, and the ability of some groups to reject the reform through mechanisms of direct democracy, such as referendums. Among the economic conditions that facilitated the reform were the financial-actuarial crisis of the public pension system and its fiscal cost for the state (complicated by demographic aging and the age of the pension system in two countries), the fiscal costs of the transition, the degree of indebtedness with IFOs, such as the WB and the IMF, and the pressure to promote domestic savings and the capital market. The response of the political decision-makers to the external pressures of the IFOs mostly resulted in collusion, except in one case of concealment and another of rejection. The design of the reform was of strategic importance: facing a strong citizen polarization, several rulers reached a political compromise supporting mixed or parallel models—instead of the substitutive model—in order to please the opposing sides or hiding or reducing the magnitude and source of financing the fiscal costs during the transition, and using obfuscation tactics, such as disguising a substitutive reform as a mixed model.

9 In the beginning, ECLAC was not involved in the structural reforms as it did not have a specialized social security team, but later it created a pension unit in the Social Development Division.

A measurement of the degrees of democratization and privatization of pension systems reached the following conclusions (Mesa-Lago and Müller, 2002, with my update for the Dominican Republic and Panama): a) In most countries, the more democratic the political regime was at the time of the reform, the lower the probability of a full pension privatization, suggesting an inverse relationship between the degrees of democratization and privatization. b) The less democratic the regime was, the more the public pension system was reduced, either by completely replacing it with a private system (Chile) or by establishing a competitive private system with a strong government support in a parallel model (Peru). c) Conversely, the most democratic regimes maintained the public system, combining it with a private component within a mixed system (Argentina, Costa Rica, Panama, and Uruguay) or establishing a reinforced and competitive public system within a parallel model (Colombia). d) Mexico constituted an intermediate case, where the degree of privatization was somewhat lower than the degree of democratization. e) The aforementioned relationship was not verified in Bolivia, where a substitutive model was taken to the extreme (further than in Chile), but in a democratic regime. f) El Salvador and the Dominican Republic also implemented a substitutive model in a democracy, but with manipulation and a reduced social dialogue. The degree of social dialogue seemed to match with the previous analysis—but a wide and transparent dialogue was a minority in the countries. Most of the reforms were carried out by autocratic regimes, a hegemonic party, and an incipient democracy. And when it was by democratic parties, it often involved a long and tortuous discussion and, sometimes, manipulation, secrecy, or concealment.

# IV.

## PROMISES AND REALITY OF PRIVATE PENSION SYSTEMS

The main objective of this monograph is to evaluate the performance of the nine Latin American private pension systems within the last four decades, since the Chilean system came into force in 1981 and, especially in 1999-2019 (period of time in which we have comparable statistics in all countries), based on the five most significant aspects: 1) Coverage of the economically active population (EAP) or labor force and the older-adult population (65 years and over); 2) Social solidarity and gender equity; 3) Sufficiency of benefits; 4) Efficient administration and reasonable costs (competition), and 5) Financial and actuarial sustainability.[10] These aspects correspond to the fundamental principles

10 Reformers also argued that, due to the ownership of the individual account and the private administration, the state would not be able to intervene or interfere in private systems. The shutting down of the private system in Argentina and Bolivia, the financing of the transition with AFP funds in El Salvador, and other similar actions put an end to said claim.

of social security approved since 1919 by conventions and recommendations of the International Labor Organization—ILO—through the tripartite vote of representatives of workers, employers, and states at the International Labor Conference (see Mesa-Lago 2008). Each aspect/principle will contrast the promises made by reformers (or the lack of pronouncement on any principle) with the reality of reliable statistics from the nine countries[11] and from more than 200 bibliographic sources. Also, whenever possible, the performance of public systems in all six aspects will be compared to the performance of private systems.

According to their degree of social development, the nine countries are divided into three groups—from highest to lowest: 1) the most developed (Uruguay, Chile, and Costa Rica), intermediate developed (Panama and Mexico), and less developed (Colombia, Dominican Republic, El Salvador, and Peru).[12] This classification will be useful to explain key problems, i.e., the difficulty in extending EAP coverage.

## 1. EAP AND OLDER-ADULT COVERAGE

### a. Promises of the Structural Reforms

EAP coverage will increase: "Increasing coverage has been presented as a core objective of the multi-pillar model [private system or pillar]... Economic theory would predict that, by reducing both the actual and the perceived tax on labor [in the old public system], by establishing individual retirement

11 Many of the statistics used herein are those published every six months by the *Asociación Internacional de Organismos de Supervisión de Fondos de Pensiones* (International Association of Pension Fund Supervisory Agencies: AIOS, 1999-2020), a source that cannot be claimed opposes such private funds. In this monograph, the Bulletin published on December 31 in each year is systematically used—the latest is from 2019. Information in this monograph is updated as of October 15, 2020.

12 The ranking of the nine countries by their level of development is based on the Human Development Index (UNDP, 2018).

savings accounts, pension reform will increase formalization of the labor force and its by-product, pension system coverage" (Gill, Packard and Yermo, 2005: 89, 97). José Piñera—the reform leader as Minister of Labor in the Pinochet dictatorship—argued that "the main victims of the old pension system were the poor, who in principle were supposed to be the most favored by the PAYG system" (1992: 19). Firstly, the social insurance system (based on PAYG or collective partial capitalization) was never supposed to cover the poor as the basis of coverage is paid employment—the coverage of the poor was the object of social assistance;[13] secondly, the individual fully-funded system has never covered the poor; this has been achieved by non-contributory or welfare programs financed by the state. Reformers neither referred directly to the role of the private system in the older-adult coverage nor in the non-contributory pensions.

## Methodology to Measure Coverage

There are two types of pension coverage (for old age, disability, and survivors): a) active or contributory coverage is that of active workers, during the period they contribute to the system (the worker and, in most countries, the employer) to be entitled to a pension; and b) passive coverage is that of those who receive pensions, whether contributory or non-contributory. There are a variety of methods for calculating pension coverage. The total economically active population (EAP), the employed EAP, and the salaried EAP are used as a divisor—the employed EAP and the salaried EAP result in a greater coverage because the divisor is smaller; therefore, in this case the total EAP that provides a more accurate coverage will be used. As for the older-adult population, the age of 65 years and over is commonly used, however, in countries with lower retirement age coverage is distorted;[14] for consistency, we will use 65 years of age.

13 Twenty-five years after its 1994 report, the WB (2019) recommends that, in developing countries due to informality, protection is separated from employment and focused on fighting poverty through social assistance.

14 For example, 60 for both men and women in the Dominican Republic; 60 for men and 55 for women in El Salvador; 62 and 57, respectively in Panama; and 60 for women in Chile (see Table 5).

The calculation of contributing insured and pensioners can be based on administrative figures or on household surveys. The former are provided by private pension administrators,[15] by social security administrators, or by superintendencies and, theoretically, they should be more precise because they are based on active contributors records. However, the latter are calculated in a variety of ways (i.e., payment of contribution in the last month or last year) and such records do not have the same quality in all countries; therefore, calculations are not uniform and it takes a long time to publish comparative figures. Also, in some countries there are schemes separated from the general system—i.e., civil servants in Mexico and the armed forces in all countries (except in Costa Rica). In the substitutive models, the number of insured who remained in the old public system at the time of the reform has already disappeared or is minimal, but in the parallel models, approximately one-third of insured is still in the public system, while in the mixed models, all the insured are in the public pillar (Table 1). The data from the AIOS—which comprises the superintendencies of private pension systems in the world, including the nine systems in Latin America—only covers the insured who are in the private system/pillar and, therefore, underestimate the total coverage because they neither include the insured in the public system/pillar nor the insured in separate schemes. Likewise, the AIOS estimates the coverage based on affiliates and "*aportantes*" (insured contributors). To qualify as affiliates it is sufficient that they have registered and paid one contribution and include workers who are not contributing anymore or have transferred from the formal to the informal sector, or have either left the labor force or the country. Therefore, the AIOS overestimates the EAP coverage—thus, in 2019, the affiliate-based EAP coverage was 114% in El Salvador and Mexico, and 112% in Chile and Costa Rica (AIOS, 2020). The active contributor-based coverage is often based on the last contribution and, therefore, may underestimate coverage as an insured may not contribute within a certain month and do so in the following month, and then recover the coverage; however, we will use this measure herein because is more realistic than the affiliate-based one.

15 Administrators are commonly called AFP, but also AFAP in Uruguay, OPC in Costa Rica, and AFORES in Mexico.

Household surveys are conducted annually in the nine countries, with long series, thus they are quite useful and more and more used to measure the coverage of both active contributing insured and pensioners. The latest survey available is from 2018, except in a few countries which is from 2016-2017. In addition, the surveys, in theory, provide a greater coverage estimate, as all the insured are included, whether in private or public systems or in separate schemes. Another advantage of the surveys is that they offer socio-economic data on the coverage of the insured, for example, EAP and self-employed-workers coverage, as well as coverage by income groups (quintiles), location (urban and rural), education level (low, middle, and superior) and enterprise size (small, medium, and large), which allows studying disparities in coverage (see Appendices 1 and 2). Nevertheless, the coverage percentages obtained in the surveys are different from those of the administrative figures and present several problems: methodological changes or adjustments to the sample and the weighting factors, which affect comparability over time; risks of sampling and errors in surveys, their representativeness and reliability; consistency and, therefore, compatibility between countries, i.e., coverage indicators that are not exactly the same in all countries; lack of cooperation among respondents to provide correct information in a timely manner; and questions asked in a different way or errors in the responses given by respondents or when collecting and processing data (Rofman and Oliveri, 2012; ECLAC, 2018; ILO, 2020b). Surveys have improved some of these problems over time. Due to their annual publication, to series relatively standardized for many years, and to socio-economic information on the insured, we use household surveys herein, except when surveys had not been conducted in some of the nine countries.

## b. Reality

### Contributory Coverage

Here we contrast the promises of the reformers in extending the active (contributory) coverage relative to the total EAP with the available statistics. Between the year the reform was implemented in each country and the year 2004, the administrative figure-based coverage (there were no household surveys at the time) dropped in the nine countries; based on a weighted average, it decreased from 38% to 26%. For example, in Chile it dropped from 64% in 1979 to 57% in 2004 and in Peru from 55% in 1990 to 10% in 1999 (Mesa-Lago, 2008).

In many countries, administrative series, for a long period of time, provide a more accurate view of the EAP coverage before the reform, after the reform, and up to one year ago. For example, in Chile a 40-year (1973-2013) series, proves that the coverage in 1973 was 73% of the EAP and 64% in 1979, the year before the structural reform was approved. In 1982, it dropped to 29% and in 1990 was 47%. Then, it grew with fluctuations but without recovering the peak. In 2013, the 1980 coverage recovered at 64.8%, but 8 percentage points below the peak of 1973 (Mesa-Lago and Bertranou, 2016).[16] In El Salvador, a 38-year (1980-2018) series shows that contributory coverage reached a zenith of 27% of the EAP in 1995, before the structural reform came into force; then, in 2018, it dropped (with fluctuations, but without recovering the peak) to 24.8%. Therefore, such year it was more than two percentage points lower than in 1995 (Mesa-Lago and Rivera, 2020). In Peru, a 69-year (1949-2018) series indicates that the EAP coverage grew steadily from 13.9% in 1949 to a peak of 34.3% in 1992 (the year before the structural reform came into force). In 1995, it had decreased to 9.4% and then, in 2018, rose (with fluctuations, but without recovering the peak) to 27.7%, a drop of 6.6 percentage points (Cruz-Saco, 2018a, 2018b; Cruz-Saco and Gil, 2020). In the Dominican Republic, the coverage in 2003 (the year the structural reform law came into force) was 15% and, in 2004 and 2005, it dropped to 13%, but then it rose and surpassed the peak of 2003 (Pichardo and Guerrero, 2020).

The series of household surveys in 2009-2018 indicates that the EAP contributory coverage in general increased, but with significant differences among countries (Table 3).

16 Another Chilean administrative series shows 61.9% in 1975 and 42.3% in 1982; in 1999, the pre-reform coverage had not yet been recovered (Arenas, 2000).

**Table 3.**

**EAP Coverage by the Contributory System, 2009-10 and 2017-18**

| Countries | 2009-10 | 2017-18[a] |
|---|---|---|
| Uruguay | 64.6 | 70.6 |
| Costa Rica | 65.5 | 67.4 |
| Chile | 58.4 | 65.3 |
| Panama | 49.0 | 50.6 |
| Dominican Rep. | 31.5 | 38.3 |
| Colombia | 28.2 | 35.2 |
| Mexico | 32.7 | 29.6 |
| El Salvador | 28.0 | 28.1 |
| Peru | 16.9 | 21.0 |

**a** Ranked from highest to lowest; Mexico 2016.

Source: Based on household surveys of the nine countries (Appendix 1).

The EAP contributory coverage in 2017-18 was (from highest to lowest): 70% to 65% in Uruguay, Costa Rica, and Chile (most socially developed countries); 50% in Panama (intermediate country), and 38% to 21% in the Dominican Republic, Mexico, Colombia, El Salvador, and Peru (less developed countries, except Mexico, which is intermediate). The ILO (2017) estimates the average contributory coverage for the region at 40.4% of the EAP, which is above the coverage in the last five countries that are also below the minimum standard of 50% established by the ILO Convention 102. The coverage of these five countries is very difficult to be expanded and the reasons will be explained at the end of this section. In the eight years elapsed between 2009-10 and 2017-18, the EAP contributory coverage increased in eight countries and decreased in one country (Mexico).

## Non-Contributory Coverage

As mentioned above, reformers did not make promises on non-contributory coverage, which is not a part of the private system but external to it. Reformers did not refer to the protection of the poor through pensions, except for criticizing that the public system did not protect them, and omitted that

**Table 4.**

**Contributory Plus Non-Contributory Coverage of 65-Year-and-Over Persons, 2009-10 and 2017-18**

| Countries | 2009-10 | 2017-18[a] |
|---|---|---|
| Chile | 83.7 | 88.9 |
| Uruguay | 84.5 | 86.8 |
| Panama | 44.8 | 80.8 |
| Mexico | 50.1 | 75.0 |
| Costa Rica[b] | 42.0 | 65.5 |
| Colombia | 21.5 | 54.0 |
| Peru | 25.6 | 49.2 |
| Dominican Republic | 12.7 | 18.9 |
| El Salvador | 14.0 | 14.0[c] |

**a** Ranked from highest to lowest; Mexico 2016. **b** ECLAC (2018) gives coverage of 57.6% in 2008 and 66.7% in 2015. **c** Calculations in El Salvador give coverage of 17%; 21% for men and 14% for women (ILO/FUNDAUNGO, 2018).

Source: Based on household surveys of the nine countries (Appendix 1).

this is not the role of social insurance. However, in many countries there were welfare pensions for the poor before the reform, i.e., Chile, Costa Rica, and Uruguay. Such coverage does not require contributions and is awarded as a social or welfare benefit, always financed by the state; also, it is targeted on extreme or total poverty and requires to be mean tested.[17] It has been shown that non-contributory pensions substantially reduce poverty and, when targeted, their cost is low regarding GDP (Bertranou, Solorio, and van Ginneken, 2002; Bosch, Melguizo, and Pagés, 2013). The incidence of poverty is lower among the most socially developed countries (2.7% to 15.1% in Uruguay, Chile, and Costa Rica) and higher in the least developed ones (between 27.4% and 43.7% in Dominican Republic, El Salvador, and

17 Bolivia is the only country in the region that grants a universal non-contributory pension paid to all citizens who reach a certain age, regardless of their income, including those receiving a contributory pension; Mexico introduced the universal pension in 2019.

Mexico) (ECLAC, 2018). Table 4, based on household surveys, measures the older-adult population (65 years and over) coverage by non-contributory and contributory pensions.

In 2016-18, the coverage (combining both contributory and non-contributory)[18] of 65-year-and-over persons was as follows (from highest to lowest): 89% to 66% in Chile, Uruguay, Panama, Mexico, and Costa Rica; 54% to 49% in Peru and Colombia; and 19% to 14% in the Dominican Republic and El Salvador. The ILO (2017) estimates the regional average of non-contributory coverage (without contributory coverage) at 70.8%, therefore, there are at least five countries that are below. All countries, except the Dominican Republic, have non-contributory pensions. However, in El Salvador non-contributory coverage as a percentage of the 65-year-and-over population grew from 1.4% in 2009 (the year the non-contributory pension was created) to a peak of 6.1% in 2014 and later it decreased to 5% in 2018, which explains the low coverage of such age cohort for both pensions; furthermore, the expansion of the non-contributory pension played a significant role in increasing the older-adult combined coverage until 2014; then, the contributory coverage came to a halt and, with the decline of the non-contributory coverage, the combined coverage also decreased (Mesa-Lago and Rivera, 2020). The Dominican structural reform law stipulated the creation of a non-contributory system ("subsidized regime"), but this program has not been implemented after 17 years. In 2019, a "limited-scope pilot plan" began (Pichardo, Guerrero, and Mesa-Lago, 2020: 8), therefore, the coverage shown in Table 4 is limited to the contributory system and is the second lowest coverage among the nine countries.

In all countries, except El Salvador and the Dominican Republic, the coverage of older-adult population is higher than that of the EAP. Such coverage

18 The higher percentage of the EAP for both types of pensions is from the contributory ones (except for Bolivia, where the opposite is true), but these proportions vary considerably, i.e., in Mexico 28.4% contributory and 47.8% non-contributory, while in Chile 59.7% and 27.8%, respectively (ECLAC, 2018).

increased due to the extension of non-contributory pensions, since the coverage of contributory pensions expanded very little (based on IADB-SIMS, 2019).[19] Extending non-contributory coverage to 40% of the population would only cost 0.9% of GDP (Arenas, 2020). (The measures of extension of coverage by the re-reforms in Chile and El Salvador are analyzed in section V).

### Does the private system have influence on coverage?

It has been shown that the private pension system in most of the nine countries has not managed to substantially improve the coverage compared to the coverage that existed before the reform, but an important question is whether it has managed to increase it more than the public systems. The first two columns of Table 5 compare the EAP coverage with the older-adult coverage in 17 Latin American countries for which information from household surveys is available, identifying those countries with public (defined benefit-DB) and private (defined contribution-DC: substitutive, mixed, and parallel) systems. Neither contributory nor non-contributory coverage appear to be related to the pension system. For example, the EAP coverage in Brazil and Argentina—with public systems—is ranked among the six countries with the highest coverage, together with Uruguay, Costa Rica, and Chile—with substitutive or mixed private systems (70.6% to 45.4%)—, while El Salvador and Peru—with private systems (substitutive and parallel respectively)—rank among the countries with the lowest coverage, along with public systems such as Paraguay and Nicaragua (28.1% to 20.9%).

The relationship is even less evident regarding the older-adult coverage; thus the Bolivian public system has the highest coverage (96.8%) and that of Brazil, also a public system, has the third highest coverage (87.8%), both above the coverage (between 86.8% and 54%) of five private systems of the three types: Uruguay, Panama, Mexico, Costa Rica, and Colombia (Figure 2).

19 For a comparison of the characteristics of non-contributory pensions and their amounts vis-à-vis contributory pensions, see ECLAC, 2018; for country case studies see Rofman, Apella, and Vezza, 2013.

**Table 5.**

**Comparison of Pension Parameters in Latin America, 2019-2020**

| Countries | Coverage (%) | | Retirement age | | Contribution (%) | Years of Contributions[a] | Pension Adjustment | Welfare Pension |
|---|---|---|---|---|---|---|---|---|
| | EAP | Pop 65+ | Men | Women | | | | |
| Argentina DB | 45.4 | 84.2 | 65 | 60 | 21.17 | 30 | CPI | Yes |
| Bolivia DB | 19.6 | 96.8 | 58 | 58 | 15.21 | 10 | CL | Yes |
| Brazil DB | 56.0 | 87.8 | 65 | 62 | 15/44[e] | 20/15[j] | CPI | Yes |
| Chile DC | 65.3 | 88.9 | 65 | 60 | 13.76[f] | 20 | CPI | Yes |
| Colombia DC / DB | 35.2 | 54.0 | 62 | 57 | 16.00 | 22/25[h] | CPI | Yes |
| Costa Rica DC / DB | 67.4 | 65.5 | 65 | 65 | 10.66 | 25 | CL | Yes |
| Cuba DB | | | 65 | 60 | 17.50[g] | 20 | DG | Yes |
| Ecuador DB | 40.4 | 53.6 | [b] | [b] | 7.90 | [b] | CPI | Yes |
| El Salvador DC | 28.1 | 14.0 | 60 | 55 | 15.00 | 25 | DG | Yes |
| Guatemala DB | 19.2 | 12.2 | 62 | 62 | 5.50 | 20 | Resources | Yes |
| Haiti DB | | | 55 | 55 | 12.00 | 20 | DG | No |
| Honduras DB | 16.8 | 9.8 | 65 | 60 | 6.00 | 15 | DG | No |
| Mexico DC | 29.6 | 75.0 | 65 | 65 | 8.65[h] | 24[i] | DG | Yes |
| Nicaragua DB | 22.3 | 24.1 | 60 | 60 | 17/18 | 14.4 | US$/C$ | No |
| Panama DC / DB | 50.6 | 80.8 | 62 | 57 | 13.50 | 20 | DG | Yes |
| Paraguay DB | 22.8 | 50.8 | 60 | 60 | 23.00 | 24 | Resources | Yes |
| Peru DC | 20.9 | 49.2 | 65 | 65 | 13.00 | 20 | Resources | Yes |
| Dominican Rep DC | 38.3 | 18.9 | 60 | 60 | 8.00 | 30 | Salaries | No |
| Uruguay DC/DB | 70.6 | 86.8 | 60-70[d] | 60-70[d] | 22.50 | 30 | Salaries | Yes |
| Venezuela DB | | | 60 | 55 | 13.00 | 15 | DG | Yes |

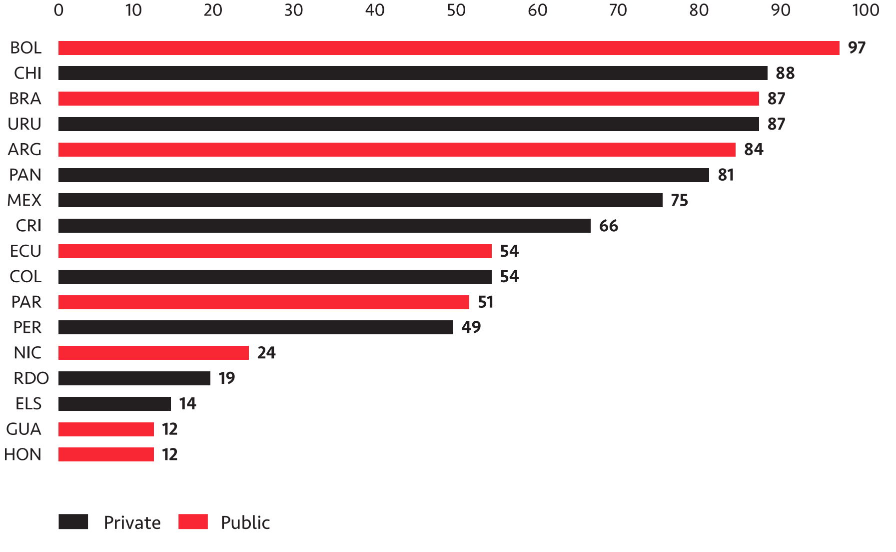
Note: **DB**=defined benefit. **DC**=defined contribution. **CL**=cost of living. **CPI**=consumer price index. **DG**=at the discretion of the government. **Resources**=adjusted when there are fiscal resources. Blank spaces mean that no figures are available.

**a** In private systems it is usually possible to retire before the legal retirement age and comply with the required number of years of contribution, provided that there is a minimum sum accumulated in the individual account, but some systems require a certain number of years of contribution to grant the minimum pension; all public systems require years of contribution. **b** There are different ages and years of contribution. **c** The adjustment is made in inverse proportion to the amount of the pension. **d** Combination of ages with years of contribution: 60/30, 65/25, and 70/15. **e** For public sector workers, the contribution depends on the salary range; it could not be determined in the private sector because the state contribution is divided between pensions and monetary benefits in sickness and maternity. **f** 10% for the deposit, 1.77% for the fee, and 1.99% for the premium; a bill submitted to parliament in 2020 increases employer's contribution by 6 points, which would bring the total to 19.76%. **g** State sector, 14.5% in the private sector. **h** Respectively in the private and public systems. **i** A bill in 2020 raises contribution to 15% and reduces the years required for the minimum pension to 14.4 for 10 years; then it increases to 19 years. **j** Men and women; every four years since 2020; ages must be reviewed based on life expectancy.

Source: My compilation based on OECD/IADB/WB, 2015; ECLAC, 2017; IMF, 2017; BPS, 2018; ISSA/US-SSA, 2020; IADB-SIMS, 2019; legislation of the countries as of 2020.

**Figure 2.**

**Coverage (%) of the Older-Adult Population by Contributory and Non-Contributory Pensions, 2018**




Source: Table 5.

The above is explained as follows: the non-contributory pensions, financed by the state, achieve a coverage greater than the contributory coverage in 13 out of the 17 countries. The five countries with the lowest older-adult coverage (between 10% and 24%) (three public and two private substitutive: Honduras, Guatemala, El Salvador, Dominican Republic, and Nicaragua) lack such pension or it has come to a halt (for public systems see Appendix 2).[20]

### Reasons for low contributory coverage

One of the structural reform promises was that the formalization of the labor force would increase and hence its coverage also. After four decades of negative evidence against this assertion, now private system supporters are arguing that the problem of coverage is not endogenous to the system but external: "[Coverage is] linked to the labor market and... closely related to low levels of labor participation" (CPC, 2016: 7). Analyzing the low pension coverage, Iglesias (2005: 87) states that the origin of this problem "lies mainly in the economic conditions of the country and the labor market, and not in the characteristics of the pension system." Private pension systems were designed for employees in the formal sector of the economy, salaried workers with an employer (who withholds the worker's contribution and who may also contribute), relatively stable jobs, and medium-high wages, mostly for men; therefore, they could achieve high contribution density. But in most Latin American countries the labor force tends to be informal, with unstable employment, low wages or income, and poor contribution density; however, there are different degrees and types of informality, as will be seen later.[21] A Peruvian insurance expert maintains that workers who are not in the formal market have low contributions, but this is not due to the pension system but

20 A regression analysis showed that the contributory coverage had a significant positive relationship with the level of development, while the non-contributory coverage was positively related to the existence of the non-contributory pension (Mesa-Lago, Cruz-Saco, and Gil, 2020).

21 The WB (1994) was aware of this problem, but did not take it into account in its multi-pillar model of structural reform, which predicted an extension of coverage, encouraged by the ownership of the individual account, the equivalence between contribution and pension, and the most efficient management of the fund by private entities. Later, a WB team acknowledged that coverage had not increased (Gill, Packard and Yermo, 2005).

to informality. He also argues that individual savings do not have to adjust to the principles of social security, such as universal coverage, because "the AFP system is the polar opposite of a social security system" (Morón, 2014, 2015). In El Salvador it is claimed that "the objective of these systems is to protect salaried workers having a dependency relationship with an employer... Therefore, by design, the coverage of the systems... would be low in the region, due to the high informality in labor markets "(ICP, 2017: 4-5). It is also argued that the structure of the labor force and the prevalence of the informal sector in many countries take time to be transformed and is linked to economic development, so that improvements will take place in the future (FIAP, 2017a).

A different position is that, even recognizing the importance of informality, there are systemic causes of low coverage: the limited capacity of the contributory system to adapt to the transformation of the labor market and to incorporate those excluded (Mesa-Lago, 2008; Mesa-Lago, Valero, Robles, and Lozano, 2017; ECLAC, 2018), and avoidance of obligations to pay contributions. The IADB states: "The underlying causes of the lack of pension coverage... are rooted in the design of social security in the region ["lack of ability to ensure an adequate pension to a significant part of the older adults"] and in the poor operation of its labor markets... Universal coverage should be a basic principle of pension systems; policies and programs that align the incentives of companies and workers towards formality are required to achieve this"(Bosch, Melguizo and Pagés, 2013: xvii, xviii). For Acuña et al. (2015: 62, 65), low coverage is due to "structural barriers in the labor market [informality], deficiencies in the design of the pension system, weaknesses in the operation of the institutions that must play a relevant role in the pension systems... [and] evasion and avoidance in the payment of contributions." They also maintain that while significant and sustainable increases in coverage are possible in the long term, it is feasible to adopt short- and medium-term measures that may reduce this problem. As for the argument that the transformation of the labor market is only feasible in the long term; if we project historical series—especially in less developed countries—many generations would have to pass to achieve this objective. There are also serious problems on the labor outlook that would make progress even more difficult, such as robotization, and COVID-19 has aggravated these problems.

This section will analyze the two key factors related to EAP's low coverage, especially in less developed countries: the external factor—informality in the labor force—and the systemic factor—the design of the pension system and its limited adaptation to incorporate the non-covered sector—. In addition, successful policies will be summarized to extend coverage through the adaptation to the structure of the labor market despite the external factor (failure to comply with the contributing obligation will be examined in section IV-6).[22]

The informal sector is usually comprised of non-salaried workers with unstable jobs and erratic and low income, as well as low productivity. The groups it embraces and their percentages of the employed labor force in 2018 in Latin America were: self-employed workers, 19.7%; employees of micro-enterprises, 11.7%; domestic-service employees, 6.8%; employers of micro-enterprises, 3.1%; and unpaid family workers, 2.8% (ILO, 2020b). Despite the steady process of urbanization in the region, a significant rural sector still prevails in the least developed countries, with a coverage that is lower than in the urban sector. The informal sector grew in 2012-2019 due to the slowdown in regional growth and it probably increased in 2020 due to COVID-19. Information and communication technologies, as well as the automation of production exacerbate the problem. The informal sector is proportionally lower in the most socially developed countries (Chile, Costa Rica, Panama, and Uruguay), and higher in the least developed countries (Colombia, El Salvador, the Dominican Republic, and Peru). In 2018, an average of 48.5% of the urban labor force in the region was informal, from which: 27.8% were self-employed workers; 4.6% domestic-service employees; and 3.2% employers—there are no breakdown figures for employees in micro-enterprises and unpaid family workers. Only 17.1% of

22 This section is fundamentally based on Mesa-Lago, Valero, Robles, and Lozano, 2017, with updated information and additional sources that are specified.

total workers covered in pension systems are non-salaried workers, where the informal sector is concentrated (ECLAC, 2018, 2020).

As for the internal factor, system design problems, and their limited capacity to adapt to the labor market, we investigate groups that are difficult to affiliate, such as self-employed workers, domestic-service employees, employees of micro-enterprises, agricultural workers, and unpaid family workers, identifying the progress made to adapt to the labor market, especially in the most socially developed countries.

Self-employed workers constitute the largest group in the employed labor force: 19.7%, and even more in the informal sector with respect to the labor force: 27.8% (ECLAC, 2020; ILO, 2020b). Among the 16 countries with information on self-employed workers, eight countries have voluntary affiliation, which is ineffective, and one country excludes them (Table 6). This is due to several causes: they lack an employer and a fixed salary, therefore, their contributions are not automatically withheld; most do not keep a record of their income; their small size and dispersion make it difficult to detect them, register them, and collect their contributions, increasing the administrative cost; and they have to pay a percentage contribution equivalent to the sum of the percentages on the salary contributed by formal salaried workers and their employers (which self-employed workers lack). The coverage of self-employed workers is mandatory in Costa Rica, Uruguay, and Colombia,[23] in private systems, and in Brazil and Ecuador in public systems; in Chile the mandatory coverage is gradually being extended and in Panama it is mandatory in the private pillar for labor market newcomers with a certain income level; in the rest of the countries it is voluntary, including El Salvador, the Dominican Republic, Mexico, and Peru. In the Dominican Republic, the structural reform law provided for a contributory-subsidized regime for self-employed workers but it has not been created; in

23 In Colombia is mandatory only for those workers who are less than 35 years old and joined the new system; for the rest it is voluntary. Also, a solidarity fund was created to help incorporating self-employed workers, partly financed with contributions from high-income contributory insured. A recent decree regulates their contributions to the system.

El Salvador, the 1998 reform law stipulated regulations to incorporate self-employed workers, but the 2017 re-reform did not do it and, as of October 2020, such regulations had not been enacted.

**Table 6.**
**Impact of the Type of Affiliation of Self-Employed Workers on their Effective Coverage, circa 2018**

| Countries [a] | Self-Employed Workers[b] (% EAP) | Type of Affiliation: Mandatory (M) or Voluntary (V) | Self-Employed Workers Covered (% of Total Self-Employed) |
|---|---|---|---|
| **Costa Rica** | 19.4 | M, with state subsidy | 47.8[d] |
| **Uruguay** | 24.7 | M | 44.3 |
| Brazil | 27.6 | M | 39.3 |
| **Chile** | 22.0 | M, gradual | 24.0 |
| Ecuador | 47.2 | M | 22.0 |
| **Colombia** | 47.4 | M | 13.2 |
| **Panama** | 34.3 | M, in private pillar[c] | 7.6 |
| Bolivia | 61.4 | V | 3.9 |
| **El Salvador** | 34.5 | V | 2.1 |
| **Dominican R.** | 39.9 | V | 1.6 |
| Nicaragua | | V | 1.5 |
| Paraguay | 37.7 | V | 1.1 |
| Honduras | 48.7 | V | 0.9 |
| **Mexico** | 18.8 | V | 0.6 |
| **Peru** | 49.5 | V | 0.3 |
| Guatemala | | Excluded | 0.3 |

**a** Ranked by the degree of coverage from highest to lowest (last column); private systems are indicated in bold. **b** Includes unpaid family workers, which is a small proportion: the weighted regional average is 3.3%. **c** Above a certain level of income. **d** Self-employed workers in the public pillar, as they are not obliged to join the private pillar.

Source: Self-employed workers on EAP of ECLAC-STATS 2019 based on household surveys; affiliation type of ISSA/US-SSA, 2020; self-employed workers covered from IADB-SIMS, 2019.

Table 6 shows that the countries with mandatory legal affiliation are those with the highest effective coverage: 48% and 44% in Costa Rica and Uruguay, decreasing between 39% and 8% in Chile, Ecuador, Colombia, and Panama; on the contrary, where the legal affiliation is voluntary, the effective coverage is lower: 4% in Bolivia and between 2% and 0.3% in the rest of countries, including El Salvador, Dominican Republic, Mexico, and Peru.[24] It should be noted that countries with mandatory legal affiliation and higher effective coverage usually have a lower percentage of self-employed workers (between 19% and 25% of the EAP), except for Colombia and Ecuador, while in countries with voluntary affiliation and lower effective coverage the percentage of self-employed workers is higher (between 34% and 49% of the EAP), except for Mexico.[25] Mandatory legal affiliation by itself may not solve the problem in these countries, therefore, ad hoc policies are required to incorporate workers, as discussed below.

Governments of several countries have provided mandatory coverage for hired professional self-employed workers with high or middle income (i.e., Chile and Uruguay); other governments have provided the incorporation of self-employed workers and other informal workers by simplifying registration procedures, flexibility in payment terms, use of post offices, banks, and smartphones for the collection of contributions and pension payments. Sending reminders to affiliates through personalized periodic messages (by mobile phones, emails, and similar means) with projections of the pension they will receive at the time of retirement, has proven to be useful to stimulate contribution. In Costa Rica, a country that covers almost half of self-employed workers (the highest coverage in the region), the state provides the employer contribution of low-income self-employed workers (with a mean tested).[26] The Chilean state grants—as an incentive to self-employed workers who join the system—benefits that

24 Peru made the coverage of self-employed workers mandatory and later revoked it.

25 Between 2009-10 and 2017-18, the effective coverage in private systems of self-employed workers increased in four, decreased in four, and stagnated in one, while in public systems it grew in six and decreased in one (Appendices 1 and 2).

26 Costa Rica has just approved a policy to further extend the coverage of self-employed workers, simplifying the regulations for their affiliation and an aggressive affiliation plan.

these workers previously lacked, such as family allowances, fiscal solidarity contribution to their pensions, and protection of occupational risks. In Peru, a pilot plan of an international NGO offers matching contributions to encourage informal self-employed workers to join, subsidizing between 50% and 100% of their contributions for six months (*El Comercio*, Lima, 06-25-2018). In Uruguay, self-employed workers must join the BPS general regime, while professional self-employed workers must contribute to the private pillar. It also created the *monotributo*, which consists of the unified payment of all taxes including the contribution to social security, income tax, and any other tax, which simplifies and facilitates payment with the resulting increase in coverage. Those paying the *monotributo* are mainly very small companies, self-employed workers, family enterprises with very few employees, and micro-enterprises; in 2004-2013, the total amount of said *monotributistas* companies increased almost tenfold. Mexico is incorporating self-employed workers compulsorily and gradually as in Chile, through a mobile AFORE (administrator) established in 2017 that allows registering and opening an account online, checking the balance, and 7,000 savings points (CONSAR, 2017).

Domestic-service employees are salaried workers and have mandatory legal affiliation in most countries (five out of nine private systems, voluntary in El Salvador and Mexico)[27] but this is difficult to carry out as either they lack a contract or, if so, the employer and the domestic-service employee often reach an agreement to avoid paying the contribution—hence inspection is necessary but difficult and expensive. The ILO Convention 189 of 2011 extends social security coverage to domestic-service employees and 13 countries in Latin America and the Caribbean have ratified it, but with little implementation in practice. In this region, on average, 10.7% of employed women work in domestic service and constitute 4.6% of the informal sector. In the three most advanced countries (Uruguay, Chile, and Costa Rica) domestic-service employees have mandatory coverage and an effective coverage between 67%

27 In Panama they are excluded if they do not work more than three days a week with the same employer and if they do not earn a certain level of income.

and 24%; Colombia also has mandatory coverage and coverage of 16% (Peru has mandatory coverage but effective coverage is only 3.4%). On the contrary, in the three countries with voluntary affiliation (Dominican Republic, Mexico, and El Salvador), this coverage ranges between 0% and 7.8% (ECLAC, 2017).[28] Uruguay has the largest coverage of this group in the region, due to inclusion policies: the government encouraged their unionization and collective bargaining, regulated their working conditions, developed home inspection to verify compliance with the law, and imposed heavy sanctions on non-compliers. Also, the state social security entity (BPS) has a specific branch for domestic-service employees. Costa Rica has recently facilitated the affiliation of domestic-service employees by setting a minimum tax base and simplifying their registration. Peru began a special program in 2017 to affiliate 375,000 domestic-service employees, identifying the employer.

Micro-enterprise employees (five or fewer workers) have only mandatory legal affiliation in three out of the nine countries (Chile, Costa Rica, and Uruguay); generally, the law establishes that this is mandatory only for micro-enterprises with more than five or ten workers. The effective coverage in the three countries with mandatory coverage ranges between 43% and 60%, while in those countries with voluntary coverage it ranges between 6% and 14%. In all countries, the smaller the enterprise, the lower the coverage and vice versa. In household surveys, the difference in percentage points in coverage between small and large enterprises ranges from 77 to 96 points in the least developed countries, while it ranges from 49 to 65 points in Costa Rica, Uruguay, and Chile (Appendix 1). Collecting entities often prioritize large and medium-sized companies because they are easier to detect and collect from, relegating small enterprises because of the high cost of incorporating them.[29]

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28 Among the public systems, Ecuador, Brazil, and Argentina have mandatory and effective legal coverage ranging from 49% to 27%, but the less developed countries have voluntary coverage and the effective coverage ranges between 0.9% and 5.4% (ECLAC, 2017).

29 In Peru, a voluntary non-contributory pension program for up-to-ten employee micro-enterprises was annulled, which reduced the contribution of employees regarding the general coverage of the system and the latter received a contribution from the state.

Agricultural workers are difficult to incorporate because they usually work on their own or are unpaid family workers or work on a seasonal basis or are sharecroppers, squatters, or usufructuaries, therefore, they lack an employer and are dispersed. They often work in subsistence agriculture, have lower income than urban workers, and less access to social security offices, banks, and post offices and the Internet (which facilitate affiliation and collection of contributions). Salaried workers on large plantations have a better chance of being covered. Within the region, the coverage of the employed EAP in the urban area is much higher than that of the rural area: 58.9% and 22.5%, respectively—although the gap is narrowing in the most socially developed countries. Among the nine countries, we have information on the legal affiliation of rural workers in six countries: in Uruguay affiliation is mandatory for everyone and covers 70% of the group (there is a special BPS branch for rural workers); in Costa Rica only for salaried workers and covers 63%; in Panama there is mandatory legal affiliation for those who accumulate more than three months a year and covers 27%; in El Salvador the coverage is limited to those who work in large plantations and covers 12%, and in Mexico it is mandatory for salaried workers, but only covers 9%.[30] The government of Colombia grants a non-contributory pension to all citizens aged 65 years and over not receiving a contributory pension and living in poor rural areas.

Unpaid family workers lack mandatory coverage in all countries and have voluntary coverage in a few countries. The percentage average of this group in the region regarding the employed EAP in 2018 was 2.8%, but the nature of this type of employment could generate an underestimation. The proportion of the group in rural areas is likely to be much higher than in urban areas. The proportion of these workers in the countries regarding the employed EAP is ordered from lowest to highest as follows: Uruguay, Chile, and Costa Rica from 0.8% to 1.7%;[31] Colombia, Mexico, and Panama from 4% to 4.7%; El Salvador

30 The most successful agricultural program is that of rural workers in Brazil, but it is not studied because of space limitations.

31 The Dominican Republic is an outlier with 1.8%.

and Peru 5.9% and 9.8%, respectively (ILO, 2020b). The most developed countries had the lowest proportions (lower than the regional average), and vice versa; El Salvador and Peru had between two and three times the regional average. It was not possible to obtain statistics on the coverage of this group in all countries—in Uruguay it was 28% in 2015 and in Costa Rica 16%; in the rest of the countries should be much lower. In Chile, the 2015 Presidential Commission proposed giving voluntary coverage to this group.

## 2. SOCIAL SOLIDARITY AND GENDER EQUITY

### a. Promises of the Structural Reforms

Reformers neither addressed social solidarity nor gender equity, because the individual account of the insured belongs to them and there are no transfers between generations, income groups, and genders. "A mandatory multipillar arrangement for old age security helps countries to make clear decisions about which groups should gain and which should lose through transfers in the public mandatory pillar, both within and across generations. This should reduce perverse or capricious redistribution—and poverty" (WB, 1994: 22). In other words, the WB branded the solidarity distribution among generations as harmful or capricious, but it stated that the reform would reduce poverty.[32] As for solidarity among genders, the WB pinpointed the problems faced in public systems, but it omitted any reference to how the private system would affect gender discrimination (WB, 1994: 34). The three WB/OECD officials who criticized certain adverse effects in the structural reform, argued that the private system "redistributes and diversifies the risks to retirement income more efficiently than do pure PAYG systems;" [also] by diversifying the retirement risks across multiple pillars, "reforms were

32 The WB (1994: 69) said: "Widows are thus one of the first groups of old people who should be targeted for social assistance, in the interest of alleviating poverty among those who the traditional system fails." However, the WB did not refer to how the new ("non-traditional") private system would face poverty, not only among widows, but also among those not covered by such system—handicapped and orphans.

expected to introduce a more equitable system" (Gill et al, 2005: 34, 90). Finally, the reform, inspired by neoliberal thought, proclaimed the "subsidiary role of the state," i.e., that the state should only intervene when the market may not do it. According to Piñera (1992: 39), the military and economists were united by a common cause: "An effective way to avoid a new cycle of statism and demagogy was… dismantling the excessive economic power of the state."

## b. Reality

### Subsidiary Role of the State

The reformers' ideal that the state would play a subsidiary role has been disproved in the last 40 years, in which its fundamental role has been proven, without which the private system could not exist: a) It made affiliation to the system mandatory for all the insured or for some of them; b) in the vast majority of countries it has financed the cost of transition from the public to the private system (with some exceptions);[33] c) it established a public agency to regulate and monitor the private system; d) it guarantees the benefits in case of the administrators' bankruptcy; e) it introduced or expanded non-contributory pensions and finances them in the vast majority of countries; f) it has made fiscal contributions to improve low contributory pensions up to a limit at which the contribution ends (Chile, Mexico, and Uruguay); and g) it finances inclusion measures in the contributory system intended for certain excluded groups, i.e., in Costa Rica it grants a subsidy to self-employed workers who join, which is an incentive for their affiliation and payment of contributions, and also, in the long term, the state saves the payment of non-contributory pensions. The FIAP, at its 2017 Annual Meeting issued a statement that reads: "It is urgent… to strengthen a first solidarity, non-contributory and efficient pillar that may improve the pensions of the most vulnerable workers with no savings

33 When the public system is closed, all or a significant portion of the insured stop contributing to it and make their contributions to the private system. On the other hand, most of the current pensions and some of the future pensions come from the public system; this generates a deficit that may last between 35 and 60 years; in Chile, at the peak, the deficit amounted to 7% of GDP; said deficit is financed by the state.

capacity" (FIAP, 2017b); it should be noted that it omits that the state finances such non-contributory pillar.

### Social Solidarity

The mechanisms opposite to solidarity, common in private and public systems, are: maintenance of separate programs from the general system and enjoying more generous entitlement conditions, benefits and fiscal subsidies (to be analyzed later in this section); coverage exclusion of self-employed workers and other low-income workers (explained in the previous section); notable inequalities in coverage by income, education, and place of residence (also gender to be discussed in the next subsection), and in low-coverage countries, the majority of the uninsured population partly finances coverage of the insured minority—and in private systems it may also finance the costs of the transition (to be discussed in section IV-6).

The structural reform replaced the principle of solidarity with the principle of equivalence: the pension is based on the fund accumulated in the individual account of each insured, not shared with the rest (there are no transfers between generations,[34] income groups, and genders), and if solidarity mechanisms are available, they are external to the private system, financed by state authorities.[35] Another anti-solidarity mechanism of the private systems is that two of the reforms (Chile and Peru)[36] eliminated the employer's contribution that is kept in all public systems; therefore, the worker pays 100% of the total contribution,[37] and also, half of the reforms increased the worker's

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34 In many public systems/pillars, as in Uruguay, a minimum and a maximum pension are established, thereby it is a redistribution from the high-income group to the lower-income group.

35 Last generation PAYG systems, such as notional defined contribution, follow this format.

36 Also, Bolivia's re-reform restored part of the employer's contribution, but the worker still contributes 80% of the total.

37 In Chile, the disability and survivors' premium was later passed on from the insured to the employer, but the worker pays around 98% of the total contribution; the reform currently at congress increases the employer's contribution by 6 percentage points, but still the worker would contribute 62% of the total (see section IV-6).

contribution; in the mixed system of Panama the worker pays 68% of the total contribution[38] and in Uruguay 67%. The foregoing violates the maximum of 50% set for the worker contribution by the ILO minimum standard (the other five private systems comply with this standard). Likewise, in the vast majority of private systems, the insured pays the high administrative costs, but not in public systems (see section IV-4). The reforms also increased the years of contributions required for minimum pensions, do not impose a ceiling on pensions as most public systems do, and accentuate gender inequalities that are smoothed out in public systems (Sojo, 2017).

All the structural reforms (also the parametric reforms in public systems) excluded the separate programs of powerful groups enjoying more generous entitlement conditions and financing than those in the general system: retirement between 10 and 22 years younger, seniority pensions (years of service regardless of age), pension amount equal to the last salary received and automatically adjusted to the active personnel current salary, contribution exemption or less than that of the general system, and substantial fiscal subsidies.[39] The armed forces in all countries (except for Costa Rica—which does not have armed forces) have successfully resisted integration. This leads to contradiction in Chile, because the armed forces actually imposed the private system and presented it to the world as a superior system due to its goodness; but the armed forces were excluded from such system because their scheme is much more magnanimous. General Pinochet warned—before the approval of the private system law—that its non-application to the armed forces "would be strongly criticized because the military would be marginalized from the law... so, we have to find another formula that lawyers could draft, as otherwise, this law would bring a general repudiation" (secret document dated October 14, 1989, photocopied by Gálvez and Kremerman,

38 This is compensated because the employer pays 8% for maternity-sickness insurance.

39 In Mexico, there are more than 1,000 different DB regimes (states, municipalities, universities) that are experiencing serious financial disequilibria and receiving fiscal subsidies (CONSAR, 2018). In Peru there are special regimes for police, armed forces, fishermen, etc. For Argentina and Bolivia see section V.

2020: 9-10). The most generous programs for civil servants and for other groups also persist in most countries. In five of the countries, the amounts of pensions for the military, civil servants, congressmen, judges, and teachers are between 6 and 36 times higher than the average pension of the general system (Mesa-Lago, 2009).[40]

In Chile, the armed forces program has differences among its four branches (air force, army, navy, and police), as well as among officers, detectives, and gendarmes. The pension is 100% of the last salary with 30 years of service regardless of the age and a 50% pension is obtained with more than 20 years of service (compared to 65 years of age and 20 years of contributions in the private system); also, a higher pension is paid with 25-30 years of contributions. The armed forces pension adjustment is based on the active personnel current salary, while in the private system it is based on the CPI. Table 7 shows that—regarding the regular and early pension of the private system (including the solidarity pension contribution)—armed forces pensions range between 3.2 and 7.3 times; if compared with the non-contributory pension (basic solidarity pension), armed forces pensions range between 6.4 and 14.6 times. Armed forces pensioners were 174,650 at the end of 2019 and the annual cost of their pensions amounted to US$3,245,840 (90% of the cost is subsidized by the state and only 10% by the contributions), while the annual cost of non-contributory pensions paid to 1.6 million beneficiaries was US$2,814,234—as for GDP, the respective proportions were 0.9% and 0.7%. The adjustment of military pensions in 2005-2009 was 35% for seniority pensions and 29% for old-age pensions (Gálvez and Kremerman, 2020), while in the private system, regular old-age pensions (also adjusted to inflation) grew by only 8% and early old-age pensions by 3.9% (Superintendencia de Pensiones, 2020b).

The foregoing is a significant factor of inequity or lack of solidarity in Chile and it has generated a strong movement to integrate the armed forces scheme

40 In El Salvador, separate public schemes took 4% of the general state budget in 2019 (Pichardo, Guerrero, and Mesa-Lago, 2020).

**Table 7.**

**Comparison of the Average Monthly Pension of the Armed Forces, the Private System, and the Non-Contributory Pension in Chile, 2019**

| Pension Schemes | US Dollars Per Month[a] | Coefficient: Private Pension[b] =1.0 |
|---|---|---|
| **Armed Forces** | | |
| Officers (age) | 2,817 | 7.3 |
| Detectives (seniority) | 2,145 | 5.5 |
| Gendarmes (seniority) | 1,872 | 4.9 |
| Air Force (age) | 1,526 | 4.0 |
| Army (age) | 1,425 | 3.7 |
| Police (seniority) | 1,392 | 3.5 |
| Navy (age) | 1,226 | 3.2 |
| **Private System (AFP and Insurance[c])** | | |
| Old-age with 25-30 contribution years | 481 | 1.2 |
| Old-age early retirement[d] | 384 | 1.0 |
| **Non-Contributory Pension** | **194** | **0.5** |

**a** Exchange rate as of December 2019: 1US$=739 Chilean pesos. **b** Old-age regular and early. **c** Insurance companies that sell annuities. **d** Includes solidarity pension contribution, otherwise it would be much lower.

Source: Gálvez and Kremerman, 2020.

into the general private system. A survey conducted in 2020 showed that 68.9% of interviewees disagreed with the fact that the armed forces have a different system than the rest of Chilean workers (Activa Research, 2020). The 2015 Re-reform Presidential Commission recommended that the armed forces received the same treatment and paid the same contributions as in the general private system and as the rest of the labor force (CAPSP, 2015).[41]

41 José Piñera, creator of the Chilean private pension system, in order to approve the structural reform accepted in 1980 that the armed forces kept their separate scheme (Matus, 2020); however, in 2019, he approved its transfer to the private system (Saavedra, 2019). A 2019 bill stipulates that civilian employees joining the armed forces must be affiliated to the general system.

In El Salvador, the armed forces program (IPSFA) has much more generous conditions than the closed public system (SPP) and the private system (SAP): IPSFA retirement age is 50 years and SSP/SAP are 50/55 (women/men); maximum replacement rates (RR) are 100% and 55%, respectively; insured contributions are 8% and 14%, respectively, administrative expenses over expenditures are 8.2% and 2.4%; actuarial deficit and proportional fiscal transfers in IPSFA are much higher than in SPP (Mesa-Lago and Rivera, 2020; this monograph recommends the unification of the armed forces entitlement conditions and benefits with those of the general private system). In Peru, the Military-Police Fund also offers more generous entitlement conditions and benefits than the two general systems (SPP and SNP), as well as fiscal subsidies that averaged 0.29% of GDP in 2000-2015 (13% of total pension spending) and it is projected to reach 2% of GDP (Altamirano et al., 2019). In Uruguay, the military scheme allows retirement at 49 years of age (11 years less than in the general system) and some pensions are equivalent to three times more than the rest of the retirees. The military scheme deficit cost the state US$550 million in 2018 for 60,000 pensioners, against US$550 million to cover the pension deficit of 700,000 private employees, therefore, twelve times more per pensioner. A law to reform the military scheme was passed in 2018 but applies only to people with less than 15 years of service (Martínez, 2018).

Coverage inequalities among active insured are evident in their income by quintiles; as income increases, so does coverage and vice versa, although the gap diminishes in the most developed countries:[42] in 2018, the ratio between the coverage of quintile 5 and quintile 1 (highest and lowest income, respectively) ranged from 2 to 4 points in the most developed countries (Chile, Costa Rica, and Uruguay) but increased from 7 to 38 points in the least developed countries (El Salvador and Peru). While in Chile, quintile 1 was covered at 44.8% and in Costa Rica at 38.8%, in El Salvador it had only a 6% coverage and in Peru zero. As for education, the average coverage of insured people with higher education in the region is 73%, but it is reduced to 17% of insured people who have not completed elementary education. The higher

42 Based on regional average deciles, the first decile (the lowest income) had a coverage of less than 10%, compared to 72% in decile 10 (the highest income).

the insured's educational level, the higher their coverage and vice versa. In 2018, the ratio between the higher education level and the elementary level coverage was from 1.4 to 1.6 points in the three most developed countries, but it increased from 5.6 to 11 points in the two least developed countries. While in Uruguay and Costa Rica the insured with only the elementary level were covered in 54.7% and 55.7%, respectively, in Peru only 4.3% was covered and in El Salvador 10%. Similar differences were observed among pensioners: in Chile the elementary education level was covered in 91.4% and in Uruguay in 88.5%, however, in El Salvador this proportion diminished to 9.5% and in the Dominican Republic to 18.4 %. Lastly, the average coverage of urban insured in the region is 55%, but it is reduced to 22% for rural insured. Among the active insured, the coverage ratio between the urban and rural sectors was 1 point in the three most developed countries, but it grew to 6 points in Peru. In Chile, Costa Rica, and Uruguay between 56% and 66.5% of the rural population was covered, but only 4% in Peru—similar gaps were found in the coverage of pensioners (Appendix 1; ECLAC, 2018).[43]

## Gender Equity

Gender discrimination results from the labor market and the private pension system itself. As for the former, both in private and public systems: a) women have a lower labor force participation than men and usually experience a higher unemployment rate; b) proportionally, more women than men perform unskilled work, domestic service, informal, part-time, home, seasonal, temporary, or non-contract work—most of these works are not covered on a mandatory basis by social security (or in the few cases, coverage is voluntary and ineffective); c) the average female salary is lower than the male salary for the same task (despite the law stipulation of the same salary), therefore, the tax base from which the contribution is withheld is lower; d) women quit work for reasons of maternity, as well as for the care of children, the sick, and the elderly (without pay and, therefore, without contribution); and e) companies invest less in women than in men training due to the interruption of female employment for the reasons mentioned above (Mesa-Lago, 2008; ILO, 2017). As for the discriminatory factors of the system, either private or

43 Similar gaps for income, education, and residence were found in public systems (see Appendix 2).

public.[44] About half of Latin American pension systems set a lower retirement age for women than for men, despite the fact that female life expectancy is between 5 and 7 years higher than male life expectancy: four private systems require five years less, as well as four public systems (another country only three years less)—this results in average retirement periods ranging between nine and ten years longer.[45] Nine systems have the same retirement ages, making it easier for women to accumulate more contributions and thus increase the amount of their pensions, but these systems do not compensate for longer female life expectancy (Table 5). The foregoing implies that women contribute less than men to their pension, have a lower contribution density, and their average pension is lower than that of men.

Although gender inequalities prevail in both private and public systems, the latter are relatively more neutral or positive, as they grant the minimum pension with fewer contribution years, apply the pension formula to the last years of working life, and use unisex mortality tables. Private systems accentuate gender inequalities: most reforms increased the years required to obtain a minimum pension, being more difficult for women to qualify for such pension (the unweighted average number of years required are 24.3 for private systems and 17.6 for public systems; my calculations based on Table 5); in addition, contributions are paid throughout the entire working life, and gender-differentiated mortality tables are applied, all resulting in lower pensions for women.[46] In Chile, after 26 years of the structural reform, women had much lower funds in individual accounts, replacement rates, and average pensions than men, and it was projected that 45% of the insured women would receive an average pension lower than the minimum pension (CAPSP, 2015). The 2008 Chilean re-reform mitigated some of

44 Not employed women have indirect insurance as a dependent spouse, but they lose this benefit if the husband divorces.

45 Unequal ages in private systems: Chile, Colombia, El Salvador, and Panama; and in public systems: Argentina, Brazil, Cuba, Honduras, and Venezuela. Five private and four public systems have equal ages. Ecuador has several programs with different ages.

46 In Peru, Chilean mortality tables were used. In 2015, the Superintendence prepared tables based on Peruvian figures, which led to a strong controversy and to the preparation of more realistic tables. In Uruguay, mortality tables have not been updated since 1996 and the Central Bank is considering to review them due to the increase in life expectancy.

these inequities with a universal bonus deposited into the individual accounts of all mothers for each child born alive and, in case of a divorce, the pension fund saved during marriage may be divided between the spouses. Since 2008, Uruguay has granted one year of work (counted towards the 30 years required to receive the minimum pension) to all women for each child they have (Mesa-Lago, 2009). The 2017 Salvadoran re-reform did not adopt similar measures to reduce gender inequity resulting from the social security system, but it did eliminate the gender-differentiated mortality tables.

The female EAP contributory coverage in the private system between 2009-10 and 2017-18 increased in all countries, except in Mexico and El Salvador, where it decreased. In 2017-18, the three most developed countries had coverage ranging between 61.5% and 71.4%, followed by Panama with 51.2%; in the rest of countries it was lower than half and in Peru it did not reach a fifth. In two countries the average annual increase in coverage amounted to 1%; in five it ranged between 0.29% and 0.71%, and in two it decreased by 0.18% and 0.56%. (Table 8). Female coverage may also be measured as a proportion of total coverage (men plus women as a percentage of the EAP). These figures provided by the administrators show that, in 2019, only in Panama women coverage was slightly higher (50.7%) than men coverage (49.3%). In the rest of the countries it was much lower. In Peru it was 38.5% for women vs. 61.5% for men (AIOS, 2020).

Nevertheless, total coverage (adding both contributory and non-contributory) of older adult women is higher than EAP female coverage in six countries (Tables 8 and 9): 88% to 86% in Chile and Uruguay, 79% to 59% in Panama, Mexico and Costa Rica, and 51% to 11% in Colombia, Peru, Dominican Republic, and El Salvador (in the last two countries coverage is very low due to, respectively, the lack and stagnation of non-contributory pensions). This results from the fact that non-contributory pensions favor women, who experience a higher incidence of poverty than men. Between 2009-10 and 2017-18 the coverage of older adult women increased in all countries due to the extension of non-contributory pensions financed by the state, which was significant in Panama, Colombia, Mexico, and Peru (Table 9). In six countries, the average annual rate of expansion of total coverage was higher than that of EAP female coverage. For social solidarity and gender equity measures adopted in the re-reforms of Chile and El Salvador, see section V.

**Table 8.**
**EAP Female Contributory Coverage in the Private Systems, 2009-10 and 2017-18 (% of total)**

| Countries[a] | 2009-10 | 2017-18 | Average Annual Increase |
|---|---|---|---|
| Uruguay | 62.0 | 71.4 | 1.04 |
| Chile | 54.3 | 63.0 | 0.97 |
| Costa Rica | 58.9 | 61.5 | 0.29 |
| Panama | 47.9 | 51.2 | 0.37 |
| Dominican R. | 36.4 | 42.4 | 0.67 |
| Colombia | 27.9 | 34.3 | 0.71 |
| Mexico | 33.3 | 28.2 | -0.56 |
| El Salvador | 27.6 | 26.0 | -0.18 |
| Peru | 13.5 | 17.9 | 0.49 |

**a** Ranked from highest to lowest by degree of coverage in 2017-18.

Source: Based on household surveys of the nine countries (IADB-SIMS, 2019).

**Table 9.**
**Expansion of Contributory Plus Non-Contributory Coverage for Older Adult Women, 2009-10 and 2017-18**

| Countries[a] | 2009-10 | 2017-18 | Average Annual Increase |
|---|---|---|---|
| Chile | 83.6 | 88.7 | 0.56 |
| Uruguay | 84.3 | 86.0 | 0.19 |
| Panama | 38.3 | 79.3 | 4.56 |
| Mexico | 44.9 | 72.7 | 3.09 |
| Costa Rica | 55.6 | 59.2 | 0.40 |
| Colombia | 17.2 | 50.6 | 3.71 |
| Peru | 18.6 | 45.1 | 2.94 |
| Dominican R. | 8.9 | 16.8 | 0.88 |
| El Salvador | 9.7 | 11.5 | 0.20 |

**a** Ranked from highest to lowest based on column two.

Source: Based on household surveys of the nine countries (IADB-SIMS, 2019).

## 3. SUFFICIENCY OF BENEFITS

### a. Promises of the Structural Reforms

The amount of the pension will be enough to maintain the pre-retirement standard of living before retirement because the private system will pay very high replacement rates as a percentage of the average salary, higher than that in the public system. According to Piñera (1992: 17-18), "pensions could reach amounts equivalent to 70% [of remuneration] at the end of the working life... this kind of pension allows the worker a standard of living similar to the previous one,... [the private system] forces workers to make a minimum effort from month to month but, beyond that, urges additional voluntary savings and so improve the benefits that the system may generate, be it in terms of a better future pension or for the achievement of a decent pension before reaching the minimum ages to retire." Lastly, the private system is based on the "principle of equivalence": "A mandatory multipillar arrangement for old age security helps countries to (...) achieve a close relationship between incremental contributions and benefits in the private mandatory pillar. This should reduce effective tax rates, evasion, and labor market distortions" (WB, 1994: 26). "The shift from a defined benefit to a defined contribution plan would encourage each age cohort to procure enough resources [contributions and yields on investments] for their own retirement (Gill, Packard and Yermo, 2005: 126). "Fully-funded systems are the only financially sustainable mechanisms that may improve workers' pensions..." (FIAP, 2017b).

### b. Reality

Entitlement Conditions. Private systems generally allow retirement before statutory age to insured individuals who have saved a certain amount in their individual accounts. In all of these systems, when the insured have met the legal requirements (including 20-30 years of contributions) but have not accumulated enough in the individual account, the insured are entitled to a minimum pension and the state finances the difference. However, most of the structural reforms increased the years of contributions, which makes wining that right even more difficult.[47]

## Calculation of Pension

To calculate the pension, in fully-funded (DC) systems the capital accumulated in the insured individual account is used as a basis—there is no explicit replacement rate (RR) guaranteed by law (Barr and Diamond, 2008). When retiring, the insured may normally choose between an annuity and a scheduled retirement. In the annuity, the retiree receives a monthly payment for the rest of his/her life; the size of the pension is based: a) on the amount of the sum accumulated in the individual account, including its capital return, b) on the calculation made by the insurance company of the life expectancy at the time of retirement through mortality tables applied to the calculated sum—in eight out of the nine private systems/pillars, gender-differentiated mortality tables are used and the women's table projects a longer life expectancy than that of men and, therefore, the female pension will be lower; and c) on what the insured estimates their life expectancy will be when retiring. If the pensioner lives less than the prediction of such life expectancy, the insurance company keeps the remainder of the estimated fund for the duration of the pension; on the contrary, if the pensioner survives the estimated average number of years, then he/she will keep collecting the pension. In scheduled retirement, the sum accumulated in the individual account is divided by the agreed number of years and paid accordingly (with a decreasing amount to be adjusted to the minor needs of retirees). If the retiree survives the agreed number of years, he/she will not have a pension.[48] Usually the RR is the percentage that results from dividing the monthly calculated pension by the last salary.

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47 In six countries the years range between 24 and 30, whereas in the other three countries 20 years are required; except for Brazil, Argentina, and Paraguay, public systems require between 15 and 20 years (Table 5).

48 In El Salvador, the 2017 re-reform created a longevity benefit covering this situation.

In PAYG systems (DB), the amount of the pension is a function of the period of time in which the insured has received a salary upon which he/she contributes and the law establishes the RR. First, an average of the "base salary" or "average salary" of the insured is obtained, which, according to each country, may be the last year of salary or a longer period, such as the entire working life or the last or best 10 to 20 years of work. The RR (a legal percentage) is applied to the base salary. It is common that there is a basic RR for the minimum number of years of contribution and that a percentage is added for each year that exceeds such minimum. The time period used to calculate the base salary has a significant impact on the pension amount. Assuming that the base salary is constant, the shorter the time period, the higher the pension will usually be because, as a worker develops professionally, his/her salary increases, except for manual workers whose salary tends to decline with aging along with their strength. This regressive effect may be avoided if the base salary is calculated over the entire working life of the insured.

### Low Replacement Rates

A gross RR means that there is not a salary tax deduction, whereas a net RR takes into account such deduction. The ILO, in its Convention 128 of 1967, established that the minimum RR on the average salary should be 45% with 30 years of contributions, while the OECD has not recommended a minimum RR.[49] Table 10 compares the gross replacement rates estimated by the two organizations for Latin American countries, which are ranked from highest to lowest according to such RRs and identified by their pension models.

The RRs in both calculations are not technically comparable for several reasons: a) the IADB considers the last salary and the OECD the average salary in the economy; also, four cases are projected: 50% of such average salary,

49 The ILO Convention 102 of 1952 (minimum standard) had established a RR of 40%, that the benefits should be sufficient for the insured and his/her family may enjoy adequate living conditions and that their amount is adjusted to variations in the cost of living. Recommendation 202 of 2012 established "social protection floors" guaranteeing basic income security for all people unable to obtain an old-age or disability pension.

the average salary—which is the one used in the table—and two and three times the average salary, the RRs vary with the salaries used; b) the IADB separates RRs in the private and public system/pillar in mixed and parallel models, while the OECD does not do so; and c) the year that is used is different: 2010 in the OECD and 2015 in the IADB; the latter is more updated. Therefore, we prefer to use the IADB calculations, but we also analyze the OECD calculations.

In the IADB's calculation, the average RR for public defined benefit (DB) systems is 64.7%, while the average RR for private defined contribution (DC) systems is 39.8%. The vast majority of RRs are higher in public DB systems than in private DC systems: in twelve of the countries with DB (either pure or the remainder of closed DB in substitutive systems), the RR is higher than the minimum of 45% recommended by the ILO, while only El Salvador's substitutive system (DC) exceeds it (by 2 percentage points); however, the three mixed models (Costa Rica, Panama, and Uruguay) exceed such minimum with a RR of 90%, 88%, and 72% respectively; the RRs of four substitutive systems (DC) are less than 45% (including Chile with 39%). In both public and private systems, the insured receive subsidies from the state, because contributions plus capital returns do not fully finance pensions. In private systems this happens because to those insured persons who do not accumulate enough in their individual account to finance a minimum pension, the fiscal authorities finance the difference, while in public systems the state finances the difference to pay the pension resulting from the RR. However, if the subsidy is subtracted, the average for public systems is still higher than the average for private systems: a) public 64.7% RR - 28.3% of subsidy = 36.4%, and b) private 39,8% RR - 27% of subsidy = 12.8% (Altamirano et al, 2018).[50] See Figure 3.

50 However, according to Altamirano et al, 2018, there is a significant difference in the impact of subsidies on distribution: in private systems, the subsidy is concentrated in low-income insured who are unable to finance the minimum pension (such subsidy is financed by the state, not by the private system), while in public systems, the subsidy is concentrated in high-income insured; therefore, the impact is regressive and contrary to the principle of social solidarity, which requires

**Table 10.**

**Gross Replacement Rates in Latin America, 2010 and 2015**

| Countries[a] | IADB Calculations (2015) | | Countries[a] | OECD Calculations (2010) | |
|---|---|---|---|---|---|
| | System Type | RR (%)[b] | | System Type | RR (%)[b] |
| 1. Mexico | DB | 107 | 1. Paraguay | BD | 104.1 |
| 2. Paraguay | DB | 98 | 2. Ecuador | BD | 94.2 |
| 3. Ecuador | DB | 96 | 3. Venezuela | BD | 94.2 |
| 4. Costa Rica | DB+DC | 90 | 4. Nicaragua | BD | 94.2 |
| 5. Panama | DB+DC | 88 | 5. Costa Rica | BD+CD | 79.4 |
| 6. Brazil | DB age | 80 | 6. Panama | BD+CD | 78.4 |
| 7. Argentina | DB | 80 | 7. Argentina | BD | 71.5 |
| 8. Nicaragua | DB | 77 | 8. Colombia | BD y CD | 70.8 |
| 9. El Salvador | DB | 75 | 9. Peru | BD y CD | 70.6 |
| 10.Colombia | DB | 73 | 10.Guatemala | BD | 67.8 |
| 11.Uruguay | DB+DC | 72 | 11.Honduras | BD | 64.9 |
| 12.Honduras | DB | 68 | 12. Brazil | BD | 58.3 |
| 13.Guatemala | DB | 58 | 13.Uruguay | BD+CD | 52.5 |
| 14.Brazil | DB time | 52 | 14.El Salvador | CD | 46.6 |
| 15.El Salvador | DC | 48 | 15. Chile | CD | 43.9 |
| 16.Peru | DB | 47 | 16. Bolivia | BD | 33.9 |
| 17.Colombia | DC | 44 | 17.Haiti | BD | 29.8 |
| 18.Mexico | DC | 44 | 18.Mexico | CD | 29.5 |
| 19.Peru | DC | 39 | 19.Dominican R. | CD | 22.8 |
| 20.Chile | DC | 38 | | | |
| 21.Bolivia | DCe | 31 | | | |
| 22.Haiti | DB | 31 | | | |
| 23.Venezuela | DB | 30 | | | |
| **Average** | **DB** | **64.7** | | | |
| **Average** | **DC** | **39.8** | | | |

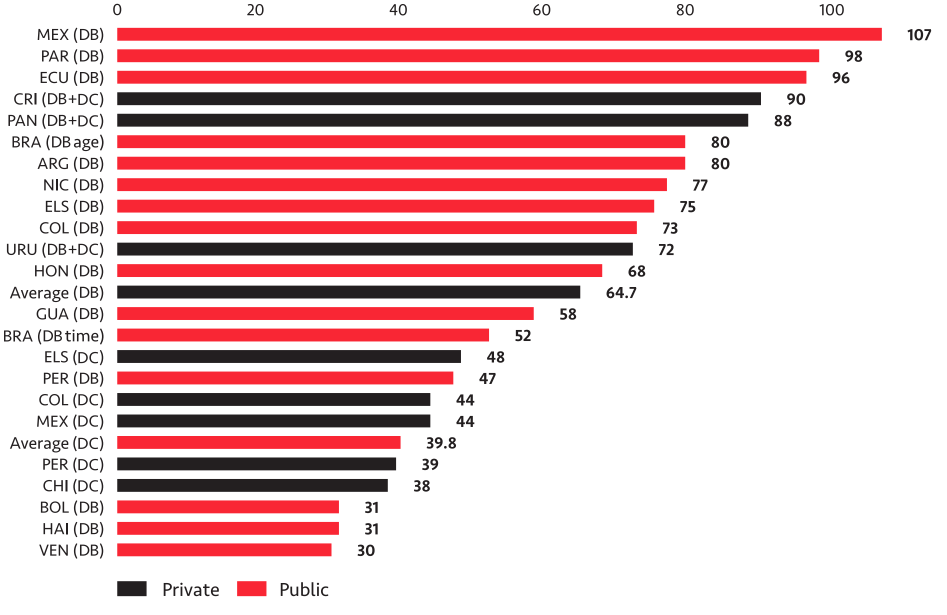
Note: **DB**=Defined benefit; **DC**=Defined contribution; in mixed systems both are added; in parallel systems both are separated; in IADB Brazil retirement is distinguished by age and time of service.

**a** Ranked by RR from highest to lowest; no calculations for Cuba and Dominican Republic. **b** Based on last salary. **c** No calculations for Cuba. **d** Based on the average salary in the economy. **e** Refers to the individual accounts that were preserved by the 2010 re-reform in the DB general system.

Source: IADB from Altamirano et al, 2018; OECD from OECD/IADB/WB, 2015.

**Figure 3.**

**Replacement Rates in Latin America, Public and Private, Pure Substitutive (DC), Mixed (DB+DC), and Parallel (DB and DC) Systems, 2015**




Source: Table 10, IADB.

The OECD calculations largely ratify the previous results: eight public DB systems exceed the RR of 45%, while only one pure substitutive private system surpasses it (El Salvador by 1.6 percentage points). On the other hand, the five mixed and parallel systems (it should be recalled that the OECD calculations do not separate the RRs of the private and public systems/pillars) exceed 45%, but in three pure substitutive systems the RRs are lower than 45%

more research and changes in the targeting of subsidies.

(including Chile with 43.9%). OECD calculations based on income of 1/2, two, and three average incomes show different rankings of countries, but most RRs are still higher in public systems—the RR for Chile with two and three incomes is 39.2% (OECD, IADB, WB, 2014). In its most recent calculation, limited to the member countries of the OECD (2019a), Chile's gross replacement rate (with an income of one average salary) is 31.2% and Mexico's 22.5%, both rates are lower than those in Table 6, while in Argentina's public system (DB) it is 71.2% and in Brazil 58.9%, both equal to those in Table 6.

Research made in all private systems ratify that in these, especially in the substitutive systems, RRs are lower than the minimum 45% established by the ILO.[51] In Chile the average RR is 34% of the average salary in the last 10 years (45% when adding the solidarity pension contribution financed by the state, see next section); a decline to 15% (37% with the solidarity pension contribution) is projected for 2025-2035 (CAPSP, 2015), and 95% of affiliates in the private system will not build up the required savings in individual accounts, not even if they work for decades and have a proper salary. This is because external factors—such as capital returns of pension funds and the ups and downs of the stock market—affect pensions. These factors prevent people from reaching a pension higher than US$389 per month. Among the insured men aged 60-65 years that have a spouse three years younger: a) 28.8% have less than US$13,000 saved and would receive a monthly annuity of US$51 or a scheduled retirement of US$64 which decreases over time until finished (most of the insured choose this pension); b) 10.4% have saved between US$65,000 and US$100,000 and would receive an annuity of $256 or a scheduled retirement of US$318; and c) only 11.1% have a balance of US$130,000 for which they would receive US$510 and US$636, respectively. Women have saved even less and will receive lower pensions—based on the same age range: 61.7% have less than an accumulated amount of US$13,000 and would receive an annuity of US$43 and a scheduled retirement of US$56 per month, and only 2.6% have accumulated US$130,000 and would receive US$433 and US$558, respectively (Barriga and Kremerman, 2020).

51 Private systems do not usually inform the insured about the RR of pensioners (Lora, 2018).

In Colombia, the RR in the public system ranges between 65% and 100% for low-income workers and between 55% and 70% for high-income workers. Only between 17% and 28% of the insured in the private system manage to get a pension compared to 59% in the public system (Lora, 2018). In El Salvador, before the 2017 re-reform, 83% of the insured in the private system (SAP) would have a RR ranging between 37% and 39% for women and between 41% and 43% for men, based on the last salary for both. Such re-reform introduced new benefits to improve this situation but no calculations of the resulting RR have been made. In any case, only 40% of the insured who reach retirement age meet the required 25 years of contribution; of the remaining 60%, 98% will only receive a refund of the balance in their individual account (*Iniciativa Ciudadana*, 2017; ILO/FUNDAUNGO, 2020; Rivera, 2020).

In Mexico, if the previous public system is compared with the private system, the RR will decrease from 71% to 29% for men and from 67% to 30% for women; the proportion of men who will not receive a pension will increase from 38% to 59% and the proportion of women from 44% to 66% (Colin, 2019). Another study projects that 64% of the insured in the private sector will not receive a pension (Freunderberg and Toscani, 2019). The Government of Mexico (2020) claims that the private model did not achieve the expected results due to two key problems: less access to pensions than predicted and a pension amount lower than expected; the government estimates that only 34% of the insured in the private sector will be entitled to a guaranteed pension (38% of men and 31% of women), 56% of the insured will achieve an annuity and the remaining 44% will be refunded the balance left in the individual account.

In Peru, the average RR is 39% in the private system versus the 60% promised when the system began; only under the two highest capital-return scenarios, RRs surpassing 40% are reached (in the public system, the RR averages 43% of the last salary for men and 52% for women). Also, between 60% and 65% of the insured will not receive a pension in any of the two systems (Cruz Saco et al, 2018b; Altamirano et al., 2019; Cruz-Saco, 2020a).

In the Dominican Republic the average RR is 27%[52] (a little higher than the 23% calculated by the OECD but, in any case, the lowest in the region) and the insured in the three lowest income quintiles will not attain the 30 years of contributions required to obtain a pension. Likewise, as the recognition bond has not been honored, the insured lose the value of their contributions to the old system and receive a lower pension (Pichardo, Guerrero and Mesa-Lago, 2020).

In Uruguay, the public administrator projects that only 30% of its affiliates aged 51-60 years will receive a higher pension than those of the same age in the public system, while two experts run simulations showing that intermediate generations with middle and high income in the mixed system will receive considerably lower pensions than in the pure PAYG system, while the youngest will receive more (Forteza and Rossi, 2018).

Opposite to all previous statistics and research, FIAP (2020b: 8) claims that "in the PAYG systems in our region, only a percentage of workers is able to meet the requirements for the number of years of contributions required to receive a pension (for example: Chile 50%, El Salvador 40%, Peru 33%). The rest do not meet the requirements and, therefore, is unable to receive a pension, whereby losing all or part of their contributions. On the other hand, in individual fully-funded systems... all affiliates receive benefits, regardless of the number of years they have contributed to the system."

The previous analysis provides extensive evidence that the promise of higher pensions in the private system than in the public system and that the RR could reach 70% of the last salary have not been kept. Neither the promise that each cohort of insured would seek sufficient resources (contributions and

52 The RR is projected in three scenarios (without reform, with a partial reform, and with a substantial reform) and none of them manages to exceed a RR of 27%. The RRs range between 9% and 84.5% according to occupation sectors (public and private) and income quintiles; male RRs exceed female RRs with very few exceptions. Another calculation of the RR is 30% that would increase to 37.8% with the 2020 parametric reforms.

capital returns) for their own retirement has been kept, as the RRs are lower than the 45% minimum set by the ILO and in several private systems a significant proportion of the insured will only receive a refund of the balance or a minimum pension, but with a state subsidy (not only from contributions and capital returns). A minority of high-income private insured with high contribution density will save enough in their individual account, to retire before the statutory age, and receive a pension with an adequate RR. The poor performance of private systems in pension sufficiency has led to a negative reaction in several countries, particularly in Chile, where, in 2016, public demonstrations of almost one million people protesting against the AFP took place.[53] Also, several countries have authorized partial or total withdrawal of funds from individual accounts (see section IV-5-b).

The foregoing, however, does not imply that the high RRs in various public systems can be financially sustained in the long term. Such systems require actuarial studies and parametric reforms in order to reinforce sustainability, either by increasing contributions or reducing RRs to a feasible level.

### Adjusting Pensions to Cost of Living

This is essential to maintain the value of pensions, since if inflation increases and pensions are not adjusted, their purchasing power will decrease (ILO, 2017). Table 5 shows whether the law stipulates such an adjustment must be made or not in the 20 countries of Latin America. In the nine private systems, the adjustment is done according to the CPI (cost of living) in Chile, Colombia, and Costa Rica and according to the salaries in the Dominican Republic and Uruguay; there is no automatic adjustment set by law in the other four countries. In El Salvador, Mexico and Panama the government has discretionary power to make the adjustment, while in Peru it is made only when there are available fiscal resources for that.

53 In many countries there have also been demonstrations against the increase in age in public systems (Spain, France, Greece, Russia), as well as against the increase in contributions and reduction of the amount of benefits (Nicaragua).

### The Principle of Equivalence and its Alleged Effects

One promise that has been kept in most private systems is the principle of equivalence, i.e., private systems have strengthened the relation between contribution and the amount of pension. However, such principle did not attain an adequate RR, whereas social solidarity and gender equity were sacrificed (as proved in section IV-2). Likewise, the structural reformers' claim that the principle of equivalence managed to reduce contributions and evasion has not been met (see sections IV-4 and IV-5).

Measures to improve sufficiency in the re-reforms in Chile and El Salvador are analyzed in section V.

## 4. EFFICIENT ADMINISTRATION AND REASONABLE COSTS

### a. Promises of the Structural Reforms

Strong competition among pension fund administrators will increase efficiency and reduce administrative costs, as the insured—having freedom of choice—will join and switch to the best administrators, i.e., those charging lower fees and paying higher pensions. "A modern social security pension system would require—first of all—agile, competitive, and efficient companies… contributions would be lower, because, among other reasons, of the greater efficiency of the private management, the fewer possibilities of fraud, and the less incentive to evasion… each worker [would know] exactly the amount he/she pays for the pension benefits he/she receives, which would make easier the decision to switch or not" (Piñera, 1992: 21-22, 26). The WB supported the private administration of the individual fully-funded system or pillar: "This report strongly recommends that the funded pillar be privately managed." It added: "Workers choose the fund in which to place their savings, presumably based on its records on [capital] returns and risk… quite commonly, the government determines the use of the mandatory savings accounts and sets the rate of return [as in the defined benefit plans]… which may lead to distortions in the capital and labor markets and cause capricious redistribution ... As an alternative, mandatory saving schemes may be privately and competitively managed, in which case, there are likely to have fewer distortions... (WB, 1994: 18, 202, 234, 241). Reforms "reduce the operational expenses of the new private pillar" (Gill, Packard and Yermo, 2005: 235).

## b. Reality

### Freedom of Choice between the Public and Private Systems

Structural reformers claimed that the benefits of the private system together with the freedom of choice promoted the opting out by insured individuals from the public system, which seemed to be ratified because an average of 82% of total contributors in the ten private systems was in the private system/pillar in 2007 (before the re-reforms of Argentina and Bolivia). But this change was caused, in part, by legal provisions detached from the goodness of the private system that: forced all the insured to change systems in three countries (Bolivia and Mexico to the private system and Costa Rica to the mixed system); increased the contribution to the public system or introduced incentives (such as salary increases) for prompting the transfer in three countries; divided the insured by age and required that the youngest switch to the private system in six countries,[54] and forced new workers to join the private or mixed system in seven countries (Bolivia, Chile, Costa Rica, Dominican Republic, El Salvador, Mexico, and Uruguay). In the parallel models of Colombia and Peru, choosing between the private and the public systems was allowed. Employers decided for themselves or pushed their employees to switch systems in Argentina, Chile, and Peru. The transfer was encouraged by reformers' promises, enhanced by publicity of better pensions, lower administrative costs, and immunity from

54 In El Salvador, insured individuals over 50-55 years old stayed in the public system and those under 36 years old were forced to switch to the private system; only middle-aged (36 to 50/55 years) insured had the option to choose between the two systems. In the Dominican Republic, insured under 45 years of age had to switch to the private system and those over that age were given a choice. In Panama, the oldest insured stayed in the public system, while the younger ones had to expressly choose to switch to the mixed system. In Uruguay, it was submitted to the age and income of the insured to stay in the public system or switch to the mixed system.

state interference in the fund—nevertheless, such promises have not been kept. As of 2003, the proportion of insured in Colombia's public system was higher than that of the private system, because the former paid better pensions and there was freedom to switch between the two systems every three years, however, a reform in 2002 adjusted the formula for calculating the public pension (it reduced its amount) and the period for the change was increased to five years; even so, 46% of the insured continued in the public system in 2007 but only 30% in 2019 (Mesa-Lago, 2008, 2009; Table 1).

### Competition Has Not Worked

One of the key principles of the private system is competition, as it was supposed to reduce administrative costs, make the investment of the pension fund more productive, and increase capital returns. The insured would choose the best administrators (those that charged the lowest fees and paid the best pensions), having the option of switching between them whenever they wanted. In practice, competition has not worked or has been very poor in the vast majority of the nine countries. To prove this, we will examine several indicators.

### Number of Private Administrators

For competition to work properly, there must be a sufficient number of administrators. This number is closely related to the size of the insured market—the larger the market, the more administrators and vice versa—thus Mexico has the largest number of administrators (ten) and El Salvador the smallest number (two), in the Salvadoran case, it is a duopoly and there is no competition as such.[55] The number of administrators is reduced over time due to mergers and closures; for example, in Mexico it decreased from 21 to 10 between the zenith and 2019. Three countries with a small insured market (Costa Rica, the Dominican Republic, and Uruguay) have a public administrator, which has increased competition. Costa Rica has six administrators, only one less than Chile that has

55 This also happened in the former private system in Bolivia where there were only two administrators and the state assigned the insured between them according to their address and prohibited transfers for five years. When changes were allowed, from 2003 until 2010 ( the year in which the private system was closed), only between 0.3% and 0.4% of the affiliates changed (Mesa-Lago, 2018a).

four times the number of active insured. In Panama, despite having the lowest number of insured and capital accumulation, there are six administrators of the fully-funded pillar: three of them are in the private sector and are regulated by the Superintendencia del *Mercado de Valores* (Superintendence of the Securities Market: SMV); according to the AIOS (2020), the two main administrators concentrate 100% of the insured, so it seems that the third has no insured;[56] and three others manage the program for civil servants (SIACAP) with a concentration of 69% in the two largest; those of the private sector cannot compete with those of the public sector. Concentration of insured in the two main administrators increased in three countries, stagnated in three, and decreased in three, but it is still very high (58-59% in Costa Rica and the Dominican Republic); concentration ranges from 68% to 100% in five countries, the higher the concentration, the less competition and vice versa (Table 11).

## Transfers Between Administrators

Reformers claimed that the insured could freely switch among competing private administrators, joining those that fit best their interests: lower fees, higher capital returns and better pensions. The high cost of freedom of choice for pension fund administrators led to restrictions in many countries, reducing the number of times they could change (e.g., once a year or every two years) and encouraging industry collusion, an anomaly recognized by the WB (Gill, Packard, and Yermo, 2005).[57] If competition worked, there would be a significant number of transfers from the least competitive to the most competitive administrators. However, the annual percentage of transfers in relation to the total number of affiliates decreased in all countries (except in the Dominican Republic) between

56 The SMV (2020) does not show affiliation statistics per administrator on its website, nor does the SIACAP (2020).

57 The 2007 Argentine parametric reform gave insured individuals in the private system a period to return to the public system, it allowed switching systems every five years complying with certain requirements, and assigned the undecided insured to the public system. More than one million insured returned to the public system in March 2008 (SAFJP 2007, 2008). In Peru, a 2007 law allowed people affiliated by 1995 to go back from the private to the public system after meeting certain requirements; retirees in the private system were paid a supplementary pension to match the public pension.

**Table 11.**
**Number of Administrators and Degree of Concentration, 2004 and 2018-19**

| Countries[a] | Number of administrators | | | Have one public | % in largest 2 | |
|---|---|---|---|---|---|---|
| | Zenith | 2004 | 2018-9 | | 2004 | 2018-19 |
| Mexico | 21 | 13 | 10 | No | 43,1 | 39,0 |
| Chile | 8 | 6 | 7 | No | 55,5 | 52,9 |
| Dominican R. | 9 | 9 | 7 | No | 55,7 | 58,4 |
| Costa Rica | 9 | 8 | 6 | Yes | 64,3 | 59,1 |
| Peru | 5 | 4 | 4 | No | 58,8 | 68,4 |
| Panama | | [b] | 6 | No | 100,0 | 100,0 |
| Uruguay | 6 | 4 | 4 | Yes | 74,4 | 74,0 |
| Colombia | 6 | 6 | 4 | No | 50,9 | 80,5[c] |
| El Salvador | 5 | 2 | 2 | No | 100,0 | 100,0 |

**a** Ranked from highest to lowest by column 3. **b** The system had not started; in 2019, AIOS reports three administrators in the private sector (SMV) with 100% concentration in the largest two; in the public sector (SIACAP) it reports three administrators with a concentration of 69%.

Source: Based in AIOS, 2000 a 2020.

the zenith (the year with the greatest number of transfers) and 2019. Also, in 2019 the percentage of transfers ranged from zero (El Salvador and Panama) to 1% in five countries, between 2% and 4% in two countries, and 5% in Chile. Although Mexico has ten administrators, less than 5% changed in 2019 (Table 12). In 2019, Chile introduced an electronic transfer option to make this easier.

## The Insured Lack of Knowledge about the System

Surveys conducted at least in Chile,[58] Mexico, and Peru in private pension systems, show the null or poor knowledge of the insured about their rights and the main norms of the system. The insured do not select administrators based

58 The Comisión Asesora Presidencial sobre Reforma de Pensiones de Chile (Chile's Presidential Advisory Commission on Pension Reform) conducted various surveys among the population and the insured that demonstrated a significant lack of knowledge (CAPSP, 2015). The 2008 re-reform established a Pension Education Fund to disseminate information and educate the population, as well as an agency to facilitate the processing of new benefits and instruct beneficiaries on their rights. Costa Rica has incorporated a social security course into the school curriculum.

**Table 12.**
**Annual Percentage of Affiliate Transfers, Zenith, and 2019**

| Countries[a] | Zenith | 2019 |
|---|---|---|
| Chile | 11.7 | 5.4 |
| Mexico | 10.3 | 4.7 |
| Costa Rica | 11.9 | 3.3 |
| Dominican Republic | | 2.2[b] |
| Peru | 16.0 | 1.6 |
| Colombia | 2.0 | 0.8[c] |
| Uruguay | 8.9 | 0.3 |
| El Salvador | 15.9 | 0.1 |
| Panama | 7.0 | 0.01 |

**a** Ordenados de mayor a menor por la última columna. **b** El cenit ocurrió en 2018, los traslados eran inferiores antes. **c** 2017.

Fuente: Basado en AIOS, 2000 a 2020.

on the fees they charge and their capital returns (as they should), but are influenced by salespeople (who charge a fee per each worker who changes administrators), employers, and advertising. Likewise, the insured lack the skills to select the best administrators, who spend a fortune on advertising, but little or nothing on providing information to and educating the insured. Periodic reports of the administrators (usually released on a quarterly basis) show the amount accumulated in their individual accounts, capital returns, and fees. But very few insured analyze these reports, therefore, in practice, they cannot make an informed choice of the best administrators, and this, in turn, limits competition. Behavioral economics has documented this situation and has conducted experiments in the region on alternatives to improve it (Mesa-Lago, Valero, Robles, and Lozano, 2017). Lastly, as the insured are not represented on the boards of directors of administrators, they are not aware of the salaries paid to managers and senior executives, how investment decisions are made, and other key aspects (Matus, 2020).

### Lack of Social Representation in the Administration

Before the structural reforms were implemented, virtually all public systems in the region had tripartite representation in pension administration (workers, employers, and state), although it was not always effective. The reforms fully transferred pension management to private for-profit companies, although the administration is multiple in nature in several countries; for example, the public administrator in Uruguay—subject to the same rules as private administrators—Banco de la República, is the one with the most affiliates and has reduced commissions and administrative costs. In mixed systems, tripartite participation continues in the DB public pillar, as well as in the parallel system in Colombia, but not in the private pillar/system (except in SIACAP in Panama in whose board of directors out of a total of eight members, five are representatives of civil servants). Administrators manage the old-age insurance, and hire the disability and survivor insurance with commercial insurance companies (with little or no competition among these companies as they have strong ties with the old-age pension administrators),[59] except in Colombia, Costa Rica, and Mexico where public social insurance institutes are still in charge of these programs (Colpensiones, CCSS, and IMSS, respectively).

There is also no participation of workers and employers in the regulation, administration, and control in the supervisors of private pension funds—a role virtually exclusive to the state, except in the Dominican Republic. The insured does not participate in the decision on the investment of the pension funds (a prerogative of private administrators), although multi-funds have been created in Chile, Colombia, Costa Rica, El Salvador, Mexico, Panama, Peru, and Uruguay, which allow the insured to choose among several of these funds with different capital returns and risks, with some restraints related to the age of the insured to mitigate the risk when they approach the retirement age. On the contrary, in all public pension systems tripartite representation subsists (except in Cuba), and retirees and pensioners do participate in three countries. Sometimes the

59 It is claimed that 70% of commercial life insurance companies have close relationships with old-age pension administrators (Matus, 2020).

sum of the representatives of workers and employers has a majority but sometimes not; occasionally the government and employers join and have a majority (as until recently in Nicaragua). The election of workers in public systems is not always democratic and transparent, which should be improved on behalf of the system and of the insured themselves (Mesa-Lago, 2008, updated).

### High Administrative Cost

Since competition does not exist or is very poor, the administrative cost is not low. Such cost is made up of two components: the net fee charged by the administrator for its services (usually as a percentage of salary, but in a few countries on the balance in the individual account), and the premium for disability and death insurance charged by said administrator that passes to a commercial insurance company. The administrator often has an allied company for the premium, therefore, there is not much competition between such companies, increasing their profits. There is also little competition in choosing the type of retirement program. El Salvador never set the annuity established by the 1996 Reform Law, but in 2017 the guaranteed benefit of longevity was created, which pays a pension throughout the life of the retiree. The IADB reports that the Mexican annuity market "is characterized by great concentration and little competition" with high prices, as the 13 insurance companies that existed when the system started have been reduced to four and the two largest ones embrace 80% of the insured; therefore, "it is very likely that the amounts of pensions granted through annuities will be lower" (Azuara et al., 2019: iv).

It is not possible to compare the administrative cost in the nine countries due to the great diversity of fees (fixed, on salary, on balance, on capital returns or combinations of the above), but we have comparable information for five countries on the fees and the premium as a percentage of salaries, as well as the percentage that is deposited in the individual account. The administrative cost (sum of net fee and premium) ranges between 23% of the deposit in Uruguay and 30% in Peru. Although the Chilean system has been in operation for almost 40 years and the 2008 re-reform objective was to reinforce competition, its cost is 28% of the deposit, the second highest (Table 13). In Peru, all deductions are paid by the worker; in Chile the deposit and the net fee are paid by the worker and the premium by the employer; in Uruguay they are distributed between the worker and the employer, but the former pays the most; and in Colombia and El Salvador they are also distributed, but the employer pays the most.

The combined net fee and the premium in Chile increased from 2.44% of salary in 1981 to 3.42% in 2009; the incentives for competition implemented by the 2008 re-reform (see section V) lowered that sum to 2.40% in 2014, but it rose again to 2.77% in 2019, higher than in 1980 (Mesa-Lago and Bertranou, 2016, and Table 13). AFP UNO offered in 2019 a fee that was 40% lower than the industry average and won the bid, but it had losses because the insured transfer was not as expected: only 1.6% of the total contributors in 2020 (Álvarez, 2020; Superintendencia de Pensiones, 2020b).

In Uruguay, the public administrator (AFAP República) reduced its fee from 0.74% to 0.71% and a rule was established stating that no AFAP may exceed the lowest fee in the market by 50%; therefore, all administrators have to reduce their fee.

**Table 13.**
**Deposit, Fees, and Cost as Percentages of Salary in Five Countries, 2019**

| Countries[a] | Account Deposit | Administrator Net Fee | Survivor-Disability Premium | Total Cost | Cost / Deposit (%) |
|---|---|---|---|---|---|
| Uruguay | 15.0 | 0.95 | 2.48 | 3.43[d] | 22.9 |
| El Salvador | 8.1[c] | 1.02 | 0.88 | 1.99 | 24.5 |
| Colombia[b] | 11.5 | 1.29 | 1.71 | 3.00 | 26.3 |
| Chile | 10.0 | 1.24 | 1.53 | 2.77 | 27.7 |
| Peru | 10.0 | 1.60 | 1.36 | 2.96 | 29.6 |

**a** Ranked from lowest to highest based on last column. **b** 2017; from the total deduction of 16%, 1.5% goes to the Minimum Pension Guarantee Fund. **c** The total that is deducted from the salary is 15%, of which 5% goes to the CGS. **d** Also, in 2019, a 0.14% fee was added on the balance.

Source: Based on AIOS, 2019; El Salvador Re-Reform Law, 2017.

The 2017 Salvadoran re-reform increased the total salary deduction from 13% to 15%, reduced the deposit in the individual account from 10% to 8%,[60] charged 5% to the *Cuenta de Garantía Solidaria* (Solidarity Guarantee Account: CGS) and limited the fee plus the premium at 2%. If we add the 5% commission to the CGS and the fee plus the premium, the total cost would grow from 2% to 7% and the proportion of the total cost relative to the deposit would increase from 24.5% to 88%.

In Mexico, the fee charged by the administrators (AFORES) has been reduced, but "the commissions are still higher than those observed with comparable financial products, both in Mexico and in other countries... Among the 43 systems in the *Organización Internacional de Superintendencias de Pensiones* (International Organization of Pension Superintendences), Mexico is located in position 31—with costs above the international average," 42% is assigned to commercial spending which does not benefit the insured but generates profits for the administrators (Ministry of the Interior, 2020: xxi-xxii). CONSAR designed a methodology to reduce the fee, but the AFORES association opposed it because their income would decrease, so it was not applied; in 2019 the commission in Mexico was higher than that in Colombia, Chile, and the United States, which had a combined average of 0.54%; according to a 2019 agreement, fees in Mexico may not be higher than such average and, if this average decrease, the AFORES will also have to do so.

A comparison of administrative costs before privatization and in 2002, in four Latin American countries, showed that such costs increased between two and ten times, while a comparison of the average administrative costs as a percentage of salaries in six public and ten private systems in 2001-2005 amounted to 0.003% and 1.63%, respectively (Mesa-Lago, 2008; Ortiz et al, 2018). As shown by Barr and Diamond (2008), for each percentage point of fee charged during the working life of the insured, the amount of the future pension is reduced by 20%. The OECD (2013: 24) informs: "High administrative costs discourage

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60 Eight percent of the deposit in El Salvador and the Dominican Republic is the lowest (after Mexico) among the nine private systems in the region (Table 5).

workers from joining voluntary plans and make mandatory plans very expensive. In fact, cost inefficiencies are a threat to the sustainability of the plans; estimates indicate that the commissions charged to workers by private pension plans can represent between 20% and 40% of their contribution."

## Significant Profits of the Administrators

Administrators earn high profits and keep them in most countries even during economic crises, while the insured are affected by these crises because the balances in their individual accounts decrease, therefore, the insured are the only ones who face the risk. In 2019, profit over net patrimony ranged between 20% and 47% in four countries and between 12% and 16% in other four countries. Only Panama had a very low profit of 0.9% but it has already been explained that a very small fraction of the labor force is in the private system. During the global financial crisis of 2007-2008, administrators continued to have profits, and these exceeded the level prior to that crisis in three countries. In 2019, three administrators had a higher profit than before the crisis (Table 14). In 2019, the stock markets paid very high dividends and there was a significant increase in the AFP profits over 2018 (AIOS, 2019 and 2020). We still do not have the data on what happened to these profits in 2020 due to the global economic crisis caused by COVID-19.

An academic paper estimated the average profitability over the patrimony achieved by Chilean AFP in the 2006-2015 period (taking into account the "reserve requirement" or investment over their patrimony that AFP must make, equivalent to 1% of the funds they manage), finding that it was 25.4%, 4.8 times higher than the 5.3% "fair" or "equilibrium" profitability considering their exposure to risk in a normal competitive market, without distortions. In monetary terms (adjusted for inflation), the industry earned US$44,400 million, of which 80% (US$35,520 million) would be an "excessive" profit. It should be noted that the author of this paper is not in favor of eliminating the AFP, but rather that they earn what is fair for their operation (López, 2016). The AFP industry objected to the methodology used by López, but this is a very technical issue to be discussed herein (see *www.emol.com/noticias/Economia/2016/10/11/825994/AFPs-discrepan-de-estudio-que-caculo-ganancias-excesivas-de-la-industria.html*).

**Table 14.**
**Administrators Profits, 2004, Crisis of 2017-18 and 2019**

| Countries[a] | Annual Profit/Net Patrimony (%) | | |
|---|---|---|---|
| | 2004/05 | Crisis (2007/08) | 2019 |
| Panama | c | c | 0.9 |
| Colombia | 26.6 | 23.6 | 12.4[b] |
| Costa Rica | 12.8 | 6.6 | 13.9 |
| Chile | 19.5 | 2.1 | 16.4 |
| Peru | 41.1 | 0.5 | 16.7 |
| Mexico | 25.2 | 6.5 | 19.5 |
| Uruguay | 39.0 | 3.6 | 32.5 |
| Dominican Republic | -5.8 | 15.8 | 38.4 |
| El Salvador | 30.8 | 36.5 | 47.8 |

**a** Ranked from lowest to highest according to the last column. **b** 2017. **c** The system became operational in 2008.

Source: Based on AIOS, 2006 to 2020.

## Millionaire Salaries and Allowances for Executive Officers

A recent study examines how 77 former leaders of Chilean political parties, executive and legislative branches—including former commanders of the armed forces, former ministers in several governments, and former directors of the Superintendence of Pensions who supervise AFP—have served the AFP. About 45% of them worked as directors or executive officers, and the remaining 55% have been in contact with the AFP through board of directors of companies where the funds of such administrators are invested, which shows the close relationship between the political power and the pension administrators. A superintendent of the AFP for a decade, while being in his post, promoted the Chilean system in many countries of the region and, after resigning, he became president of the AFP Magister. In 2019, the AFP spent US$25,923,525 on executive salaries and US$3,888,528 on their board of directors' allowances. For example, a president of AFP Habitat received US$1,324,962 within four years. It is important to compare these millionaire salaries and allowances with the annual old-age pension of US$3,142 that half of the 984,000 retirees in the private system received (Sepúlveda and Jara, 2020; see also Meunier, 2019 on managerial costs).

### Efficiency Improvements

A positive aspect of the reforms is that administrators introduced the periodic report of the fund accumulated in the individual accounts of the insured and that reduced the time to process the pensions. In most public systems, the granting of pensions sometimes took a long time since in most countries there was no up-to-date record of the working years and of the contributions made by the insured and their employers and, often, some insured individuals had to prove these in administrative courts. As individual accounts are automatically updated in private systems, the process is very fast and easy; for example, in Chile a preliminary estimate is prepared and the first pension is paid immediately, then the estimate is verified, and the whole process takes less than a month. (The measures to improve competition and reduce administrative cost by the re-reforms in Chile and El Salvador are analyzed in section V).

## 5. FINANCIAL AND ACTUARIAL SUSTAINABILITY

### a. Promises of the Structural Reforms

The promises of the reformers were focused on the financial-economic aspects of the private system: The ownership of the individual account and the private administration of the system will encourage the insured to contribute promptly to their individual accounts and reduce evasion; also, the general fund and the invested capital will grow generating high capital returns and a good portion of the investment will be in domestic stocks hence developing the capital markets; finally, DC systems will protect against the aging process. These promises are divided into five: a) capital accumulation, development of capital and financial markets, and economic growth: "Mandatory savings schemes have the potential to stimulate capital accumulation and the development of modern financial instruments and institutions [also] they can be part of a national policy to develop new financial institutions and deepen capital markets by mobilizing long-term saving and allocating it to the most productive uses, including uses in the private sector" (WB, 1994: 21, 230). The three aforementioned WB/

OECD officials elaborated on this first aspect: "An important justification for pension reform in Latin America has been its expected benefits for capital markets. The growth of pension funds... can help make capital markets more resilient and dynamic... Deep and liquid domestic capital markets can also help curtail dependence on foreign capital, and thus reduce the economy vulnerability to external shocks..." (Gill, Packard, and Yermo, 2005: 57). The Mexican Reform Law claimed in its preamble that pension privatization would promote domestic savings and the local capital market, which in turn should promote growth and employment. b) Significant reduction and eventual elimination of fiscal costs generated by public PAYG systems. c) Evasion: In defined benefit systems, "high-rate taxes lead to evasion thereby defeating the purpose of the mandatory scheme. They also lead to strategic manipulation that enables workers to escape much of the tax, but still qualify for benefits—causing difficulties for the broader economy..." As an alternative, "mandatory savings schemes may be privately and competitively managed, in which case they are likely to have fewer... incentives for evasion [and] allow the reduction of effective tax rates" (WB, 1994: 224, 202). "Because pension benefits in defined-benefit PAYG systems often have little relationship to mandatory contributions, both workers and firms can view contributions to these systems as a tax rather than as savings. In developing countries with dual [formal and informal] labor markets, this perceived tax creates incentives for evasion, thereby reducing participation [payment of contributions] in the pension system and lowering coverage-levels" (Gill, Packard, and Yermo, 2005: 97). Piñera (1992: 17) ratified that the private system is an incentive for the contribution: "It forces workers to make a minimum effort every month." d) High capital returns: An individual fully-funded system "also allows workers to increase their returns and insure against political or other country-specific risks through international diversification of investments... The rate of return to workers in the Chilean system has been much higher than in countries with centrally managed mandatory savings pillars" (WB, 1994: 213, 244). e) Protection against aging: "The PAYG system is practically unfeasible... for strictly demographic reasons... the system is bound to finance the pensions of a growing group of pensioners with the imposition of a contingent of workers that is growing in smaller proportion. At the beginning, the equilibrium may be manageable but it will soon become unmanageable and will tend to strangle itself." (Piñera, 1992) Aging adversely impacts long-term sustainability of public systems, but will not affect private systems due to their design and full funding (Puyol, 2017).

## b. Reality

### Declining Trend in Contributing Affiliates

Table 15 shows the percentage of affiliates that contributed in 1999-2019, denoting the zenith reached in bold. This percentage decreased in all countries after the zenith, while—based on the first year available—it also declined or stagnated, except in Chile (the abnormality of the Panamanian case has already been mentioned). The worst falls occurred in El Salvador: from 64% to 22% (42 percentage points) and in Mexico: from 60% to 32% (19 percentage points) (Figure 4).[61] Therefore, it is obvious that the ownership of the individual account, the principle of equivalence, and the private administration have not been incentives for the contribution[62] and that there were other reasons: the insured exit from the labor force or switching from the formal to the informal sector, employer evasion and payment delays, campaigns by administrators to affiliate newcomers into the labor market, and the fact that only by registering and paying one contribution individuals are shown as affiliates, even if they do not pay later. Therefore, there is a very significant overestimation of affiliates, thus, the 2019 EAP coverage based on affiliates and contributors in the private system, were respectively: 114% and 24% in El Salvador; 114% and 36% in Mexico; and 112% and 62% in Chile and Costa Rica (AIOS, 2020).

### Employers' Evasion, Payment Delays and Avoidance or Under-declaration of Income

Evasion, whether in private or public systems, occurs when the employer does not register all or part of its employees in order to avoid paying pension

61 Lima Chamber of Commerce revealed that 75% of workers under 25 years of age do not contribute.

62 This was recognized by the WB/OECD team (Gill, Packard, and Yermo, 2005).

**Table 15.**

**Percentage of Affiliates Actively Contributing, 1999, Zenith[b] and 2019**

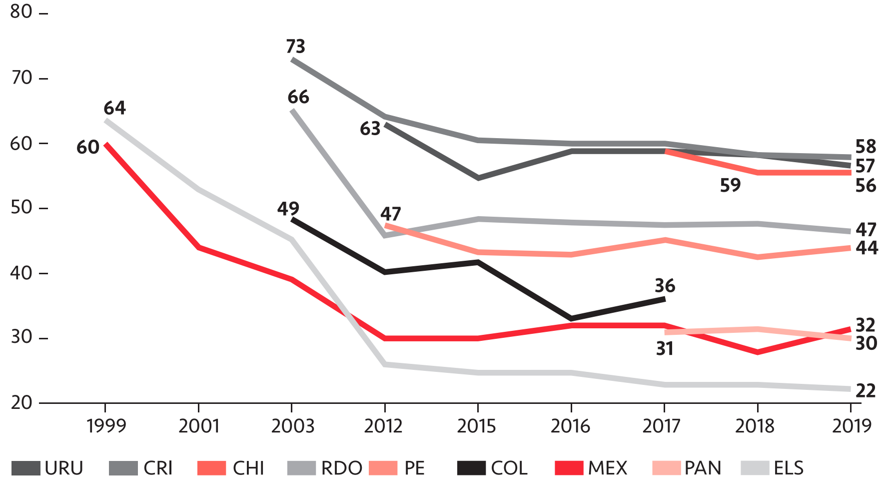
| Countries[a] | 1999 | 2001 | 2003 | 2012 | 2015 | 2016 | 2017 | 2018 | 2019 |
|---|---|---|---|---|---|---|---|---|---|
| Uruguay | 58.7 | 53.7 | 52.7 | **63.1** | 55.2 | 59.4 | 58.9 | 58.6 | 57.5 |
| Costa Rica | c | c | **73.1** | 64.2 | 60.7 | 60.2 | 60.2 | 58.4 | 56.6 |
| Chile | 53.4 | 53.7 | 51.9 | 56.5 | 56.0 | 55.9 | **58.9** | 55.8 | 55.6 |
| Dominican R. | c | c | **65.5** | 46.3 | 48.3 | 48.1 | 47.6 | 47.5 | 46.5 |
| Peru | 45.7 | 41.2 | 41.9 | **47.4** | 43.4 | 42.9 | 45.1 | 42.7 | 44.0 |
| Colombia | c | c | **48.7** | 40.6 | 42.0 | 32.9 | 35.9 | d | d |
| Mexico | **60.2** | 44.7 | 39.3 | 29.9 | 29.9 | 31.9 | 31.8 | 28.1 | 31.5 |
| Panama | c | c | c | c | 27.1 | 29.7 | **31.2** | 31.2 | 30.0 |
| El Salvador | **63.8** | 53.3 | 45.8 | 26.7 | 24.7 | 24.3 | 23.2 | 22.7 | 21.9 |

**a** Ranked from highest to lowest based on last column. **b** Zenith in bold. **c** The system had not entered into force; in Panama, since 2015, figures from SIACAP administrators. **d** No statistics are reported after 2017.

Fuente: Basado en AIOS, 2000 a 2020.

**Figure 4.**

**Percentage of Affiliates Actively Contributing in Private Systems, Zenith, and 2019**




Source: Table 15.

contributions (it may also hire workers informally or subcontract them to avoid paying contributions). Payment delay is when the employer collects the insured's contributions (and must withhold its own contribution in those countries where the employer contributes) but does not transfer them to the administrators. Avoidance is when the employer declares salaries lower than those actually paid with the purpose of saving part of due contributions. Also, collusion is when the employer and the worker agree not to declare employment or under-declare income, very common in domestic service. The fact that between 41% to 77% of the affiliates do not contribute to the private systems suggests the widespread use of one or more of these employer practices, although other causes have been noted already. Contrary to the promises of the structural reformers, evasion has not been reduced in the private system.

In theory, the insured should receive periodic reports from the administrator that might detect any failure by his/her employer to transfer the contribution; nevertheless, surveys show that such report is often not read by the insured or he/she does not understand it, losing, therefore, the opportunity to notify the AFP about the employer's non-compliance and then claim its collection.

It has been calculated that in Colombia the employer's non-compliance rate is equivalent to 30% of the potential sum that should be collected, which is equivalent to 1.6% of GDP. In Peru the relevant figures are 46% and 1.6%; the sum owed to the private system in 2019 amounted to US$7,348 million of which 42% was owed by state agencies and 58% by private companies; that year, a program to recover the debt was implemented but only managed to collect 10% of it (SBS, 2020). In Chile, 5% of contributing salaried workers are affected by some type of employer non-compliance (ECLAC, 2018). In El Salvador there is a significant gap between health coverage by the social insurance institute (ISSS) and pension coverage by the private system (SAP); the former exceeds the latter by more than 100,000 contributors, which remained relatively constant in 1998-1999, due to the lack of a unified registry and the lack of coordination between the two programs to detect tax-evaders. The 2017 re-reform established a unified database to try to correct this problem (ILO/

FUNDAUNGO, 2020). In the Dominican Republic, the contribution registered in the Social Security Treasury is lower than the income that workers actually receive, partly due to the high levels of evasion, as well as because part of the remuneration they receive (production and Christmas bonuses, commissions, etc.) are exempt from contribution (*Listín Diario*, 08-22-2017).

The centralized collection by the state of all contributions and taxes is a lower-cost mechanism; due to economies of scale, it simplifies payment by avoiding that enterprises (particularly small ones) have to fill out different forms and record different contributions for multiple entities (i.e., for pensions, health, unemployment, etc.) and it helps to detect employer evasion, which is easier with multiple collecting agencies. Said centralization is common in six of the nine countries (Colombia, Costa Rica, Dominican Republic, Mexico, Peru, and Uruguay); in all of them this is done by public social insurance institutes, except in the Dominican Republic, where the Social Security Treasury does it, and in Peru, by AFP NET, from the AFP association, which transfer collections to private administrators (Mesa-Lago, 2008; updated with information from the countries).

Costa Rica implemented "the social security crime" that extended and increased sanctions with more effective mechanisms to control breaches, strengthened inspection, and carried out cross-checks with other public databases. In Uruguay, a law and campaign to reduce tax evasion by expanding *monotributo* (unified tax regime), to grant incentives to those insured who register and pay on time, as well as to offer better benefits resulted in a reduction in tax evasion from 37.5% in 2004 to 18% in 2016; the number of contributing insured doubled in such period while contributing companies grew by 38% (BPS, 2018). Unification and simplification in the payment of all taxes and contributions may help in the formalization of the labor force.

It is common that fines, penalties, and interests for employer non-compliance are established in the law as sums in local currency, thus they are devalued due to inflation and may eventually be miniscule . Therefore, it is better to set percentages. Another problem is that inspection to detect irregularities is concentrated in large companies, as it is easier than in medium-sized and especially in micro-enterprises, the latter being more expensive because they are many with fewer employees, and difficult to detect. Finally, judicial enforcement takes often a lot of time due to the accumulation of cases. Therefore, a centralized collection may be more effective in prosecuting delinquent individuals for their greater power. In some countries, ad hoc judicial bodies have been created to judge non-compliance promptly.

### Increase in the Capital of the Pension Fund

Ratifying the promise of structural reform, private systems have attained substantial capital accumulation, although with significant variations among countries. In 2004-2019, in absolute numbers, the increase ranged between 354% and 12,239% in eight countries, while as a percentage of GDP the difference was between 3 and 22 percentage points in the eight countries—Panama is excluded as the system had not begun in 2004 (Table 16). The amount of the fund is the outcome of: the size of the insured market, per capita income, capital return of the invested capital, administrative cost, and time that the system has been in operation. For example, Chile has a medium-size insured market, the highest per capita income in the region, 39 years of operation of the system, and has accumulated US$215,372 million. Mexico has the largest insured market and, although its operating time is 17 years shorter than Chile, it has almost closed the gap with US$211,325 million and will soon exceed that country. However, the fund in relation to GDP is a fifth of the Chilean proportion as Mexico's GDP is much higher. The Dominican Republic begun with a very small fund capital; therefore, it grew 12,239%, and something similar occurred in Costa Rica. The Panamanian fund—the last to be created and with the lowest number of insured—only has accumulated US$1,397 million, equivalent to 0.6% of the Chilean fund, and is the smallest of the nine.

The economic power of the administrators is enormous—in Chile, seven AFP controlled a capital equivalent to 80% of GDP in 2019. Such power goes beyond national borders, because there are Chilean administrators with subsidiaries abroad.

In Chile, the pension fund lost US$75,915 million or 33% between December 2019 and March 2020 (from US$215,372 million to US$144,457 million), due to the pandemic and the subsequent recession, but in September it had recovered to US$205,941 million, still 4% below the zenith; as for GDP, it fell from 80.8% to 72.9% and then rose to 81.2%. The real capital return fell in the five multi-funds, between January and March 2020, ranked from highest to lowest risk and capital return: that of Fund A at -17%, Fund B at -14%, Fund C at -12% , Fund D at -9%, and Fund E at -4% (Superintendencia de Pensiones, 2020). Only the insured faces the risk, because when the amount accumulated in his/her individual account decreases substantially if he/she retires at that time of serious economic contraction, his/her pension will be reduced significantly, therefore forcing to wait for a recovery without knowing how long it will take. Conversely, the executive officers who manage the investment fund and the AFP are not responsible for

**Table 16.**
**Fund Growth in Thousands of Million Dollars and Percentage of GDP, 2004 and 2019**

| Countries[a] | Thousands of Millions of Dollars | | Fund/GDP (%) | | Years of Operation (from the beginning to 2019) |
|---|---|---|---|---|---|
| | 2004 | 2019 | 2004 | 2019 | |
| Chile | 60.8 | 215.4 | 59.1 | 80.8 | 38 |
| Mexico | 42.5 | 211.3 | 5.8 | 16.4 | 22 |
| Colombia | 11.1 | 76.1[b] | 10.2 | 24.5[b] | 25 |
| Peru | 7.8 | 52.3 | 11.0 | 22.8 | 26 |
| Uruguay | 1.6 | 15.1 | 16.1 | 29.1 | 23 |
| Costa Rica | 0.5 | 11.9 | 4.8 | 18.8 | 18 |
| El Salvador | 2.1 | 11.7 | 13.6 | 16.4 | 21 |
| Dominican R. | 0.2 | 10.5 | 1.0 | 12.2 | 16 |
| Panama | c | 1.4 | c | 1.2 | 11 |

**a** Ranked from highest to lowest based on column 2. **b** 2017. **c** The system had not started to operate.

Source: Based on AIOS, 2000 to 2020.

the losses and the reserve requirement is at its lowest historical level, so executive officers have little to lose (Barriga and Kremerman, 2020).[63]

## Concentration in the Investment Portfolio

The promise of structural reform that would diversify the investment portfolio is rejected because by the evidence in most private systems. Table 17 shows the distribution of the portfolio by instrument in 2018.

Concentration in the two largest instruments ranges between 80% and 90% in four countries and between 64% and 76% in the other five countries. The biggest investment is in public debt, which ranges between 61% and 82% in four countries. This was typical in old public systems and still exists in the private systems of El Salvador, Dominican Republic, Uruguay and Costa Rica, as they are small countries lacking a developed stock market. Also, the state sometimes exerts pressure to invest in public debt in order to finance the cost of the transition.[64] The larger countries have a more diversified portfolio, but not lacking concentration. The second largest investment is in foreign instruments: 36% to 45% in three countries. Despite the Santiago Stock Exchange was established at the end of the 19th century and developed afterwards, there are not enough national instruments traded in such exchange market and 43% is invested abroad. In Peru, due to the few instruments traded on the national stock market, the investment cap in foreign instruments was 10.5% and it has been increased successively, three times only in 2018: from 46% to 50%. Likewise, regulations on investment in foreign mutual funds were eliminated and investment in foreign infrastructure funds was allowed (these changes must have caused a significant drop in the fund's value during the 2020 crisis). A moderate investment in foreign instruments helps diversification and also capital returns in the long term, but if it is excessive, the risk of volatility

63 The reserve requirement is the sum of the patrimony that the AFP has to keep and is only 1% of such patrimony.

64 El Salvador lacked a stock market when the structural reform was approved, the law to regulate such market was enacted almost simultaneously, and 82% of the investment is in public debt, which has been used by the government to finance the cost of the transition.

**Table 17.**
**Percentage Distribution of the Investment Portfolio by Instrument, 2019**

| Countries[a] | Public Debt | External | Debt Financial Agencies | Debt Non-Financial Agencies | Shares | Mutual Funds | Others | Two Highest |
|---|---|---|---|---|---|---|---|---|
| Chile | 19.4 | **43.3** | **20.5** | 6.4 | 7.1 | 2.5 | 0.8 | 62.7 |
| Mexico | **53.8** | **14.4** | 5.3 | 11.9 | 5.8 | 5.9 | 2.9 | 68.2 |
| Peru | **23.1** | **44.8** | 7.5 | 7.0 | 11.5 | 3.1 | 3.0 | 67.9 |
| Colombia[b] | **34.4** | **36.4** | 6.6 | 2.0 | 15.8 | 2.4 | 2.4 | 70.8 |
| Panama | 7.0 | 6.7 | **63.0** | **13.5** | 6.4 | 3.4 | 0.0 | 76.5 |
| Costa Rica | **61.3** | 0.0 | **18.3** | 3.4 | 0.0 | 0.0 | 17.0 | 79.6 |
| Uruguay | **66.0** | 8.0 | 6.5 | **14.4** | 0.2 | 0.0 | 4.9 | 80.4 |
| Dominican R. | **77.5** | 0.0 | **11.3** | 4.9 | 0.0 | 6.2 | 0.1 | 88.8 |
| El Salvador | **82.1** | 5.2[c] | **8.2** | 4.3 | 0.0 | 0.1 | 0.1 | 90.3 |

**a** Ranked from lowest to highest concentration based on the last column; instruments with the two highest concentrations are in bold. **b** 2017. **c** Only foreign instruments registered in the Salvadoran stock market.

Source: Based on AIOS, 2000 to 2020.

increases. The third most important investment is in bank deposits (debt from financial agencies) between 20% and 63% in two countries (the highest in Panama), due to the lack of alternatives. The fourth investment is in debt from non-financial agencies, between 12% and 14% in three countries. Investment in domestic stocks is the fifth one, despite the structural reformers' prediction that it would greatly benefit: it is zero in four countries and ranges between only 6% to 16% in the other five. Participation in mutual funds is only between 0% and 6%. Therefore, private systems have not attained an adequate and efficient diversification of pension funds as promised. A statement made by FIAP (2017b) pinpoints the need for a change in the private system: "We must promote diversification of investments more efficiently...".

It is important to mention that the lack or underdevelopment of the local capital market was not considered by the reformers as a limitation to investment portfolio diversification. In El Salvador, reformers even rejected the recommendation that the regulation of the stock market should precede the introduction of a Chilean-type reform.

Public systems with collective partial capitalization—CPC (usually scaled premium)—are not exempt from the low diversification of their portfolio: it is usual that most of the fund is invested in state debt, another portion in bank deposits (in some countries in Central Banks with low interest), another portion in loans for insured individuals and in housing loans (a risky investment). Investment in domestic stocks is scarce and in foreign instruments is usually prohibited or small, except in Brazil (Mesa-Lago, 2009). It was not possible to make an updated investigation of said investment and its yields, but in most countries, it requires greater diversification.

### Fluctuation in the Capital Returns of the Investment

The gross real capital return on the investment,[65] was quite high at the beginning (from the creation of the system to 1999), but during the 2007 crisis it fell between 19% and 26% in three countries and between 2% and 9% in other four countries (Table 18). With the recovery from 2009 until 2019 (the longest in history), capital returns grew, but in 2009-2019 annual average returns had not recovered the initial average, from their creation to 1999, in five countries and had equaled such average in two countries. In 2014-2019 and 2016-2019, they were below such initial average in all countries. Only in 2019 the initial capital-return average was exceeded in five countries, but in El Salvador and Uruguay it was still lower.[66] It was mentioned before that, between December 2019 and March 2020, the Chilean pension fund lost US$75,915 million or 33% of GDP.

65 Gross return means that the administrative cost is not deducted hence net capital return is subtracting this cost and should be less, but it is not published by AIOS. Cruz-Saco et al, 2018 claim that the administrative cost is substantial and that the series of net real capital return (adjusted annually for inflation) should be published.

66 My calculation of the real capital return in Peru shows that it fell systematically, except in 2019: from the creation to 2019 it averaged 6.7%; in the last 15 years 6.1%; in the last 10 years 3.9%; in the last five years 3.5%; and in 2019 8.1% (nominal yield from SBS, 2020, inflation from ECLAC-STATS, 2020). See other calculations in Cruz-Saco et al., 2018; Freunderberg and Toscani, 2019).

**Table 18.**

**Gross Real Capital Return on Investment from its Creation to 1999, Crisis 2007, and 2008-2019**

| Countries[a] | From Creation to 1999 | Crisis 2007 | In the last | | | |
|---|---|---|---|---|---|---|
| | | | 10 years 2009-19 | 5 years 2014-19 | 3 years 2016-19 | 1 year |
| El Salvador | 12.8 | -2.3 | 2.8 | 3.7 | 4.2 | 6.2 |
| Chile | 11.2 | -18.9 | 4.8 | 5.0 | 7.0 | 15.0 |
| Mexico | 9.6 | -6.5 | 4.3 | 2.3 | 3.5 | 12.2 |
| Uruguay | 7.9 | -21.5 | 2.7 | 3.9 | 6.1 | 4.0 |
| Peru | 7.3 | -26.7 | 3.9 | 5.0 | 5.7 | 10.8 |
| Colombia[b] | 6.9 | -2.7 | 6.9 | 6.1 | 3.5 | 10.4 |
| Costa Rica | 6.7 | -9.0 | 6.7 | 6.1 | 6.7 | 12.3 |
| Dominican R. | [c] | 8.0 | 7.3 | 7.3 | 6.4 | 7.0 |

**a** Ranked from highest to lowest based on the first column. **b** Year 2017, years 2018-2019 have not been published as of September 25, 2020. **c** The system had not been created.

Source: Based on AIOS, 2000 to 2020.

Virtually all countries publish nominal returns but not the real ones. In Colombia, a recent study calculated the real annualized capital return at 3.9% from the beginning of the system to 2017 and with a clear decreasing trend since 2010. Also, it estimated the net capital return (deducting the fees, premium, and contribution to the solidarity fund) in 2.5%; then compared it with the real rate in other investors of 5% and concluded that the AFP would have to pay a real return ranging between 6.3% and 7.8% (Lora, 2020).

The *Secretaría de Gobernación* (Ministry of Interior) of Mexico (2020) maintains that the real historical annual investment has averaged 5.8% and has contributed 51% of the amount in individual accounts; however, the accumulation in such accounts would hardly exceed the amount required to obtain a pension higher than either the guaranteed minimum pension or an annuity.

There are some reasons that yields in most countries (before 2019) were lower than the initial average: a) at the beginning of the system there were very few investment instruments and their prices were inflated; b) in countries with a high concentration of public debt and bank deposits, interest rates are quite low, reducing capital returns; and c) a significant decline in the world interest rate occurred in the last decade. The former president of CONSAR (2018) in Mexico, acknowledged that administrators face an investment market where it is increasingly difficult to obtain the high capital return that was achieved in the past.

Other investment problems are: due to current regulations (for example, the guarantee of a minimum annual capital return) investments tend to be short-term in order to avoid deviating from the average return of the industry, instead of having a long-term horizon that benefits the insured. As there is not a great diversity of options in national investment, the profiles of the administrators' portfolios are very similar and there is no great difference in capital returns ("herd effect"). It is argued that a Chilean insured who invested each year from 2002 to 2008 in the best performing AFP funds (type-A and type-B) would have earned 0.3% more annually than if he/she had invested in the worst performing funds. The insured do not choose administrators based on their risk-adjusted capital returns (they lack the appropriate financial education to do this) but rather on advertising and affiliation campaigns. It is questioned why so many national and foreign managers are needed to manage the AFP funds; for example, in Chile, the AFP Cuórum that manages US$40,000 million has 660 commercial managers, half of the total payroll (Meunier, 2019).

Public pensions are less affected by market volatility than private pensions, especially because they invest less in the stock market. However, they are not immune to the low diversification of the portfolio and the low capital returns (Mesa-Lago, 2009).

## Additional Voluntary Savings Have Not Been Successful

Table 19 shows the accumulation in the voluntary additional funds (in US dollars and percentages of GDP) and compares it with the accumulation in

**Table 19.**

**Accumulation in Additional Voluntary Funds Compared to Mandatory Funds in Private Systems/Pillars, 2018-2019**

| Countries[a] | Additional Voluntary Funds 2019 | | Mandatory Funds 2019 | | % in US$ in Voluntary/ Mandatory Funds |
|---|---|---|---|---|---|
| | Million US$ | % of GDP | Million US$ | % of GDP | |
| Colombia | 6,515 | 2.0 | 76,076[e] | 24.5[f] | 8.5 |
| Chile | 5,935 | 2.1 | 215,372 | 80.8 | 2.8 |
| Dominican R. | 292[c] | 0.3 | 10,508 | 12.2 | 2.8 |
| Costa Rica | 239 | 0.4 | 11,982 | 18.8 | 2.0 |
| Peru | 692 | 0.3 | 52,349 | 22.8 | 1.3 |
| Mexico | 1.258[d] | 0.3 | 211,325 | 16.4 | 0.6 |
| Uruguay | 3[e] | 0.0 | 15,100 | 29.1 | 0.0 |
| El Salvador b | 1 | 0.0 | 11,666 | 16.4 | 0.0 |

**a** Ranked from highest to lowest based on last column; information from Panama is not available. **b** The voluntary fund began in one AFP on July 1, 2020 and in the other AFP it was registered in 2020, but as of September it had not started operating. **c** March 2020. **d** CONSAR reports US$3,129 million and 0.7% of GDP in 2018, but including—in addition to voluntary savings—solidarity savings in the ISSSTE. **e** August 2020. **f** 2017.

Source: Voluntary funds from Valero 2020a, based on figures from the World Bank and FIAP; El Salvador from Crecer, 2019; Dominican Republic from SIPEN, 2020; Uruguay from AFAP República, 2020; mandatory funds from Table 16.

the mandatory system/pillar. Colombia has the highest voluntary additional accumulation (8.7%) in relation to mandatory accumulation, largely due to the *Beneficios Económicos Periódicos* (Periodic Economic Benefits: BEPS) program that encourages voluntary savings with a state subsidy, especially among low-income groups (see section V-B). In the rest of the countries, this ratio ranges between 0.6% and 2.8%; in El Salvador it is zero since it began in 2020, two years after the system was created; in Uruguay it is zero, although it started many years ago.

The causes of low accumulation are many: most insured individuals do not have saving capacity, there is a lack of tax incentives for long-term savings, fees for voluntary savings tend to be higher than those of the mandatory savings system/pillar, and the mediocre performance of the mandatory system in most countries does not help either (Jackson, 2017). In Peru, a five-year permanence period in the private system is necessary to make voluntary contributions; the congress is evaluating the elimination of this requirement. Mexico requires five months before being able to withdraw funds from the voluntary savings account (the elimination of this requirement has been proposed). On the other hand, this country is developing new techniques to increase voluntary savings: automating accounts, digital files, electronic deposits, biweekly reminder text messages to savers' mobile phones, Facebook campaigns for those who already have accounts and are informed of the balance in it, CONSAR advertising campaigns in the media and transportation, and adding a percentage for voluntary savings to all purchases with credit cards (CONSAR , 2017-2019).

It must be noted that the voluntary supplementary funds additional to the public system in Brazil amounted to US$366,756 million and 20% of the BIP in 2019—24 times the sum of the voluntary funds in the eight private systems in Table 19 (ABRAPP, 2020; FenaPrevi, 2020).[67] In this regard, the president of the Global Aging Institute states: "Among Latin American countries, Brazil is clearly the leader" (Jackson, 2017: 32).

The FIAP (2017b) recognized, in its Annual Meeting, the poor result of voluntary funds in private systems: "It is urgent to improve savings levels by a regulation promoting more efficiently... voluntary pension savings."

### Withdrawal of Funds from the Individual Account prior to Retirement

The low RRs paid by private systems, as well as urgent needs of the insured, aggravated by the pandemic, have encouraged the withdrawal of funds before

67 Voluntary funds are of two types: "Closed" for workers who have agreements with employers (US$240,756 million and 13% of GDP), and "open" for individuals (US$126,000 million and 6.8% of GDP).

retirement. The pioneer in this practice was Peru where several withdrawals of funds have been approved. Firstly, a 2016 law authorized all the insured turning 65 years old (also 55 with early retirement) to withdraw 95.5% of the accumulated amount in their individual account—the remaining 4.5 % is for health insurance (Cruz-Saco et al., 2018); in July 2020, 65% of the insured had done this, in the amount of US$6,870 million; only 1% had decided to opt for the pension and 4% for a mixture of withdrawal from the fund and pension (FIAP, 2020c). The insured having financial education (a minority) could properly invest the funds withdrawn and receive an income for the rest of their lives, but the majority that lacks foresight could spend the withdrawn amount on consumption and be left unprotected—an IADB survey shows that more than half of those who withdrew their funds were consuming them at a higher rate than the amount provided by an annuity (Altamirano et al., 2019). Secondly, the same law authorized the withdrawal of 25% to finance the first home and, in 2019, 17,000 applications had been approved for US$130 million (SBS, 2020). Thirdly, in March 2020, due to the coronavirus crisis, those unemployed were allowed to withdraw US$1,400, as well as an additional withdrawal of 25% of the funds, with a ceiling of US$3,624 and a minimum of US$1,180; the insured having a very low sum in their accounts may withdraw 100% (Hidalgo, 2020). Fourthly, in June 2020, the Economic Commission of Congress approved another bill that allows affiliates meeting 20 years of contributions, but with no contributions within the last twelve months, and over 55 years of age, to withdraw 100% of their funds in the public system.[68] It is estimated that 1.5 million insured could do this, amounting to US$17,300 million. This measure is financially questionable since the state—in the midst of the recession—lacks the funds to pay that sum; also, it would not have the resources to pay the monthly benefits of 250,000 pensioners, which would leave 3.7 million insured without pensions in the future. In July 2018, it was projected that within five years there would no longer be retirees in the private system and that the system would be closed, but the situation in 2020 is much worse. The purpose of the social security system has been distorted and its sustainability has deteriorated drastically,

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68 Affiliates who are active contributors will be able to withdraw up to US$1,200.

hence it is no longer considered as a possible fully-funded pillar in a potential mixed system as recommended by the OECD (Cruz-Saco, 2020a, 2020b; OECD, 2019b). As for the public system, a bill approved in September 2020 authorizes the insured to withdraw all their contributions. The Executive Branch rejected it, but the Consumer Defense Commission recommended that the congress ratifies the law. If so, the government will have to pay US$4,000 million and vanish the public pension system (Cruz-Saco, 2020c).

The Salvadoran pension re-reform included an "advance of the balance" benefit that came into effect in October 2017, possibly influenced by the Peruvian law, in which the insured may withdraw up to 25% of their savings in the individual account, provided they meet the required age, 10 years of contributions to an AFP, and are not retired. Unlike Peru, the insured must reach the retirement age before making the withdrawal, repay the entire advance payment that he/she withdrew, plus the capital returns earned in order to avoid reducing his/her pension. If this obligation has not complied with, he/she may postpone his/her retirement for a maximum of five years (ILO/FUNDAUNGO, 2020). In September 2020, congress approved the withdrawal of funds by pension holders with terminal diseases or living abroad, according to certain requirements (Legislative Assembly, 2020).

In the Dominican Republic, the structural reform law (updated by the National Social Security Council in 2018) allowed those insured to the private system suffering from a terminal disease to withdraw all their contributions from individual accounts, without submitting a life medical certificate issued within six months.

COVID-19 with its effect of high unemployment, lost wages, and increasing poverty has driven an expansion of withdrawals to try to mitigate the needs of the insured. In July 2020, Chile enacted a law (which required a constitutional reform) authorizing the withdrawal of 10% of the balance in individual accounts. This withdrawal may be made only once with a cap of US$5,606 to be paid in two installments, but those having less than US$1,308 in their accounts will be able to withdraw all of their funds. It is not mandatory to repay this sum before retirement. Initially, the idea was to create a Collective Solidarity Pension Fund financed by employers and the state, but it was rejected. For those who contribute on the minimum wage, their already low pensions would fall between 1.9% and 4.9% for men and between 2.6% and 6.3% for women (see discussions in *La Tercera* and *El Comercio*, July 2020). The law was approved by the opposition against the position of neoliberal president Sebastián Piñera and the AFP (for a debate among both supporting and opposing experts regarding this measure, see Freixas, 2019; Bertranou and Montt, 2020; Figueroa, 2020; OECD, 2020). The law was broadly supported by the population: 83% approved it, despite that only 52% would withdraw, arguing that the funds belong to the insured and they may use them in times of great need; another position claimed that the funds are only for retirement and should not be withdrawn (Eurasia Group, 2020). In August 2020, a month after the law was enacted, 3.2 million insured had withdrawn an average of US$1,866, equivalent to an average of 39% of the amount deposited in their individual accounts (Superintendencia de Pensiones, 2010a). A second 10% withdrawal was being debated in congress in September 2020. In Costa Rica, in October 2020, a law authorizing several alternatives to withdraw funds from the individual account came into force: those who retire before the end of 2020 may withdraw the total amount; those who are currently retired may withdraw the remaining balance; those who retire between January 2021 and February 2030 may withdraw the contributions made, divided by the number of months of the relevant installments (Law 9906, 2020).

In July 2020, the Dominican Republic was analyzing two bills to allow a withdrawal ranging between 20% and 30% of the accumulated amount in individual accounts. A debate emerged between the need to access such funds in an emergency or against this action because of the adverse impact on future pensions and because workers have to face the crisis with their savings instead of with state support (*El Nuevo Diario*, July 2020). A bill in Bolivia would allow a 10% withdrawal due to the crisis. Colombia took a different path by approving a decree that suspended contributions to the private pension system and stipulated that 20,000 of its pensioners were transferred to the public system, but was declared unconstitutional by the Supreme Court (Decree 558 of 2020).

## The Cost of the Transition and the Financial-Actuarial Equilibrium

The structural reforms assumed that the fiscal cost would be significantly reduced and eventually eliminated in the long term. While these reforms reveal the implicit debt of the pension hidden in public systems,[69] the claim that the fiscal costs of the transition will eventually disappear is questionable. The aforementioned WB/OECD team maintained that "fiscal sustainability is far from the truth" and that "the impact of a pension reform on solvency perceptions is not as obvious as theoretical models claim" (Gill, Packard, and Yermo, 2005: 7, 44, 54). In substitutive models, the implicit debt becomes fully visible because the system is closed, however, in the mixed and parallel models this does not occur, because a public pillar remains in the former and a public system in competition with the private in the latter. The so-called "fiscal costs of the transition" when passing from the public to the private system, all financed by the state, are: the "operating deficit," which is the value of current pensions being paid and future obligations of the closed public system (which keeps most of the pensions, but with few or no contributors); the reimbursement of the contributions paid to the public system by the insured who switched to the private system ("recognition bond" in Chile, "transfer certificate" in El Salvador, etc.); financing of minimum pensions and non-contributory pensions, and the deficit of the armed forces regime. The disappearance of the first two fiscal costs could take 40-70 years, while it is projected that the last three costs will increase.[70] Also, actual fiscal costs have been considerably higher than those initially projected—they have taken longer than foreseen, and in the coming years they will grow in most countries. As opposed to the original WB projections, the fiscal cost in eight private systems averaged 2.7% of GDP in 2001 (Mesa-Lago, 2008). Transition costs have usually had a regressive impact as they are financed by the population through taxes (especially the consumption tax—VAT), including the

69 The implicit debt is the present value of all long-term obligations of the PAYG system, including the payment of current and future pensions.

70 The three WB/OECD officials admitted that the structural reforms prioritized mandatory savings in the private regime and neglected public welfare pensions for the poor; therefore, a reversal of the previous policies was recommended (Gill, Packard, and Yermo, 2005).

poor and others not covered by the system.[71] Structural reforms in Dominican Republic, El Salvador, and Peru attempted to reduce fiscal costs by sacrificing certain rights and benefits of the insured and pensioners. The high fiscal costs of the transition were decisive in the repeal of the Nicaraguan reform law, and in the postponement of the subsidized and contributory-subsidized regimes, as well as in the non-granting of the recognition bond in the Dominican Republic (Mesa-Lago, 2008; Mesa-Lago and Bertranou, 2016).

A methodological note is critical regarding the implicit debt in public PAYG or collective partial capitalization (CPC) systems. The concept of implicit debt (an obligation created when pension benefits are promised, but not funded) was developed by the WB in the 1990s and it has been adapted from the concepts used in the private insurance sector. The term may be defined in two ways: according to the first one, the implicit pension debt is equal to the present value of all future benefits of present pensioners plus the acquired rights of the current insured, less the amount of the initial reserve of the pension system. This definition is used strictly in private insurance and was adopted by the WB (1994) as a justification to replace public pension systems with private fully-funded systems as the only way to balance such systems in the long term. According to the second definition, the implicit debt of social security pensions is equal to the present value of all the benefits of current and future pensioners, *less the amount of the initial system reserve, less the value of all contributions of current and future insured at a constant initial contribution rate*. This definition is based on a public finance approach and reflects the principles of solidarity and collective financing included in various ILO conventions and recommendations in the field of social security (Gillion et al., 2000). In this case, the implicit debt only occurs when the present value of all future benefits is higher than the present value of all future contributions and their interests; if the contribution rate is increased according to the spending, or if such spending is reduced through parametric reforms, the implicit debt disappears. The first definition and the WB approach implies that no

71 In countries with low coverage, most of the uninsured population partly finances the coverage of the insured minority, often through consumption taxes that predominate in the region.

parametric adjustments will be made to the pension system for several decades, which contradicts historical experience; in practice, all PAYG pension or CPC systems are developed on the assumption that contribution rates will be increased in the future to match the gradual maturation process of said systems (Cichon, 2004). Private pension insurance is normally fully funded since it must have sufficient resources to meet its obligations if the insurance company or occupational plan is dissolved. Public social security systems are backed by a promise from society guaranteeing their liquidity and do not require the same level of reserves as private insurance systems (ILO, 2001). According to the ISSA-ILO social security actuarial guidelines and the International Actuarial Association guidelines, the evaluation method must be consistent with the model adopted by the system—whether it is PAYG, CPC, or fully funded (ILO, 2017). Finally, individual fully-funded systems are known as "defined contribution" (DC) because, in theory, their contribution should not be increased over time, in contrast with "defined benefit" (DB) systems; however, later we will see that currently DC systems are claiming that in order to keep existing they will have to increase their contribution, as happens with DB systems.

ECLAC has just published a study on public spending on pensions in seven of the nine private systems, including some calculations of the current and projected financial deficit, for which it uses indicators such as the level of aging and the degree of pension coverage of the elderly (Table 20). The second to the last column of the Table is incomplete as there is no projection for 2025 or 2030 on public pension spending/GDP in Costa Rica, El Salvador, and Uruguay, therefore, an average could not be obtained for the seven countries. Likewise, it is almost impossible to obtain projections on the public pension deficit—ECLAC only shows these projections for Costa Rica and Peru. Table 20 reproduces the ranking of the countries made by Arenas (2020). In my opinion, this is a pioneering and important exercise, but projections on pension spending in three countries are needed, as well as on the current and projected deficit in seven countries, and a greater accuracy on how the indicators determine said ranking. Lastly, other key indicators—such as the generosity in benefits and the existence or non-existence of excessively generous and expensive separate schemes—should be considered.

**Table 20.**

**Indicators of Financial Sustainability of the Public Pension Systems in Seven Countries, 2000-2017 and Projections**

| Countries[a] | Public Pension Spending (% GDP) | | | | | Projection of Pension Spending/ GDP (%)[a] | Level of Aging |
|---|---|---|---|---|---|---|---|
| | 2000 | 2017 | % Real Annual Growth | | | | |
| | | | Gasto Pensión | PIB | PIB - pensión | | |
| Costa Rica | 4.9 | 7.3 | 6.6 | 4.1 | 2.5 | Δ | Moderate-advanced |
| Uruguay | 11.4 | 10.7 | 2.8 | 3.3 | -0.5 | [d] | Very advanced |
| Colombia | 1.9 | 4.5 | 9.2 | 4.0 | 5.2 | 4.5 | Moderate-advanced |
| Mexico | 1.4 | 3.1 | 6.8 | 2.0 | 4.8 | 5.0 | Moderate |
| El Salvador | 2.1 | 2.7 | 3.7 | 2.2 | 1.5 | [c] | Moderate |
| Chile | 5.7 | 3.1 | 0.1 | 3.8 | -3.7 | 2.2 | Advanced |
| Peru | 4.0 | 1.6 | -0.5 | 5.1 | -4.6 | 1.4 | Moderate |
| Average[b] | 4.5 | 4.7 | 4.1 | 3.5 | 0.6 | | |

**a** In 2025-2030. **b** Simple average (unweighted) of the seven countries. **c** There were no projections in the last actuarial study. **d** There are no projections.

Source: Based on Arenas, 2020; for Brazil see section VI.

I analyze and integrate below the information available on public pension spending, the financial deficit financed by the state, and some projections of the actuarial equilibrium (based on the WB's definition of implicit debt, which we have seen is not correct) in the mixed systems of Uruguay, Costa Rica and Panama, and in the substitutive systems of Mexico and the Dominican Republic. The analysis of the substitutive systems of Chile and El Salvador, as well as of the parallel systems of Colombia and Peru, is done in section V-B. In addition to the indicators used by Arenas, I am including others such as system maturity, generosity of benefits (high RRs, low retirement ages), size of contributions regarding spending, system-design flaws, and existence or non-existence of separate regimes that are very generous and burdensome for fiscal authorities.

### Uruguay

Public pension spending is the highest in the region due to the greater EAP coverage by the contributory system, the fourth highest coverage of the older-adult population, the oldest public system, the existence of several expensive separate regimes, the generosity of benefits (a RR of 72%), low retirement ages, and the very advanced degree of aging, the highest in Latin America; therefore, the contribution is the highest in the region. Pension spending reached a zenith of 11.4% of GDP in 2000 and decreased to 10.7% in 2017, only exceeded by that of Brazil and tied with that of Argentina, but it is projected that it will still increase in the coming decades. The public pillar has historically experienced a deficit that is financed with fiscal transfers, which decreased from 6.1% of GDP in 1982 to 2.5% in 2004 and 0.9% in 2016 (BPS, 2018, 2020) and it is projected to be reduced to 0.3% in 2025, but will then grow to 1% in 2045 and 2.5% in 2065 (Arenas, 2020). Therefore, there has been a considerable reduction in public spending and the deficit financed by the fiscal authorities; however, both will increase in the future. In October 2020, the Minister of Labor and Social Security announced the creation of a commission of experts made up of 15 members, representing the various sectors involved, to reform the pension system—both the public system and the private pillar—. The commission must submit its recommendations to the executive branch in April 2021 (MTSS, 2020).

### Costa Rica

It has a "moderate-advanced" degree of aging instead of a "very advanced" (Uruguay) and an "advanced" (Chile) degree; also, the maturity of the public pension pillar is lower than that of Uruguay; its system is much less fragmented (there are no armed forces and only the separate judicial system regime remains);[72] the retirement age is 65 years old for both men and women with 25 years of contributions (but there is early retirement, as will be seen later); and a retirement age five years higher than ages in Uruguay and than the women age in Chile. On the other hand, the EAP and the older-adult population coverages are similar to those of these two countries (the self-employed coverage is the highest in the region due to the state subsidy), and the RR combining the two pillars is 90% on the four highest salary years, the highest among the nine private systems. A shortcut at the age of 65 is the early retirement for men aged 62 and women aged 59, with only 9 years of contributions, resulting in many retirements and a substantial increase in spending. Despite the high RR and other lax conditions, the contribution on salaries is the third lowest one (10.66%) among the nine private systems (after Mexico and the Dominican Republic, having much lower coverage and benefits) and half of Uruguay's with similar coverage and benefits.

Thus, in 2017, Costa Rica's public pension spending regarding GDP was 7.3%, the highest after Uruguay's spending (10.7% and much higher than Chile's 3.1%) and is increasing compared to 2000, instead of being decreasing as in the other two countries (also, real annual growth in spending exceeded GDP growth within the period, while it decreased in the other two countries). Therefore, ECLAC ranks as "high" the sustainability pressure of the Costa Rican system compared to its "moderate" rate in Uruguay and "low" in Chile (Arenas, 2020). In 2007, the CCSS actuarial valuation projected that the public pillar would be in equilibrium until 2048, but in 2008-2016 three actuarial valuations, by two private companies and by the University of Costa Rica, projected a shorter equilibrium period and the reserve depletion earlier than expected (based on the WB definition explained before in the methodology), which led to a strong debate on the financial-actuarial sustainability of such pillar (see Durán, 2016; Matas, 2020).

In order to mitigate the situation, in 2017 the contribution was gradually increased by 2% in 2017-2035, but a CSSS actuarial study, with figures from the

72 The teaching and the National Bank regimes have been closed.

end of 2018, projected that, under the base scenario, the interest of the reserve would have to be used since 2021, and in 2037 the reserve would be exhausted (CCSS, 2019). The CCSS has taken several parametric measures:

**a)** It shortened the period of increase of 2% in the contribution from 2035 to 2029, and will raise the total contribution from the current one from 10.16% to 12.16% (divided among the worker, the employer, and the state);
**b)** It changed 3% of the salary of the worker which was transferred to the Labor Fully-Funded Fund (FCL) and a year later 50% of the FCL was transferred to the supplementary fund (ROP), in order that 1.5% is transferred directly to the ROP, which will improve the supplementary pension; and
**c)** In May 2020, a CCSS commission recommended three alternatives for early retirement: to eliminate it completely, to increase the age, and to increase the required contributions. This has been submitted to public consultation and will be decided in early 2021.

These three measures will extend equilibrium at least until 2053 and will halve the actuarial deficit; another parametric reform is planned by 2035 (Law 9906, 2020; CCSS, 2020b).

The judicial separate program granted an RR of 100% on the average of the last 24 months of adjusted-to-inflation salary as well as early retirement ages; the contribution of judges was 11% and the rest was financed by the state; an actuarial valuation in 2012 projected its insolvency for 2027; in order to balance it, while keeping its generous entitlement conditions, the contribution of employees would have to be increased to 70% of salary, plus a contribution of 60% of the pensions of retirees. In 2017, the Legislative Assembly raised the age to 65 years, reduced the RR to 80% of the average salary of the last two years, set a maximum limit of US$7,000 per month for the pension, and increased the contribution of employees from 11% to 13%. This parametric reform is a good role model for other countries with highly fragmented systems, but it has not been reported if it did achieve actuarial balance and when.

## Panama

Affiliates in the private pillar are only 15.6% of the total insured—the lowest among all the private systems; thus, the public pillar is 84.4% of the total. Panama ranks in an intermediate position among the nine private systems and has social indicators that are among the top three or four regarding the nine countries and the region; for example, regarding total and female EAP coverage and older-adult population coverage (see Mesa-Lago, 2019). On the other hand, it faces several financial problems.[73] There are multiple separate regimes (armed forces, firefighters, teachers, etc.) with more generous benefits than the general system and expensive fiscal subsidies; retirement ages are relatively low: 57-62 years old (women/men) and—although aging is moderate—in 2020, life expectancy at retirement for women was 28.4 years old, for men 25.4 years old, and life expectancy of both men and women will grow even more in 2050 (INE, 2019). Benefits are very generous and the RR combining the two pillars is 88%. The state deposits an additional amount in the individual savings account that accrues interest. Of the total contribution, only 3.5% is assigned to the public pillar and 96.5% to the private pillar. There is high employer evasion and payment delays.

Financial sustainability is fragile: the public system has closed and has no contributors but pays 99% of retirements and pensions, thus resulting in a growing deficit. The ILO (2003) recommended increasing the retirement ages and changing the pension formula; it also determined that the total contribution should increase from 9.25% to 13.5% in 2013 (which was done) and keep increasing it to 24.1% in 2050 (not done in 2020). In 2016, the UNDP and the IADB projected that the closed public system would begin to experience a deficit in 2017 and the reserve would be extinguished in 2024 (based on the first definition explained above). It is projected that in 2025-2032, the state will have to disburse US$23,900 million to finance pensions—40% of GDP (Argote, 2018). There is no information on the disequilibrium of separate regimes. In 2019, the Director of the CSS announced the need to start using reserves to pay benefits.

73 The CSS does not publish key periodic financial statistics such as the balance of income and expenses, the distribution of investment by instruments, and the real capital return on investment.

As of December 2019, such reserve amounted to US$13.6 million (virtually the entire reserve was in bank deposits). Pension spending was 2.3% of GDP, and the ratio of active workers per one pensioner was 4.8 (Sánchez, 2019; CSS, 2019; INEC, 2019). The new president Laurentino Cortizo took office on July 1, 2019 but, as of October 2020, he had not announced any plan to carry out the parametric pension reform.

### Mexico: Parametric Reform or Re-reform?

The pension system is one of the most fragmented in the region: in addition to the two general privatized regimes (IMSS for private workers and ISSSTE for federal civil servants), with significant differences between them, there are over 1,000 contributory and non-contributory pension programs, including separate regimes for the armed forces, states, multiple autonomous agencies (oil, state banks, finance ministry, public universities, etc.)—municipal regimes are not considered herein—with more generous benefits and financial subsidies (see OECD, 2015; Azuara et al., 2019; Ramírez, 2019; Arenas, 2020). Conditions that reduce spending are: relatively low EAP coverage and older-adult population coverage, an average RR of less than 30%, 64% of insured will not receive a pension but the return of the balance, only 6% of the total number of insured will reach a pension above the minimum amount (a monthly non-contributory pension of US$58, equivalent to 41% of the urban poverty line and moderate aging).[74] Despite those factors, public pension spending (excluding part of the separate regimes) grew from 1.4% to 3.1% of GDP in 2000-2017 at a real annual growth rate of 6.8%, while GDP increased at a real rate of 2% (4.8 percentage points less). Said spending is projected to grow to 5% or 6% of GDP in 2030 and 90% of pensions will be financed with public resources. Furthermore, the percentage of contributing affiliates decreased from 60.2% to 31.5% in 1999-2019, the second largest decline among the nine countries, and 49% of IMSS-insured

74 Despite the "moderate" aging ranking (Arenas, 2020), the 2019-2024 National Development Plan projects that life expectancy at age 65 will increase from 18.2 to 24 years old between 2020-2025 and 2090-2095, while the highest-growth segment will be the 65-year-and-over segment. Finally, the ratio of the productive segment aged 20-64 years regarding the 65-year-and-over segment will be reduced from 7.8 in 2019 to 3.5 in 2095 (Ministerio del Interior, 2020).

workers and 19% of ISSSTE-insured employees did not make contributions in 2017-2019. The IMSS-insured workers that were in that system at the time of retirement, can choose between the pension they would have received according to the old DB formula and the pension they would receive with the accumulated amount in the individual account; most of them have chosen the first option because it is more beneficial, but it is financially unsustainable. The cost of the transition, originally estimated at 0.4% of GDP to a peak of 0.8%, was 1.5% in 2017 and it is projected to grow to 3% in 2035—this cost takes 85% of total pension spending. The fiscal cost of public sector pensions is higher than that of private sector workers, as there are more generous entitlement conditions and benefits in the former (CCE, 2020).

Carlos Ramírez, former president of CONSAR, and other experts acknowledge that the system will experience serious problems when the first generation of insured begins retiring in 2021: more than five million of these insured individuals, upon reaching the retirement age of 65, will not have 24 years of contributions required to receive a pension; 70% of contributors will receive a pension of less than a minimum wage; and the mandatory contribution rate of 6.5% is the lowest among the 34 OECD countries and is insufficient to guarantee a decent pension, therefore, the contribution would have to be doubled; separate public pension programs are financially unsustainable (CONSAR, 2017; Saldívar, 2017).

President Andrés Manuel López Obrador (AMLO) has supported two key reforms to the Mexican pension substitutive system. The Decree of May 8, 2020, taking into account, the high percentage of the EAP not covered by contributory pensions, established the right of people over 78 years of age (65 years if they are indigenous or Afro-Mexican people) to a non-contributory pension, approximately US$66 per month. It is estimated that such pension would be received by 8.5 million older adults at a cost of 0.8% of GDP ("¿Cuánto daría AMLO de pensión...?", 2018). On September 25, 2020, the Ministry of the Interior submitted to Congress a reform bill for the private sector pension system with the following changes to be gradually introduced in 2023-2030, to allow the pandemic to pass:

**a)** Reduction of the years of contributions required to receive a minimum pension from 24 to 8 years (from 1,250 to 750 weeks), in order to increase the percentage of the insured who have access to such pension; then the contribution period grows gradually to 18 years over a 10-year period.

**b)** Increase in the amount of the minimum pension guaranteed by the state by an average percentage of 32%: from 3,289 pesos—equivalent to 80% of a minimum wage—to an average of 4,345 pesos, at least one minimum wage (US$157 and US$208, respectively). This calculation is made based on three factors: weeks of contributions (that have been reduced); average base salary for contributions during the working life; and the age of the insured; the pension is adjusted on an annual basis according to the CPI.

**c)** A survival insurance financed by the state that allows to continue the payment of the guaranteed minimum pension when the pensioner's individual account is exhausted. Also, the state will pay the difference to buy an annuity, when the aforementioned pension is less than a minimum wage and the beneficiary is 60 years of age.

**d)** Paying at retirement, both an annuity and a scheduled retirement (now the insured has to choose between these two options).

**e)** Projection of an average RR of 40%, as a result of the previous measures; but still lower than the minimum of 45% established by the ILO.

**f)** Elimination of the six-month waiting period so that the insured may make withdrawals from his/her voluntary savings account.

**g)** Adjustment of the fees that the insured pay to the administrators (which are quite high), according to international parameters and based on an average of the fees of four countries; if fees decrease, they must also be reduced in Mexico (see section IV-6-b).

**h)** Increase in the employer contribution from 5.15% to 13.875% (gradually in eight years); the worker contribution of 1.125% remains unchanged and the state contribution of 0.225% does not change either, but it now mainly benefits the low-income insured individuals; the total contribution grows from 6.5% to 15.225% (8.72 percentage points). The government argues that the current contribution is insufficient, which generates pensions with a very low RR.

**i)** Increase in the state daily "social quota" (in addition to the state contribution) granted for each day of contribution on the salary, in order to improve the pension level. The new quota decreases (from 10.75 pesos to 6.25 pesos) as the number of minimum wages increases. I estimate the new quota at 322 pesos monthly for minimum-wage earners, down to 188 pesos to those who receive between four and eight minimum wages—US$15.40 and US$9.00, respectively. The federal government finances 100% of the quota for minimum-wage earners and this percentage decreases to 21% for those earning four minimum wages, and the rest is to be financed by the employer.

**j)** Monitoring the results of the reform through an annual evaluation conducted by CONSAR, and through an evaluation to be sent to the *Secretaría de Hacienda y Crédito Público* (Ministry of Finance and Public Credit) ten years after the reform has been approved. The project does not foresee specific spending allocations in the government budget (SHCP, 2020; CCE, 2020; Government of Mexico, 2020; Secretaría de Gobernación, 2020). It is unknown if an actuarial study was conducted to validate the new RR and the equilibrium between the new benefits on the one hand, and the increase in the employer contribution and in the state social quota on the other hand, as well as to determine the cost of the new benefits and guarantee the payment of the non-contributory pension.

The two previous reforms improve most of the principles of social security:

**a)** They extend the coverage of non-contributory pensions and the access to the minimum contributory pension guaranteed by the state;

**b)** They expand social solidarity because the state contribution and its social quota are reallocated to improve the minimum pension of the insured with the lowest income, and it also increases (by 8.7 percentage points) the employer's contribution to increase access to and the amount of pensions;

**c)** There are no specific provisions on gender, but the previous measures would favor women through non-contributory pensions and through the increase of lower pensions;[75]

**d)** They improve the adequacy of benefits with a projected 40% increase in the average replacement rate, although it is below the ILO minimum standard;

**e)** They reduce the fee paid to the administrators pursuant to international benchmarks; and

**f)** As for financial sustainability, they establish CONSAR's obligation to send annual reports, as well as another in ten years after the reform implementation. However, when this monograph was finished, it had not been reported whether the necessary actuarial study has been conducted to guarantee the financial-actuarial sustainability of the new benefits based on the new revenue. Also, no budget allocations have been specified to fund such expenses. The costly selection by those insured who were in the IMSS at the time of the structural reform (between the pension based on the DB formula and the pension based on the accumulated amount in the individual account) still persists.

The reform bill admits that two promises of the structural reform were not fulfilled due to certain "shortcomings" of the system: the lack of access to the minimum pension by the majority of the insured and a lower than expected pension amount; it also acknowledges that the administrative cost is higher than the international cost level in general and than the cost of four countries in particular; it suggests that the aging process affects the private system, and implies that the defined contribution must be increased as in the defined benefit system—even before the Mexican system has matured. Moreover, the state makes contributions (together with the employers) to mitigate the failures of such system. The proposed reform could be considered a re-reform since, despite maintaining the private system, the reform modifies several of its key aspects. In fact, a document from the employers recommended integrating

75 A public document recommends the write-off of contribution weeks for women when they have to be absent from work to raise their children, provided they return to work after six months. This provision is not included in the draft decree.

three pillars of the system; "pursuant to Article 4 of the Constitution": the non-contributory pillar and the two contributory pillars—the mandatory and the voluntary (CCE, 2020: 8), although the draft decree does not state this.

**Dominican Republic**

The system is highly fragmented with multiple separate regimes (teachers, autonomous agencies, state banks, ministry of finance, armed forces, etc.) with lax and subsidized benefits and the Executive Branch has granted numerous "praiseworthy" non-contributory pensions in the public sector (see Pichardo, Guerrero, and Mesa-Lago, 2020; Pérez-Montás, 2020; Valero, 2020b). The private system is the second youngest (17 years from its creation) and its population has an incipient or moderate degree of aging. Likewise, the EAP coverage is only 38% (self-employed workers have a coverage of 1.6%, the third lowest, because their special regime stipulated in the structural reform has not been established), while coverage of the older-adult population is 19%, the second lowest since it is the only country that has not introduced the non-contributory pensions that are also established in the structural reform. The recognition bond was never issued to those insured under 45 years of age who had contributed to the public system. The RR of the private system (23% or 27%) is the lowest in the region. On the other hand, the retirement age of men is the lowest together with that of El Salvador. The 8% deposit to the individual account is the lowest among the nine countries. Only 46% of the affiliates contribute to the system and 50% of the insured have a contribution below the minimum wage. There is a debt of US$8,651 million of employers' non-payment equivalent to 82% of the pension fund accumulated in the individual accounts. The concentration of investment in public debt is the second largest.

The foregoing explains why spending on public pensions was only 0.3% in 2017 (Arenas, 2020), but it also indicates that it will increase. No actuarial studies determining the cost of the transition of the general system have been conducted, nor of the multiple separate regimes that are financially and actuarially unbalanced. In February 2020, a law was approved that eliminates the administrative fee on the individual-account balance and reduces the fee on capital returns from 30% to 0.75% in ten years. This law also waives surcharges to employers for payment delays. The Superintendence proposed increasing the retirement age from 60 to 65 years for both men and women, but it was not approved (CNSS, 2020). The government claims that these measures will reduce the AFP income by US$603 million, nevertheless, a study calculates that they will increase their income by US$825 million, thereby doubling previous income (Fundación Juan Bosch, 2020). The probability of a comprehensive and significant re-reform of the system is complicated as the government is facing other areas urgently in need of change (fiscal, health, education, and poverty) worsen by the pandemic and the economic crisis, and is also encountering a strong opposition in congress and a resistance from employers and unions. The new president, the economist Luis Abinader, who took office in August 2020, is already addressing the reform of the family health insurance that intends to incorporate two million people who cannot contribute; it is expected that then Abinader continues with the pension re-reform.

This monograph could not include the financial-actuarial aspects of the eleven countries with public PAYG or CPC systems in Latin America, another six months of work would have been needed and there were no resources or time to do so. However, the monograph has an analysis of the problems of the public pillar in the mixed systems of Costa Rica, Panama, and Uruguay. Also, in section V, the public systems of Argentina and Bolivia are analyzed, as well as the public pillar in the parallel models of Colombia and Peru. Finally, the public system of Brazil is also examined (section VI) in view of its importance, size, latest parametric reform, and its failed attempt to structural reform.

A major obstacle to this investigation has been that there is no regional association of public pension superintendences or agencies that periodically gathers statistics, standardizes them, and publishes them every six months, as the AIOS does. My analytical critical review of private systems does not imply by default that public systems do not face financial and other problems. In my first book on social security in Latin America (Mesa-Lago, 1978), I made a detailed study of these problems and explained that many public systems did not comply with the ILO social security principles. My comparative book of the pension and health systems in the region, included private and public systems and identified the weaknesses of both (Mesa-Lago, 2008). I have also published monographs or technical reports on the public systems of Cuba, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, and Venezuela describing their problems and the need for parametric reforms (the last two are Mesa-Lago, 2018b and Mesa-Lago et al., 2020). I hope I can address the comparative study of these systems in the near future.

## The Adverse Impact of Aging on Financial-Actuarial Sustainability

Another ECLAC study (2018) classifies the countries of the region into four groups according to their degree of aging (measured by the percentage of the 65-year-and-over cohort over the 15-year-and-less cohort): 1) very advanced: Cuba and Uruguay; 2) advanced: Chile, Costa Rica, Argentina, and Brazil; 3) moderate: Colombia, El Salvador, Panama, Peru, Mexico, Ecuador, and Venezuela; and 4) incipient: Dominican Republic, Paraguay, Bolivia, Nicaragua, Haiti, Honduras, and Guatemala.[76] The pioneering pension systems in the region that have reached maturity, are placed in the first two groups. Therefore, the ratio of active workers per one pensioner declines in them, resulting in financial-actuarial sustainability problems, especially in public DB systems because the productive cohort (age 15-65) is declining while the elderly cohort (age 65 and over) is expanding rapidly. To solve the problem, it is necessary to raise the retirement age or the years of contribution, increase the contributions, reduce pensions, or a combination of all these measures (ECLAC, 2018 supports the same argument). This is much less of a problem in group four, as they have younger populations, less mature systems, the productive age (15-64) cohort is expanding, and the elderly (65 and over) cohort increases little; thus, the ratio of active workers per one pensioner is much higher than in the first two groups. Therefore, these countries have more time to take measures to ensure financial-actuarial equilibrium in the future, but the longer they wait to carry out a parametric reform, the tougher the measures will be. Group three is in an intermediate position.

For many years, structural reformers and the FIAP have maintained that public systems (not only PAYG—as they generally claim—but also collective

76 This classification is a bit different from that of Arenas (2020), because many countries that are rated as "incipient" by ECLAC are classified by him as "moderate."

partial capitalization regimes) are financially unsustainable or unfeasible. They also assumed that private systems would not be affected by the aging process because they eliminated transfers between generations, they have a defined contribution, and each insured individual finances his/her own pension (see section IV-5-a). Barr (2000) was the first to disprove that "individual fully-funded systems isolate pensioners from demographic changes... this is not a strong argument to change [from a PAYG] to a fully-funded system." I elaborated this point twelve years ago, arguing that the increasing life expectancy (particularly in the oldest group) will expand the longevity period of retirees, thus the fund accumulated in the individual account will not be sufficient to finance their pensions for a longer period of time and mortality tables will determine a reduction in the pension amount. Furthermore, with the maturity of the private system, the number of retirees will grow and they will withdraw their funds, while contributing workers will decrease and the same will happen to the accumulated fund. In order to address these problems, it will be necessary to increase the contribution of private systems or raise the retirement age or a combination of both, as is the case in public systems (Mesa-Lago, 2008: 131-132). The FIAP (2020b: 8), acknowledges this last argument: "An increase in life expectancy at retirement, which has not been accompanied by a raise in legal pension ages... negatively affects both individual fully-funded systems and PAYG schemes."

The FIAP (2017b) insists that "fully-funded systems... are the only financially sustainable mechanisms to improve workers' pensions" as opposed to "the PAYG systems that *still exist in some countries around the world*, which for demographic [aging] reasons, are not sustainable, as evidenced by the parametric changes that they have had to carry out [increase in retirement age and contributions] and those changes that are still in the process of being implemented, as well as the levels of public debt..." But in the same statement, the FIAP supports my previous argument:

> *"Notwithstanding the sustainability of individual fully-funded systems, they face the challenge of an aging population, as they have to finance an increasing number of pensioners for longer periods of time. To face this challenge, it is urgent to increase*

*the contribution rates and the retirement age, in order to adjust them to the demographic changes that have occurred since the creation of these systems... with the above changes [already mentioned in this monograph], the system of individual accounts may provide effective protection to the workers..." (FIAP, 2017b).*

Here are four comments regarding the two previous quotes: a) The statement maintaining that "the PAYG systems that *still exist in some countries around the world*" is disproved by the data on old-age pensions (also disability and survivors pensions) from 183 countries: 151 (82.5% of the total) have public social security pension systems with PAYG or CPC (including 34 in the Americas), while only 32 (17.5%) have fully-funded systems, but among the latter there are 23 that combine the two systems (mixed or parallel models); this results in 9 (4.9%) countries with pure fully-funded systems and substitutive models (ISSA/US-SSA, 2020; ILO, 2020a). b) The key feature of the fully-funded system has been the "defined contribution," i.e., it is a fixed contribution and does not change over time, as opposed to the public defined benefit system whose contribution must increase over time due to demographic aging and maturity of the pension system. After almost 40 years of maintaining such defining feature, FIAP now proposes—in order to save the private system—to increase the contribution that will no longer be defined but an increasing contribution as in the public system. This also disproves the promise that the private system would reduce contributory rates. c) The argument claiming that the private system protects better than the public regarding aging is refuted since an urgent increase in the contribution is needed to compensate for such aging. d) The private system will offer effective protection to workers provided that these crucial changes are made, which contradicts the FIAP's statement that said system is the "only financially sustainable one," because it must make similar changes in its parameters as in the public system.

The financial sustainability measures introduced by the re-reforms in Chile and El Salvador are discussed in section V-A-6, while the proposals in Colombia and Peru are examined in section V-B.

# V.

## PENSION RE-REFORMS IN LATIN AMERICA AND THEIR EFFECTS

A re-reform of the structural pension reform implies an elimination or significant change of the private system. As of September 2020, four pension re-reforms had been implemented in the region and all of them share the common feature of strengthening the role of the state in the pension system, although their degrees of change are different: Argentina (2008) and Bolivia (2010) closed the private pillar/system and integrated it into the public system. However, Bolivia guaranteed individual accounts to those insured who had them before the re-reform,[77] while Argentina limited itself to making a legal promise that the transferred insured individuals would receive higher pensions. On the contrary, Chile (2008) and El Salvador (2017) maintained the private system, but while Chile improved it in

77 The amount of the pension no longer depends only on the fund accumulated in the individual account. At the time of retirement such fund is transferred to the public PAYG fund that calculates the pension.

terms of non-contributory coverage, social solidarity, gender equity and financial sustainability, El Salvador prioritized the reduction of the fiscal cost of transition for the state. The changes introduced and proposed in Mexico in 2020 could be considered a re-reform. The proposals for re-reform of the parallel systems of Colombia and Peru are analyzed in section B.

## A.
## EVALUATION OF THE RE-REFORMS IN ARGENTINA, BOLIVIA, CHILE, AND EL SALVADOR

This section compares the features of the four re-reforms, evaluates whether they have resolved or not the shortcomings of the structural reform, and identifies outstanding problems and challenges. The same structure of section IV is followed. The re-reforms are ordered from the most radical, the one in Argentina, followed by Bolivia, then Chile, and lastly El Salvador, which was the least significant.[78] This section ends with an analysis of how the re-reforms and some subsequent laws or bills have reduced the AFP functions, while increasing the role of the state.

### 1. Social Dialogue

In 2001, the ILO reinforced the principle of social dialogue: any pension reform must be preceded by a debate involving all stakeholders. Today, the WB acknowledges that it is very important to avoid radical changes and that, before dismantling the private pillar, it would be useful to hold a social dialogue.

78 General sources for this section are Mesa-Lago, 2012 and ECLAC 2018; for Argentina see also FGS, 2009 to 2020, Bertranou et al, 2018, Bertranou, Centrángolo and Casalí, 2018, Grushka, 2018, and OPS, 2020; on Bolivia Mesa-Lago 2018a; on Chile CAPSP, 2015, Mesa-Lago and Bertranou, 2016, Arenas, 2020 and Ministerio de Hacienda, 2020; on El Salvador, ILO/FUNDAUNGO, 2020 and Mesa-Lago and Rivera, 2020. The survey coverage data come from Appendices 1 and 2, and IADB-SIMS 2009-2018; the AIOS AFP data, 1999-2018. Some additional later sources are mentioned in the text.

In Argentina there was little public discussion and few debates in Congress on the re-reform, which was quickly approved by a significant majority of the government in Congress, supported by the two largest union federations, the opposition of employers and AFJP and with no input from experts, civil society, and other stakeholders.[79] Transferring the insured and the capital accumulated in the private pillar, respectively, to the public system (Sistema Integrado Previsional Argentino: SIPA) and the public PAYG collective fund (FGS) affected some 3.7 million insured individuals in the private pillar. Argentinean insured had not responded to previous legal options to be transferred to the public system, but unlike the massive street demonstrations held during the 2001 economic crisis (due to the banking "corralito"), the re-reform did not led to union protests or demonstrations against the aforementioned mandatory transfer of funds and insured individuals, other than a few unsuccessful lawsuits—an obvious behavior resulting from the flaws of the structural reform and the private pillar, as well as from their inability to obtain the support of society.

The Bolivian government conducted extensive negotiations, granted concessions, and entered into an agreement with the most important labor federation (COB), but the employers' federation and other relevant sectors were not consulted. A wide debate was held in the National Assembly and the law was approved by a two-thirds majority held by the government.[80] After the re-reform was approved, there were conflicts with the COB, which went on strike and received other concessions.

In Chile, President Michele Bachelet appointed an advisory board with 15 representatives from all sectors of society to: study the re-reform, discuss it at numerous public meetings, and submit a report proposing changes to

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79 Conversely, the 2005-2007 parametric corrections in Argentina were based on public discussions in 2001-2003, technical studies, and experts' recommendations.

80 In a survey conducted in 2008 before the Bolivian re-reform, among affiliates, contributors, unaffiliated individuals, and pensioners, only 38% wanted to maintain the private system (these was the high-income group that wanted to keep individual accounts) and 61% supported a new system.

correct the shortcomings of the private system: 90% of the advisory board's recommendations were incorporated into the legal bill approved by Congress.

In El Salvador there was not a clearly defined social dialogue among the different actors; union representatives claimed that the reform was characterized by an inconclusive process with very few spaces for discussion. The employers' association, together with the AFP, was part of Iniciativa Ciudadana that prepared a reform proposal (out of a total of four), but there were few approaches with the Executive Branch, who actually prepared its own proposal. In the Legislative Assembly there were some disagreements, especially from opposition parties. The fiscal deficit resulting from the acute financial disequilibrium of the pension system had worsened and the government was under more pressure, thus it reached an agreement with other political parties to generate an integrated proposal that was approved with a wide margin in the Assembly.

## 2. Coverage

The measurement of the impact of the re-reforms on the EAP and older-adult population coverage faces challenges due to discrepancies between administrative and survey figures or contradictions in some results, or a single observation after the re-reform.

In Argentina, before the 2008 re-reform, there were important parametric changes, especially in 2005 and 2007, that led to a series of measures to extend contributory and non-contributory coverage: the so-called "*moratoria*" allowed insured individuals to retire without having met the 30 years of required contributions (with fiscal subsidies), while self-employed workers who lacked full or no documentation were also able to retire. However, according to surveys, EAP coverage remained virtually static at 45% in 2009-2018; administrative figures calculate the EAP coverage at 47.9% in 2019; coverage of the older-adult population for all pensions increased from 84% in 2007 to a record of 90.1% in 2009, but then dropped to 84.2% in 2018.

The Bolivian re-reform lowered the retirement age from 65 to 60 years for both men and women, which expanded the number of retirees (see section 6). The impact of this measure on the coverage shows discrepancies between two measurement methods: based on administrative figures, the coverage of contributors with respect to the EAP was 12.5% in 2010, increased to 13.3% in 2011, but then dropped to 11.1% in 2014, indicating a static trend since 2000; conversely, surveys indicate an increase from 15% to 19.6% in the EAP in 2009-2018 (whatever the measurement may be, Bolivia has the lowest contributory coverage in the region after Honduras); self-employed coverage increased from 2.6% to 3.9% in the period. Coverage of the older-adult population for contributory and non-contributory pensions (mostly by the latter) reached its historical peak in 2008 with 98% (over 77% in 2007) due to the expansion of Renta Dignidad, but remained static in 2009 before the re-reform and then it decreased slightly to 97% in 2011-2014, despite its universalization provided in the law (nevertheless, the last figure is the highest in the region).

The Chilean 2008 re-reform began to incorporate self-employed workers on a mandatory but gradual basis since 2012 and made them eligible for other benefits such as state solidarity subsidies. The re-reform granted voluntary affiliation to unpaid family workers, while low-income young workers were granted a two-year fiscal subsidy as an incentive for their affiliation. According to administrative figures, the EAP contributory coverage grew from 61.2% to 64.8% in 2007-2013, while the surveys show an increase from 58.4% to 65.3% in 2009-2017. On the contrary, surveys show a decrease in the self-employed coverage from 25.7% to 24% in the same period; in 2017, only 6% of self-employed workers who entered the labor market were contributors to the AFP and only 3% of total contributors were self-employed workers; a 2019 law gradually stipulated the affiliation of half a million self-employed workers with annual fees equal to or greater than US$1,932. A bill was being prepared in 2020 to incorporate other self-employed workers, such as taxi drivers, fishermen, and micro-employers. Non-contributory coverage was strengthened with the creation of the *Pensión Básica Solidaria* (Basic Solidarity Pension: PBS) covering 60% of the poorest households, which contributed to the expansion of total coverage by three percentage points among men and five points among women in the same period. Likewise, it ended  previous limitations, such as quotas, waiting lists, and insufficient fiscal resources. Administrative figures show an increase in such coverage from 79% to 84%, while surveys indicate an increase from 83.7% to 88.9% both in 2009-2017.

The 2017 Salvadoran re-reform did not take any action to extend coverage, failing to comply with the mandate of the 1996 structural reform law to expand coverage of groups that are difficult to incorporate.[81] As this reform is very recent, we only have figures for a single year (2018): EAP coverage by administrative figures virtually stagnated from 24.6% to 24.8% in 2017-2018, but its zenith was 27% in 1995, while based on surveys it grew from 27.2% to 28.1%, but its peak was 30.3% in 1998. Regarding the coverage of the older-adult population, administrative figures indicate stagnation at 35% in 2017-2018, but the peak was 36.4% in 2014, while surveys indicate stagnation at 14% and its zenith was 16.2% in 2015. Regardless of the source, both coverages in 2018 were below the zenith reached years earlier.

In summary, there were coverage increases in Chile regarding the EAP and older-adult population coverage (but a drop among self-employed workers); in Bolivia, regarding the EAP and the self-employed worker, based on surveys, the older-adult coverage was static but the highest in the region; there were no increases in Argentina and El Salvador coverage; additional research and data are required for 2019 and 2020 in order to reach stronger conclusions.

## 3. Social Solidarity and Gender Equity

Social solidarity improved in Argentina and Bolivia when the private pillar/system that lacked social solidarity closed and all the insured were transferred

81 In mid-2018, self-employed workers were allowed to register for the first time, since in practice they had been excluded; they are now granted health benefits and pensions. They must pay US$40 per month if only the worker joins or US$56 if his/her family joins.

to the public system with intergenerational solidarity. Likewise, Argentina ended the high administrative fees; extended the contributory system for lower-income groups; and expanded social inclusion of the older-adult population by eliminating some restrictions on contributory pensions, and for mothers as for non-contributory pensions. Bolivia also improved solidarity with the universalization and age reduction of non-contributory pensions (Renta Dignidad) that has alleviated poverty, the semi-contributory pension, a solidarity fund (which redistributes its patrimony on behalf of contributors with the lowest income and higher probability of a low pension), and a solidarity contribution imposed on the employer and high-income insured.

The Chilean re-reform infused social solidarity in the private system, thus creating two benefits financed by the state: the basic solidarity pension (PBS) granted to households in 60% of low-income resident population, being 65-year-and-over, and lacking a pension; and the solidarity pension contribution (APS) complementing the contributory pension of 65-year-and-over persons whose income is low; the APS decreases with the amount of the contributory pension and ends when it exceeds a cap, hence it has progressive effects. The 2015 Presidential Commission recommended expanding the PBS to 80% of the poorest households or universalizing it with a mean test but was not implemented. A law approved in 2019 increased the amounts of the PBS and APS by 20% and a bill currently in congress imposes a 6% contribution to the employer to improve particularly lower pensions plus an increase in fiscal support from 0.8% to 1.12% of GDP, to improve low RRs for women, the middle class, and insured individuals who delay their retirement.

In El Salvador, the 2017 re-reform neither extended nor improved the non-contributory pension, but created three new benefits to help insured individuals who are not entitled to a regular pension because they lack 25 years of contributions: insured individuals who have contributed less than 10 years are only entitled to a refund of the balance (as was before); those who have contributed between 10 and 20 years may opt for the refund of the balance or for the new temporary economic benefit (BET), which is calculated according to the amount accumulated in the individual account plus a contribution from the Solidarity Guarantee Account (CGS), the BET ends when the individual account is exhausted; those who have contributed between 20 and 25 years may opt for the new permanent economic benefit (BEP), which is calculated in a similar way to the BET minus 2% of the CGS contribution as the latter continues to pay the BEP when the individual account is exhausted; and retirees who survive 20 years after retirement are entitled to the new longevity benefit (BL) provided by the CGS guaranteeing the payment of such pension after the individual account is exhausted. Only 2% of the insured individuals requested the new BET and BEP benefits; 98% requested the return of the balance in the individual account. The CGS aimed to reduce the fiscal deficit and now finances the new and old DB benefits (except for the pensions of the closed public system that the state is still paying); it is financed with a portion of the employer's contribution (both employers and workers now pay an additional 1%) and with another contribution paid by retirees except for those receiving the minimum pension; despite the adjective "Solidarity", the CGS has not improved this aspect of the system.

A common feature against solidarity in all four countries is that the re-reforms did not affect the separate contributory regimes, which still have higher benefits and fiscal subsidies. Argentina has about 130 regimes that include provincial and municipal public officials, professionals, armed forces, police, gendarmerie and prison staff, as well as so-called "complementary" and "special" regimes, but also the previous generous regimes for teachers, researchers, diplomats, the judiciary, and the electricity sector were restored, and the construction worker regime was added. Bolivia kept the separate regime for the armed forces (their average pension subsidized by the fiscal authorities is twice the average of public and private pensions) and also awarded more liberal conditions to mining and metallurgical workers, and to those working under unsanitary conditions. In Chile, the armed forces that implemented the re-reform were exempted from it and still have their privileged regimes (the average pension of the military ranges between three and seven times the contributory pension of the private system), despite making legal attempts and exercising social pressure to include them in the general system. In Uruguay there are five parastate "*cajas*" (funds): military, police, banking, notary public, and professional. El Salvador maintained the generous and very expensive scheme of the armed forces.

Three re-reforms have improved gender equity, but in some cases certain deterioration has occurred in recent years. In Argentina, mothers with seven or more children and with no resources receive a non-contributory benefit, and a universal allowance is awarded for each child under 18 years of age or disabled child to unemployed or informal parents with no pension. However, in 2020, 40.6% of contributors were women versus 59.4% men, which suggests that a significant portion of women are outside the labor market; 34.9% of the total contributors to the integrated system (SIPA) were women and 65.1% were men; the average female replacement rate was 32.6% versus 43.9% for men. Therefore, 69.2% of women versus 50.8% of men receive pensions equal to or less than the minimum retirement amount; only 11% of women between 55 and 59 years old will be able to retire when they turn 60 as they will not meet the 30 years of required contributions. Conversely, women receive 62% of the non-contributory pensions versus 37.8% men.

In Bolivia, insured mothers with 10 years of contributions may reduce one year per each child born alive, with a maximum of three years, which are counted for the mother's pension.

In Chile, mothers—regardless of their income—are entitled to a bonus for each child born alive; the bonus is deposited in the mother's individual account, accrues annual interest, and becomes effective at the time of retirement, increasing the pension level. Likewise, the disability-survivor premium is the same for both men and women, but considering that women have a lower incidence of risk than men, the resulting surplus is paid into their individual accounts. In case of divorce, a judge can order the transfer of funds accumulated in individual accounts during marriage (up to 50%) from one spouse to another, which is usually the woman; housewives have voluntary affiliation and male spouses are now entitled to a survivor's pension.

These three countries have increased female participation in pensions, particularly in non-contributory pensions where they now have a majority: in Argentina, the proportion of older-adult women who receive all types of pensions increased to 92% in 2010 (versus 89% for men); in Chile, participation in total solidarity pensions amounted to 63% in 2012 (the female average solidarity pension was 4% higher than the male average); and in Bolivia, female participation in Renta Dignidad pensioners reached 54%. Gender-differentiated mortality tables were eliminated in Argentina, Bolivia and El Salvador, but continue in Chile (the 2015 Presidential Commission recommended unisex tables; however, it was not approved). The Salvadoran re-reform did not introduce other measures to improve gender equity.

## 4. Sufficiency of Benefits

All re-reforms improved benefits, although to varying degrees. Argentina increased: three times the maximum amount of contributory pensions to US$3,108 in 2012; also, the average of contributory pensions rose five times to US$560; increased the minimum pension by 73% to US$423; and by 100% the universal basic pension (PBU: non-contributory) to US$200.[82] The minimum pension is 76% of the average pension (a too narrow gap), while the PBU is 70% of the minimum contributory pension; the percentage of the elderly living in poverty dropped from 28% to 3.3% in 2003-2009. The average replacement rate (RR) was 75% of the average salary in 2012, but it decreased to 43% when taking into account the program that grants lower contributory pensions to 2.4 million insured older adults ("*moratoria*").[83] A recent report from Congress estimated in 2020 the average RR at 36% in the general system (in the separate regimes the RR ranges between 75.4% and 151.6%), the general average rate was 55 percentage points below the minimum basic breadbasket of goods for

82 According to the law, the state guarantees affiliates and pensioners transferred to the public system equal or better pensions than those they had under the private system at the time of the re-reform, but it is almost impossible to calculate such pension.

83 Under certain conditions, a reduced pension was immediately awarded to insured older adults, provided that they acknowledged their previous debt and paid it through pension deductions.

women and 38 points lower than such breadbasket for men, which indicates a significant deterioration in sufficiency, probably due to the economic crisis and to a delay in the adjustment of pensions to inflation.

The Bolivian re-reform expanded and liberalized the entitlement and benefits conditions, which are very complex and diverse, therefore, they are only summarized herein. There are three pension regimes: contributory with individual accounts, semi-contributory with a solidarity subsidy, and non-contributory. The contributory old-age pension is composed of two parts: the balance in the insured's individual account calculated by a formula and the compensation for contributions (CC) paid by the insured to the old public pension system. This pension is granted regardless of age if the said balance finances at least 60% of the average base salary; also it is granted to women aged 50 and men aged 55 as long as both have such 60% including the CC; and at 58 years of age for both sexes with the 60%. The semi-contributory pension is awarded at 58 years of age with 10 years of contributions and is based on the contributions plus the CC and the solidarity subsidy. In 2012, the average monthly pension based on individual accounts was US$346, slightly higher than in the old public system. The semi-contributory pension may be less than the minimum wage and has a maximum amount of US$376; the minimum contributory pension is equivalent to a minimum wage (US$145); and the contributory pension has a maximum of 60 minimum wages (US$8,700). The beneficiaries of the non-contributory pension (Renta Dignidad) amounted to 88% in 2007-2012 tantamount to 924,446 individuals (8.5% of the total population), and 83% of them lacked another pension; the monthly sum was US$28.50 (8% of the average contributory pension); despite it is a very low sum, this pension is the only source of income received by half of the poor.

In Chile, the number of PBS and APS beneficiaries doubled in 2008-2012, exceeding 1 million and reducing poverty among the older-adult population by 2.7 percentage points. The PBS was granted to 84.5% of people in the six poorest income deciles (60% of the population) and increased by 72% the income of those in the poorest 5%. The value of the PBS is 50% higher than the previous non-contributory pension and it increased income by 34%; the APS also increased the level of contributory pensions significantly. A law passed by Congress in December 2019 rose the benefits of the PBS and the APS: by 50% to beneficiaries aged 80 and over, by 30% to beneficiaries between 75 and 79 years of age, and by 25% to beneficiaries under 75 years of age (Law 21190, 2019). A bill by the president Sebastián Piñera[84] (during his second term) sent to congress in 2020 proposes: a) guaranteeing that new solidarity benefits ("solidarity collective savings") prevent all Chileans over 65 years of age from being below the poverty line, as well as that the increase from contributory pensions ensure that the insured (especially women) who have contributed full working days for 30 years receive a total pension not less than the minimum wage; b) creating a "dependency insurance" for 65-year-and-over pensioners and for those with severe functional disability (financed by 0.2% of the 3% solidarity fund) and a "dependency allowance" for people of the same age and disability being part of the poorest 60% households (financed by the state); and c) ensuring that solidarity pensions are paid through the entire life of the insured and are adjusted to the CPI—these pensions, added to the contributory pension, would have a cap above which the solidarity component would be reduced ("Reforma de Pensiones...", 2020; República de Chile, 2020).

In El Salvador, three new benefits were added (BET, BEP, and BL), but a cap on the pension that previously did not exist was established at US$2,000 per year or 55% of the basic regulatory salary. Also, the deposit in the individual account of the insured was reduced from 10% to 8% in 2018-2019 and is supposed to increase gradually until recovering the old 10% in 2044-2049 and then rise to 11%.

Three re-reforms improved or kept the indexation of pensions. Argentina had a long history of devaluation of pensions that led to half a million legal claims; since 2009 the pension value began to be restored and there were

84 Many of the proposals of this project were part of the 56 recommendations of the 2015 Presidential Commission, although most of them are pending.

other adjustments in 2016-2018; in the last year, it was changed from an adjustment based on the average salary index and all contributions to a quarterly adjustment according to the CPI, leading to a negative effect and—due to the economic crisis—to another deterioration in the real amount of pensions. In Bolivia, as before the re-reform, indexation is based mainly on the UFV, but with some differences among regimes. In Chile it is still tied up to the monetary unit automatically adjusted for inflation (UF). In El Salvador the adjustment of pensions remains at the discretion of the government.

## 5. Efficiency and Reasonable Administrative Expenses

In Argentina, with the change to the public system, competition came to an end, all fees and premium were terminated. The state agency that manages the public system (ANSES) cannot impose fees.

In Bolivia, the constitution, the re-reform law, and other laws stipulated the establishment of a Gestora Pública (Public Manager) to administer individual accounts and invest the funds of the Sistema Integral de Pensiones (Integrated Pension System), after which the two AFP would be shut down. Since January 2018, such Manager began to administer and pay the universal non-contributory pension (Renta Dignidad) and funeral expenses; in 2020, the payment of direct transfers resulting from the pandemic (universal, family, and basic breadbasket bonuses) were assigned to the Manager, but the government has postponed several times its takeover of the AFP functions (the last time until 2022); therefore, two AFP are still managing individual accounts, investing the funds, and paying pensions. Fees are still being paid to the two AFP until the full functions of the Manager begin, and the premium is collected by a collective risk fund at the *Autoridad de Fiscalización y Control de Pensiones y Seguros* (Authority for the Supervision and Control of Pensions and Insurance: APS), which supervises, publishes statistics, etc. So far, the Manager is financed through a fee paid for the administration and payment of Renta Dignidad, as well as for funeral expenses and fiscal transfers; subsequently, it will collect the fee for managing contributory pensions.

The 2008 Chilean re-reform attempted to promote competition with several measures: a biennial bid that assigns new labor force entrants to the AFP that offers the lowest fee, which is also applied to previous affiliates (but most of the insured is still affiliated with the two main AFP, despite they charge higher fees); the authorization to banks to manage individual accounts; and the substitution of the selection of commercial insurance companies from a bid by each AFP to a collective bid including all. A new AFP was founded and the concentration in the two largest decreased from 55.1% to 52.9% in 2008-2018, while the number of annual transfers increased from 4.3% to 6.1% of total affiliates (AIOS, 2019). Initially, the average total fee increased because the elimination of the old fixed-sum fee was incorporated into the variable fee and coverage of disability-survivor risks was expanded; then, due to the bid, the total fee dropped to the pre-re-reform level. The re-reform also set a Pension Education Fund to inform and educate people on the pension system,[85] as well as centers to answer public inquiries and help the insured in claiming benefits and making decisions, but the information available is very technical and the goal of promoting pension school courses was not met. The 2015 Presidential Commission recommended measures to improve competition and cut costs: establishing a public AFP (supported by 79% of interviewees in a 2014 survey) with the same rules as private ones; expanding auctions every two years to incorporate part of the insured already affiliated with the AFP that offers a lower fee; allowing participation of non-profit institutions and introducing collective auctions for contracting annuities. It also recommended creating educational programs financed by the Education Fund for students, workers, unions, and employers; as well as programs financed by the AFP and specifying goals and indicators to evaluate the performance of the Fund. In his second term, president Sebastián Piñera submitted a bill in 2020 that would open the AFP to non-profit associations and cooperatives of affiliates, and would develop a national pension education strategy that would replace the Pension Education Fund to be financed by the AFP. A survey in February 2020 indicated

85 Mexico has established a Pension Education Strategy, including detailed information on rights, obligations, and procedures, personalized advice, and face-to-face and online courses.

that 74% of interviewees negatively evaluated the general performance of the AFP, while 79.2% considered that the AFP should be eliminated and replaced by another system (Activa Research, 2020). There is a movement of citizen groups, "No+AFP", which organized the 2016 demonstrations and is active in ending the current system.

The Salvadoran re-reform did not implement any measure to increase competition between the two AFP that maintain a duopoly, but did stipulate the creation of a single database to verify inconsistencies between contributors to the pension system and the health system in order to increase coverage and fight evasion in the former.

None of the re-reforms restored direct social representation in the management of pensions, although Argentina and Chile created advisory and monitoring boards that have slightly improved the previous total gap. Argentina established, as part of the public administrator (ANSES), an advisory board to supervise and monitor the funds of the unified public system, consisting of 13 representatives: three from the unions, two from the retirees' association, two from the employers' organizations, and the remaining six from the government and banks. Despite the constitutional mandate in Bolivia, the re-reform law did not establish representation of the insured and employers at the Public Manager; the latter is legally bound to inform the population about the new rights and obligations of the system and to defend the insured, through information and education campaigns.

Chile's 2008 re-reform created a user commission (CUSP) representing workers, pensioners, and other sectors, to monitor compliance of the objectives of the re-reform and publish an annual report on its results, but its recommendations are not mandatory. The bill under debate in Congress in 2020 would establish the participation of affiliates in the AFP board of directors, as well as an Affiliate Committee in each AFP, which would monitor the implementation and results of the investment policy and regulations, as well as the quality of the services provided by the AFP. The CUSP would appoint the candidates for the board of directors and the Affiliate Committee, and the AFP could choose only from such candidates, also would create an *Intendencia de Protección de los Afiliados* (Department for the Protection of Affiliates) at the Superintendence of Pensions, and the AFP should inform their affiliates about their management results.

The Salvadoran re-reform stipulated that the risk committee and a new actuarial committee must have, in addition to government representatives, a worker representative and an employer representative.

## 6. Financial-Actuarial Sustainability

### a. Contributions

In general, contributions were maintained in Argentina and Chile, but were increased in Bolivia and El Salvador.

Contributions in Argentina are the highest (a total of 21.7%, 10.7% from insured and 11% from employers), but fees and premiums were eliminated. However, since 2007, the employer's contribution was gradually diminished in order to reduce labor costs and increase formal employment, which resulted in a loss of contributions to SIPA tantamount to 0.25% of GDP in 2018.

Bolivian contributions were increased due to the new solidarity contribution paid by the employer (3%) and by the insured according to their income (rising from 0.5% to 10%). The total contribution of 17.42% is higher than that of Chile, and could rise to 32.71%, exceeding that of Argentina. The insured's contribution is at least 2.7 times that of the employer (which violates the ILO minimum standard stipulating that the worker should not pay more than 50% of the total contribution), and self-employed workers have an extra fee of 1.71% for employment risks. The state no longer contributes to the contributory regime and may establish other sources of income to avoid using fiscal resources.

The Chilean re-reform did not change the contribution, fee, and premium, but later the disability-survivors premium was transferred to employers; in 2020, the total was 13.76% distributed as follows: 11.77% from insured for deposit (10%) and net commission (1.77%) and 1.99% from employers for the premium; the worker had a burden of 86% of the total amount in violation of the minimum ILO standard that the worker must not pay over 50%. In October 2020, the bill in congress would impose a 6% contribution to the employer[86] that would go to individual accounts (thus the total contribution would be 19.76%, still 60% paid by the worker); also, the AFP should reduce their intermediation fees—they could not charge fees for mutual fund investments and their total fee would be capped at 1.25 times the average of international benchmark fees. Finally, the AFP would have to return 20% of the fees charged to the insured when  capital returns are negative.

The Salvadoran re-reform increased the total contribution by two percentage points, from 13% to 15% (the worker from 6.25% to 7.25% and the employer from 7.25% to 7.75%). However, the deposit in the individual account was immediately reduced by two percentage points (from 10% to 8%) and it will then gradually increase to 11.1% in 2020-2050. Five percent is transferred to the new Solidarity Guarantee Account (CGS), which will be gradually reduced to 2% in 2020-2050 (so the deposit in the individual account will increase). Also, a certain group of pensioners must contribute between 3% and 10% of their pension to the CGS. The AFP net fee plus the disability premium has a maximum of 2% (previously 2.2%), which will be reduced to 1.9% as of 2020 and remain static afterwards. The worker must pay 45% of the total contribution and the employer 55%, so that the maximum of 50% of the ILO paid by the worker is not violated, although it is close to said maximum.

### b) Fund's capital, its investment, and capital returns

The fund's capital grew and reached new milestones in three countries, the largest one in Chile, followed by Argentina, and the smallest in El Salvador, while it decreased in Bolivia.

86 The employer's contribution would be subsidized annually by 0.5% until 2032, when the employer would make the full payment.

In Argentina, the capital in the PAYG public fund (FGS) rose 48% in 2009-2017 from US$35,792 million to a record of US$67,854 million, but dropped to US$38,052 million in April 2020, a similar amount to that of 2009; as for GDP, it reached a zenith of 12.1% and dropped to 8.6% in the same period, a lower level than that of 2011, due to the recession and the pandemic (the transfer of funds from the private pillar to the public system was 11.5% of GDP in 2007). The FGS has been invested mainly in public debt of the state and the provinces, growing from 62.8% to 70% in 2009-2020; productive and infrastructure projects (also state-owned projects) decreased from a record of 13.9% in 2011 to 3.3% in 2020 (possibly due to low capital returns); investment in stocks declined from a peak of 13.5% in 2016 to 8.7% in 2020; an increasing percentage from 4.9% to 12.7% within the same period has been allocated to loans to beneficiaries, non-beneficiaries, and provinces (possibly with negative real capital returns); there are no investments in foreign instruments. The real capital return on the investment is not reported, only nominal capital return has been reported a couple of times.

In Bolivia, in 2010, 545,608 active contributors and US$5,042 million were transferred from the private system to the public system, equivalent to 28.9% of GDP (AIOS, 2011). The re-reform created five funds with total income equivalent to the "fund's patrimony;" this is different from the "value of the SIP (Integrated Pension System) funds," which is the capital accumulated in the individual accounts and invested. The fund's patrimony grew 198% in 2011-2019, from US$6,472 to US$18,796 million, while regarding GDP it increased from 27.1% to 46.3% in the period. On the contrary, the value of the SIP fund was US$2,886 million as of July 31, 2020, which compared to said fund in 2010 (US$5,042 million) results in a decline of 42.7% and, regarding GDP, a decrease from 28.9% to 7.4%, a reduction of 22 percentage points (APS, 2020, this is the source of the official statistics in 2019-20). The distribution of the investment portfolio in 2019 was in "highly liquid resources," very concentrated and growing in bank deposits 56.8% (which pay very low or negative real interest), followed by public debt 36.7% (possibly with low real interest) and 4% in foreign instruments. The annual gross real capital return averaged 7.3% between 1997 (year the system was created) until 2009 (before the re-reform) and 9.7%

in 2019, an average performance among the private systems at that time; in 2011-2019, such real capital return decreased to an annual average of 4.6% and was 6.4% in 2019, for respective reductions of 2.7 and 2.8 percentage points before and after the reform (my calculations based on APS, 2020); this decline has been similar among fully-funded systems, although Bolivia's performance in 2019 was only lower in two countries (Table 18).

The capital accumulated in Chile doubled from US$105,900 million to US$215,372 million in 2008-2019 (from 65% to 81% of GDP).[87] The system's average annual real rate of return increased 3.8% percentage points between the average rate from the fund inception until 1999 and the rate in 2019; the rate of return decreased 19% in 2007 and 2% in the first quarter of 2020, but partially recovered in August (Superintendencia de Pensiones, 2020b); investment in foreign issues and debt of financial agencies increased from 58% to 63%.

In El Salvador, the impact of the re-reform can only be measured within two years (2018 and 2019): in 2017-2019, the accumulated capital grew by 17% and as a percentage of GDP by 4.6 points; the concentration in government debt increased by 1.2 percentage points and the return on capital grew by 3.6 points.

### c) Financial-actuarial Sustainability of the Re-reforms

Said sustainability is at risk in Argentina, Bolivia and El Salvador; previous actuarial studies were not done in any of these three countries, although in El Salvador a study was conducted in the year after the reform and in Bolivia five years later.

In Argentina, the pension spending of the public PAYG system (SIPA) rose from 3.8% to 7.5% of GDP in 2004-2016 and is projected to rise to 8.7% in 2020. Before the re-reform, the public system experienced a significant annual deficit financed by the state, but it was eliminated by the transfer of US$25,500 million from private funds to the FGS, which halted the disequilibrium in the

87 In 2017, it was US$201,512; in 2020, it experienced a significant decline due to the global economic crisis.

short term. However, in the long term, the FGS faces onerous obligations and a potential deficit with regard to the 3.7 million insured transferred from the private system, in addition to the insured who were previously in the public system. This risk is aggravated by several factors: aging of the population, increased life expectancy, maturity of the pension system, persistent informality, and poor compliance. In 2020, the actual contribution rate in the general system was 17.5%, but 30.5% was needed (12.9 points more) to cover the expenditures of the system; the deficit was covered by the state;[88] the ratio of active workers per one pensioner in the general system (including the beneficiaries of the "*moratoria*") was 1.38 showing a declining trend. Separate regimes are actuarially unbalanced and require significant fiscal resources. At least as of 2017, an actuarial study had not been conducted to evaluate the sustainability of the system. Nevertheless, projections made by an expert show that the pension deficit (income minus expenses, without fiscal subsidies) would increase from 2% of GDP in 2015 to 3% in 2050. If the public system faced a deficit or the risk of long-term unsustainability, the government must propose solutions: state subsidies, increases in contributions, pension cuts, or a combination of all these measures. At the end of 2017, a law, on an optional basis, increased the retirement age from 65 to 70 years for men and from 60 to 63 years for women, and also tightened the calculation of pensions (Law 27,426, 2017).

In Bolivia there is no official series of the total balance of revenue and expenses of the SIP for the entire period. Revenue from collections and capital returns on investment are reported, but not expenses.[89] The 5-year reduction of the retirement age increased retirements almost six times in 2009-2019 (153,880 in 2019). It was not possible to obtain information neither on the accumulated total of the number of pensioners due to disability and survivors, nor of the retirees and pensioners of the military sector. The re-reform law set the ratio

88 All the special systems had insufficient contributions and many exceeded the contribution of the general system, i.e., diplomats in 24%, police officers in 30%, and university teachers in 39%; the average for all systems/regimes was 13.5%.

89 Only the balance of the Solidarity Fund could be obtained and it showed a positive balance in 2015 and 2016 (but see later).

of active workers per one pensioner (including all programs) at 10, and I calculated that it declined from 3.4 per one in 2010 to 2.8 per one in 2013 (Mesa-Lago, 2018a). The new available series reports affiliates instead of contributors (contributors are approximately half of affiliates) and only "retirees" (without other pensioners), hence the ratio is much higher and is not comparable (APS, 2020). Conversely, the last actuarial study (that uses active contributors and all pensions) estimates, for 2020, a ratio of 7.8 active workers per one pensioner (less than the legal 10 per one) that will decrease to one per one in 2090. The aforementioned actuarial study made projections of the present value of the obligations in 2014-2063, at various interest rates, always resulting in deficits ranging, according to three scenarios: at the lowest interest rate between US$4,718 and US$55,558 million and at the highest interest rate between US$532 and US$1,032 million. The contribution rate in the year in which the financial balance turns negative (around 2031) would have to be increased, in order to restore the equilibrium, between 126% and 931% (the largest deficits would be equivalent to 11% and 131% of GDP in 2019). The Solidarity Fund will show a deficit starting in 2022 (Melinsky, Pellegrini and Asoc, 2015). This is due to the reduction of the retirement age and the years of contribution required, as well as to the increase in pensions, including military pensions.

In Chile, the structural reform provided the most generous entitlement conditions and benefits among the nine countries, therefore, pension spending was high; but, after 40 years, pension spending declined from a peak of 5.7% to 3.1% of GDP in 2000-2017 and it is projected to decrease to 2.1% in 2030. It will not disappear until 2050, i.e., in 70 years. The costs of the transition have been financed by substantial annual fiscal surpluses; no other countries have followed this example. The cost of the 2008 re-reform was only 0.7% and it underpinned the financial sustainability with the creation of a reserve fund financing the new benefits, subject to actuarial reviews every three years (the first review showed that the system would fulfill its obligations until at least 2030), as well as every five years to evaluate the effects of key variables on replacement rates (RR) and financial needs; an advisory board (CUSP) supervises the fiscal sustainability of the re-reform and studies potential modifications required. The 2015 Presidential

Commission approved 56 recommendations issued by a majority vote of its 24 members. The Ministry of Finance estimated that the cost of implementing all the recommendations would be 0.4% of GDP, an obviously low percentage considering all the proposed improvements. The recommendations attempted to alleviate several financial problems analyzed in section IV-5, through multiple measures: a) developing new productive instruments for national investment, especially instruments benefiting small and medium enterprises; b) allocating a larger share of investment to real assets (such as mutual funds); c) increasing or eliminating the cap on the contribution's taxable income in order to increase revenue and reduce the regressive effect; d) imposing on employers a contribution of 4%; e) increasing the period before the legal retirement age (from 10 to 20 years) so that investments can be moved from high-risk to lower-risk instruments; f) eliminating multi-funds A and E (highest and lowest risk) in order to reduce excessive options for insured who lack financial education; g) strengthening the functions of the technical investment board created by the reform; h) increasing the current low penalties for employers who withhold their workers' contributions and do not transfer them to the AFP; and j) strengthening the capacity of the Ministry of Labor and Social Welfare in everything related to the payment of contributions, supervision, and delivery of pensions. The bill under debate in congress would create a Pension Advisory Board that from time to time would review the parameters of the system and mortality tables with the assistance of an Actuarial Technical Unit that would be established at the Superintendence of Pensions; this Unit would have to conduct an actuarial study every three years to evaluate the sustainability of the public component in the new system.

In its second presidential term, the Bachelet administration appointed a committee of ministers to study the proposals of the Presidential Commission and thus decide what proposals to submit to the executive and legislative branches (Mesa-Lago and Bertranou, 2016). Due to political conflicts within the ruling party coalition, the minister of finance that had supported the Commission and the reform process was replaced by a more conservative minister who had no interest in promoting the proposals, and hence a power vacuum  was created and the process was paralyzed for a year. This led to demonstrations of around a million people in Chilean cities in 2016 who were against the AFP and demanded a reform. In January 2018, president Bachelet—nearing the end of her second term—tried to pass a law in Congress that incorporated several of the Commission's recommendations, including increasing the employer's contribution to 5% and establishing a new solidarity collective savings fund, but the division in Congress hindered the reform bill ("Government does not obtain the votes…," 2018).[90] As of September 2020, the current president's pension reform bill had not yet been approved by congress. The Ministry of Finance estimated its cost (including the increase in new solidarity benefits in 2019) at 1% of GDP by 2032 (US$3.7 million per year) due to the creation of new benefits and public agencies (Ministerio de Hacienda, 2020).

The Salvadoran re-reform stipulated the creation or modification of three entities: a) created between two and four multi-funds (growth, moderate, conservative, and fixed income), the latter two mandatory multi-funds; b) established a Risk Committee in charge of setting the maximum and minimum investment limits for each instrument; and c) set an Actuarial Committee, which is a new body that must meet annually to verify and project the financial sustainability of the system, including information on life expectancy to be reviewed every five years to determine the retirement age, examine every three years the sufficiency of the CGS, and evaluate all legal reform bills of the private system; this committee must have at least one actuary (as of the end of September 2020, such committee had not been established and appointed the actuary). The reserves of the closed public system (SPP) were exhausted in 2000-2002, as well as the reserves of the armed forces regime (IPSFA); the accumulated deficit in the balance of revenue and expenses was US$263 million in 2000-2018; fiscal transfers covered 95% of the SPP deficit and 45% of the IPSFA deficit in 2018. An actuarial study was not done before the re-reform, but one was actually conducted a year after (2018) by a private company which calculated net actuarial liabilities in the SPP of US$5,301 million (20.3% of GDP in 2018)

90 For a comparative analysis of the political conditions that facilitated Bachelet's first reform and frustrated the second, see Borzutzky, 2019.

and net commitments for fiscal contributions amounting to US$17,136 million (65.8% of GDP in 2018). State commitments will grow steadily because of the introduction of new benefits (BET, BEP, and BL) and the Solidarity Guarantee Account (CGS); the balance of the CGS shows a growing deficit since 2027 making it financially unsustainable (Melinsky, 2018). The foregoing shows the flaws in the design of the 1996 structural reform, aggravated by subsequent state policies that—in order to reduce the fiscal deficit—financed the cost of the transition with transfers from the private system fund (SAP) at the cost of reducing pensions amount,[91] as well as the ineffectiveness of the 2017 re-reform to restore the sustainability of the system (Mesa-Lago and Rivera, 2020) .

## 7. Increase in the Role of the State and AFP Decline

All re-reforms increased the role of the government either by the transfer from the private to the public system and/or by creating/expanding the benefits financed by the state, together with new public management agencies. Argentina created a Bicameral Commission in Congress that monitors the public system funds and its evolution, receives annual reports from ANSES, and may make recommendations, but not binding; an advisory board of the public fund (also with no binding power) and other public agencies conduct external supervision, so there is no unified autonomous superintendence, as in the case of Chile. Supervisory agencies are weak and ANSES plays a predominant role. The Public Manager in Bolivia is autonomous, although it is supervised by a governmental agency, therefore, its real autonomy is not clear. The most serious problem it faced was the integration of the data from the two AFP, the Manager already administers and pays the universal non-contributory pension

91 This contradicts the FIAP's statement (2020b: 5, 6) that "the collective ownership of the [PAYG] funds exposes the pension resources to the danger that they will be used for purposes other than the objectives of the pension system," also, they face the risk "that the portfolio structures are influenced by political pressure, allocating resources to suboptimal investments that are rightly [sic] detrimental to obtaining adequate capital returns." This happened not only in the Salvadoran private system, but also in the fully-funded pillar of the Argentine mixed system at the end of the 1990s, before the re-reform, when the superintendence of the AFP pushed the latter to change instruments traded in dollars to pesos, then the devaluation occurred and the fund value contracted dramatically.

and other benefits. The powers of the Executive Branch over the pension system were substantially increased by the re-reforms. Bolivia and Chile closed the previous autonomous Superintendence that supervised the private system/pillar and replaced it with a new state agency of diverse unity, nature, and independence. The new Chilean Superintendence of Pensions continuous to be autonomous and unified its control over the entire pension system except for the armed forces and the police; likewise, the state finances the PBS and the APS, improves social solidarity and gender equality, promotes competition, and guarantees the system financial soundness. In El Salvador, the role of the state as funder of benefits was contracted, transferring the financial burden of the old DB benefits and those added by the re-reform (BET, BEP, and BL) to workers, employers, and pensioners.

As for the Chilean case—a pioneer and model for the rest of the region—, it is important to delve into the role of the state. In the twelve years between 2008 and 2020, there has been a gradual but constant trend to limit AFP functions and increase the role of the state. In this regard, the bill in congress submitted by a conservative government has features of a second re-reform since, although preserving the essence of the private system, it modifies key aspects: expands social solidarity with the increase of non-contributory pensions and especially low contributory pensions, which would also improve sufficiency (these benefits would be managed by a public agency independent of the Social Security Advisory Board); reduces the gender inequity of the system by improving the pensions of women; strengthens competition with the entry of non-profit associations and cooperatives; provides affiliates with a minority representation in the AFP boards of directors and expands the CUSP functions; creates an Actuarial Committee to monitor the system and the new benefits; obliges the AFP to refund part of the fees to the insured when capital returns are negative (slightly reducing the risk formerly born only by the insured); increases by six points the employer's contribution to improve low pensions in individual accounts and the fiscal authorities contribute 1.12% to the solidarity pillar—this also improves solidarity, although the worker would still contribute 60% of the total contribution-fees of 19.76%, in violation of the ILO standard of not exceeding 50%. The question that still remains is whether this second re-reform, if approved, would prevent the termination of the private system as demanded by an important sector of citizens (Neira, 2020; "Senadores and No+AFP...," 2020). A survey conducted in May 2019 asking Chileans aged 18 and over what are the three main problems to which the government should devote its greatest effort, 46% named pensions as the main problem; in December 2019 the percentage had increased to 64% (CEP, 2019).

## B. RE-REFORMS PROPOSALS IN COLOMBIA AND PERU

The parallel models of Colombia and Peru are unique in the world and, as mentioned above, were the result of political compromises to approve the structural reform. The public PAYG system (DB) was maintained and a private fully-funded system (CD) was added and both systems compete with each other. In both countries, newcomers into the labor market can choose between these two systems; in Colombia they can switch system every five years and the last transfer has to be made 10 years before reaching pension age, while in Peru they can switch from the public to the private system but cannot return to the public. In the beginning, most of the insured were in the public system because it offered more generous entitlement conditions and benefits than the private system (including guaranteed RRs higher than private system RRs). And yet, legal amendments aimed at some standardization (such as a contribution of 13% in Peru), more generous entitlement conditions in the private system,[92] advertising, switching restrictions, and the disequilibrium of the public system led to a gradual increase in the number of insured in the private system, which affiliates 71% of the total in Colombia and 66% in Peru (Table 1).

92 In Colombia the years of contributions in the private system are 22 and in the public system they have increased to 25; Colpensiones (administrator of the public system) cannot advertise and is under double supervision, while the AFP spend significant amounts on advertising, have only one supervisor, and enjoy greater flexibility.

## 1. Colombia

Colombia's parallel system consists of the public system (*Régimen de Prima Media*, PAYG, administered by the public agency Colpensiones) and the private system (*Régimen de Ahorro Individual con Solidaridad*,[93] fully-funded managed by the AFP). The situation of the Colombian system is somewhat better than that of the Peruvian one, but it also endures serious problems. Many of such problems are similar (the two systems compete with each other and lack any coordination), but others are different, for instance in Colombia, a higher fiscal cost of the public system and of the debt for its future obligations, while the private system has its own flaws (see Bosch, Melguizo and Pagés, 2013; Bosch et al., 2015; SURA, 2015; Lora, 2018; Villar and Forero, 2018; Lora and Mejía, 2020). In addition to the two general systems, there are separate regimes for congressmen, military, and teachers, with more generous benefits and substantial fiscal subsidies.

The combined coverage by the two contributory systems is 35% of the EAP—better than that of Peru—but it is the fourth lowest coverage among the nine private systems; eight countries in the region have a higher coverage (including the Dominican Republic). The coverage of the older-adult population by contributory and non-contributory pensions is 54%. Likewise, it is the fourth lowest coverage among the nine private systems; nine countries in the region have a higher coverage (including Bolivia and Paraguay). The informal sector represents 35% of the labor force and, despite the mandatory legal coverage for self-employed workers, only 13% are covered. Female contributory coverage of the EAP is 34% and that of older adult women by contributory and non-contributory pensions is 50.6%.

There are significant inequities: in the public system, 80% of fiscal subsidies are received by 20% of the highest-income population, and part of the affiliates

93 The term "*solidaridad*" (solidarity) was added as it had been promised to subsidize pensions of workers that have contributed the 22 years required in the public system and do not receive a pension equal to the minimum wage; actually, only a reduced number of pensions have been granted said subsidy (Lora, 2018).

(most of them low-income affiliates) subsidize the highest-income pensioners, while in the private system the insured who fail to meet the requirements to receive a pension subsidize pensioners receiving a minimum wage pension; the richest 1% receive as much in pensions as the poorest half of the population. The private system has a damaging intergenerational redistributive impact for the current generation of insured and a regressive intragenerational effect, although lower than those in the public system and in the separate regimes.

The RR in the public system is 73% whereas it is 44% in the private system, lower than the minimum established by the ILO. Access to the minimum pension guaranteed in the private system (through a Minimum Pension Guarantee Fund: FGPM) is not granted when the insured has other income. The amount of the non-contributory pension (Colombia Mayor) is lower than the value of the minimum basic basket of goods to cover the minimum nutritional requirements of the indigence line and said amount has been substantially reduced in recent years—the daily per capita income in international dollars is the lowest throughout Latin America and the Caribbean, after Honduras. Insurance companies do not offer annuities and the AFP scheduled retirements do not protect against longevity risk.

Competition in the private system is quite poor: Colombia has four administrators, while countries with a much lower EAP have the same number or more (4 in Uruguay, 6 in Costa Rica and Panama, and 7 in the Dominican Republic); the concentration of insured in the two largest AFP is 80.5%, the highest after El Salvador, which only has two AFP; annual transfers are 0.8% of affiliates, and the fees charged by the administrators, as well as the disability and survivors insurance premiums are among the highest of the nine private systems.

Only 36% of the affiliates contribute to the private system showing a declining trend. The accumulated fund is the third largest one among the nine private systems, but 36% is invested in foreign instruments and 34% in public debt with a concentration of 70%, the fourth highest. The net real capital return, since the creation of the system to 2017, averaged 2.5% annually. The IADB estimated the public system deficit at 3.8% of GDP in 2013 (its reserves were exhausted in 2003) but, due to the decline in affiliates to this system in 2050—only 10% of total retirees will be from the public system—said deficit will drop to 2.1% in 2025 and 1.7% in 2075. On the other hand, a renown Colombian expert estimates that the deficit was 1% of GDP in 2017, because he considers that most of the 3.8% deficit is caused by separate regimes. The IADB also projects that the pension debt in 2013-2075 will take 129% of GDP (Bosch et al., 2015; Lora, 2018). Public pension spending regarding the GDP grew from 1.4% to 4.5% in 2000-2017 and the average annual growth of these pensions exceeded GDP growth by 5.2%, thus ECLAC ranks Colombia as the fourth country with the greatest sustainability pressure among the seven private systems plus Argentina (Arenas, 2020).

The first reform proposal was prepared by the Ministry of Labor in 2013. An IADB proposal in 2015 recommended an integration of the two systems with four pillars (Bosch et al., 2015). The first pillar is the current non-contributory pension that is expanded to become the basic pillar; it has to be decided–according to fiscal and efficiency considerations--whether the pension of this pillar should be targeted on poverty or be universal. The second pillar is the current public PAYG system that must be significantly reformed (the very low retirement ages must be increased and the RR formula adjusted), which would pay a basic pension equal to one minimum wage. The third pillar is based on the current private fully-funded system with significant modifications: separating the AFP administration fee and the premium (now combined) and setting caps to both; bidding for new affiliates to assign them to the AFP offering the lowest fee, as well as a nationwide bidding for disability and survival insurance, to reduce the costs of both; mandatory access to the minimum pension granted by the private system even when receiving other income; modifying or eliminating scheduled retirement and promoting and providing annuities. The fourth pillar is additional voluntary savings. Furthermore, the IADB recommends: eliminate the current inequities in the two systems (the expensive separate regimes are not mentioned) to make the whole system more equitable; conduct independent actuarial studies to calculate the present and future fiscal costs and making those studies public to guarantee the sustainability of the integrated system; strengthen the Financial Superintendence and extend its scope to all pensions, as well as consider creating a separate and independent specialized superintendence .

With a view to the 2018 presidential election, a series of pension reform proposals were submitted. It is impossible to summarize them all herein, but the most representative ones from different positions are presented below.[94]

FEDESARROLLO proposes four integrated pillars, with many important innovations (Villar and Forero, 2018). A zero pillar (similar to the welfare pillar 1 in other proposals) extends the non-contributory pension (Colombia Mayor) to all people over 65 years of age in extreme poverty and increases its fiscal funding by 50% so that it rises above the indigence line. It is still administered by Colombia Mayor and financed by the state budget. Pillar 1 is the PAYG system for formal workers earning at least one minimum wage and contributing to Colpensiones; said pillar offers a pension with a ceiling of one minimum wage administered by Colpensiones. This pillar must be submitted to a parametric reform: gradually increasing (in a five-year term) the current age from 62/55 to 65 years for both sexes for all insured with more than 10 years before retirement. As the increase in the life expectancy of women is seven years higher than that of men, this is compensated by the write-off of contribution weeks for each child born alive. It unifies the years of contributions required in 22 years, three years less than in the public system. Pillar 2 is the current fully-funded system to which contribute all insured earning more than one minimum wage, for the amount exceeding such wage, managed by the AFP, but with several changes: separating the AFP fee from the premium; shifting the administrator's fee on salary to a fee on capital returns; eliminating the minimum annual capital return, and holding auctions to select the insurance company that covers disability and survivor risks (these changes are less substantial than those currently proposed in Chile and Peru). As for the contribution to pillars 1 and 2, the 1.5% allocated to the FGPM is transferred to the deposit in the individual account (because the FGPM is eliminated),

94 For a useful compilation of analyses and proposals, see "La reforma pensional...", 2018.

2% is also added to the deposit, therefore, the total to be deducted rises from 16% to 18% and the deposit from 11.5% to 15%. These measures should allow the current RR to be doubled. All insured earning more than one minimum wage must be in both pillars and, at retirement, they receive a basic pension from pillar 1 and an annuity from pillar 2. For those insured with savings in pillar 2, their pension in pillar 1 is proportionally reduced until it disappears. Therefore, there would not be a pension lower than one minimum wage and its amount will grow with the savings in the individual account, hence contributions to both pillars will be related to the pension level. Pillar 3 is the most innovative, as it introduces the Periodic Economic Benefits Program (BEPS), virtually unique in the region: it is a semi-contributory voluntary savings scheme designed for the informal sector and stimulated by a state matching subsidy. This program, very flexible regarding the amount of contributions and benefits, would help to provide a modest pension to the informal labor force not covered by the contributory system. The proposal recommends: increasing the current state subsidy from 20% to 50% of the contributed amount; introducing the *monotributo* as in Argentina and Uruguay, and converting the balance at the individual account into an annuity at the time of retirement.

Two proposals are summarized below, both agreeing in shutting down the public system, but with the essential difference that one of them enthrones the private fully-funded system as the most important or practically the only one, adding as an appendix, a small public component, while the other eliminates the obligation to affiliate and contribute to the AFP, and makes it voluntary.

The president of Colombia's AFP association (ASOFONDOS), Santiago Montenegro (2018), argues that Colombian AFP are better than the Chilean ones because they grant a minimum pension that does not exist in Chile,[95]

95 Montenegro omits saying that, in 2008, Chile replaced the minimum pension guaranteed by the state with a better system including the basic solidarity pension (PBS) and the solidarity pension contribution (APS), which the insured are entitled without having to fulfill the requirement of 20 years of contributions. Until 2023, the insured can choose between the minimum pension or the new solidarity pension system; very few have chosen the former.

and that the RR is not 30%, as has been maintained, but an average of 80% (he does not give any evidence on this percentage). He affirms that "the new pension scheme must be a fully-funded system" and his re-reform proposal has three pillars: a non-contributory pillar, the fundamental fully-funded pillar (including a subsidized one-minimum wage pension scheme as "part of the fully-funded scheme"), and a semi-contributory pillar (BEPS). The Colombia Mayor program should be improved in order to cover people who are below the poverty line; it is not clear if this means expanding the coverage over the current indigence line or to all the poor. The BEPS is not articulated within the new system, but Montenegro advises that those affiliates not meeting the requirements to receive a contributory pension may obtain a refund of the final balance in their accounts. The public system is shut down for new affiliates, but a subsidized one-minimum wage pension is provided to workers who do not have sufficient capital to finance a full pension, provided that they reach retirement age and have contributed for 22 years (compared to 25 years now). Such one-minimum-wage pension, as part of the fully-funded system, will be financed with subsidies from the contributions paid by the insured. "It is not desirable that this PAYG scheme takes the form of a traditional PAYG pillar, as it would undermine national savings…" (p. 16). The insured who are close to retirement and those with 10 years before retirement can stay at the shutdown public system and receive a "notional" capital return set by the regulatory agency. He does not recommend making reforms to improve the fully-funded pillar (as it is being done in several countries, as well as in the previous proposals in Colombia, all summarized herein), except that the AFP can be private or public: thus, Colpensiones could become a public AFP subject to the same rules as private ones (as in Uruguay). Notwithstanding that Montenegro estimates that the PAYG deficit costs the government 14% of GDP (compared to the IADB estimate of approximately 3.8%) and a third of tax revenues, he does not deepen on the cost of the transition; he only maintains that "the higher expenditures that these changes may generate in the national budget can be financed with the savings resulting from eliminating the subsidies for those with the highest income in the public system" (p. 16-17) . In addition, he claims that his proposal will expand coverage from the current 35% to 65% in 2050 (these predictions are not documented). He argues that informality causes the low coverage of the current system, but he does not recommend any specific measure to expand it, other than the formalization of the labor force.

One of the founders of the Colombian private system, the economist Eduardo Lora (2018: 29) acknowledges that, 25 years ago, when they made the decision: "we were more concerned about fiscal stability and economic growth than about income distribution and social allocation of risks, and we were very naive about the state's regulatory capacity and neutrality." Now, with a colleague (Lora and Mejía, 2018), they propose a new system of three pillars: the first, a basic DB pension targeted on poverty; the second, a non-mandatory pillar of pension schemes negotiated with companies based on worker and employer contributions; and the third, a voluntary and individual fully-funded pillar. The basic pension is granted to those over 65 years of age for an amount equal to the periodically adjusted poverty line and is financed by general taxes. All mandatory contributions made from workers and employers to the private and public systems are eliminated, as well as those made to the civil servant separate regime; the military and the police are excepted, but this regime "must also be reformed." Likewise, all state subsidies are eliminated, even those for separate regimes. He proposes a transition period in which the PAYG system gradually disappears with certain differences among age groups of the current insured: the oldest group that is close to retirement remains in this system with the current conditions; the middle-age group has to choose, within a year's time, between either staying in the system—with reformed conditions—or receiving compensation; and the youngest aged-group receives back 4 percentage points increasing their salary, the companies 10 points, and 2 points to cover occupational risks. The state does not guarantee a minimum wage pension to those who have had a stable working life in the formal sector, "this fortunate segment of the population can freely bear such responsibility without the support of the state" (p. 3). The AFP may have voluntary affiliates that decide the amount to be contributed and there is no guarantee of minimum capital returns. A technical, politically independent authority should be created and report to Congress. The proposal projects the fiscal impact in 2020-2100: both the net percentage of all effects and the deficit grow and reach the peak of 2.6% in 2031 and then decline and become positive: 2% of GDP at the end of the century. This proposal has positive aspects, such as the elimination of subsidies to the separate regimes, the extension of the basic pension to the poor, and the termination of the AFP mandatory contribution (contributions remaining voluntary, but it has been seen that voluntary savings have practically been ineffective in the region, except in Brazil). On the other hand, it eradicates social security, especially for the middle-income sector of society that is left at the mercy of negotiation with employers and their savings capacity, which would have to be improved substantially.

President-elect Iván Duque Márquez took office in August 2018. Considering the great debate that preceded his election, it was expected that he would implement the pension re-reform. In fact, at the beginning of his administration he announced that in a few weeks he would propose it, giving out some very general guidelines he had promised in the electoral campaign: Colpensiones will still be operating but not necessarily the PAYG system, the acquired rights will be respected, retirement ages will not be changed, contributions will not be increased, and the fiscal subsidies granted to the highest pensions will be targeted on the lowest pensions. This was an ambiguous statement that avoided taking sides. At the beginning of 2019, the Ministry of Finance announced that the reform would be submitted in the second half of the year and that it was being prepared by a highly qualified government team, specifying that it would not affect the insured who were close to retirement and that it would expand coverage and reduce inequities. Then, the minister of labor said that the project would not be submitted until March 2020 and ratified that the retirement ages would not be increased.[96] In March, said minister announced that there was

96 It has been discussed for decades the increase of the current retirement ages (62 years for men and 57 years for women), which are very low at the regional level, but there has been strong opposition. In 2017, the OECD recommended to raise it to 65 years for both sexes. The same year, the National Association of Financial Institutions proposed to gradually raise the ages to 67 and 62, respectively, in 2029-2034. It has already been mentioned that FEDESARROLLO proposed to unify the age at 65 years. In 2018, the Public Investment and Expenditure Commission advised gradually increasing the age within a five-year period.

no project under study and added that the public system will not end but will be strengthened. Due to the economic emergency caused by the pandemic, two measures were taken: reducing or postponing the payment of contributions and switching AFP affiliates to the public system, but both were declared unconstitutional by the Supreme Court, thus everything returned to the starting point. More than two years have now passed since the president took office and he has not presented a reform bill yet, apparently for fear of the opposition in Congress. Therefore, he will miss a good opportunity to tackle the serious problems of the system, which will keep getting worse.

## 2. Peru

This monograph and other studies (CPS, 2017; Altamirano et al., 2019; Freunderberg and Toscani, 2019; OECD, 2019b) have proven that the Peruvian pension system faces important problems that demand an appropriate and urgent solution: the EAP contributory coverage (21%) is the lowest among the nine private systems; contributory and non-contributory pensions cover less than 50% of the older-adult population (approximately half each); only the Dominican Republic and El Salvador have a lower coverage. The informal sector comprises 70% of the labor force, a proportion ranked among the top three in the region, and has no protection (only 0.3% of the self-employed workers are covered). The system is highly fragmented and lacks the slightest integration: there are two contributory pension agencies with no coordination (public system SNP and private system SPP) and the non-contributory pension is not connected with them; also, there are a dozen separate PAYG schemes that are expensive and experience financial-actuarial disequilibria. Both the contributory female coverage of the EAP and that of the older adult women are the lowest among the nine private systems and among the lowest in Latin America, and this is true also concerning the average contribution density. The average RR in the private system is 39%, lower than the minimum standard of 45% set by the ILO, but in the public system it is 47%. The non-contributory pension is low, only received by people living in extreme poverty and has not been adjusted to the cost of living, hence it has been devalued; 60% of the insured will not be entitled to a pension for not meeting 20 years of contributions. There is no effective competition among the four AFP that operate in an oligopolistic market; the fee and premium withholding is 29% of the deposit in the individual account, among the highest in private systems, and the AFP profit is 17% of the net patrimony. Only 42% of affiliates to the private system contribute to the system. Forty Five percent of the investment fund is in foreign instruments, the average real capital return declined in 1994-2018, and there is a misalignment of interests between portfolio management and the long-term preferences of the insured. The citizen and the insured do not know the existing system and lack advice to make crucial decisions. The instruments available to ensure retirement are complex and expensive. About 95.5% of the individual account can be withdrawn, as well as 25% and other withdrawals that are de-funding the private system. The public system faces a low financial-actuarial disequilibrium because it was reduced with parametric reforms. The fiscal cost was only 0.2% of GDP in 2017 and it is projected between 0.1% and 2% of GDP by 2050.[97] Public pension spending decreased from 4.7% to 1.6% of GDP in 2003-2017, and its average annual growth was 4.6 points lower than the GDP growth mentioned above. Therefore, ECLAC ranks Peru as the country with the least financial sustainability pressure among the eight investigated.

Below is a summary of the four recently submitted re-reform proposals; all proposals support the transformation of the current Peruvian parallel model into a mixed model, although with significant differences among them.

At the end of 2017, a Social Protection Commission—appointed by President Pedro Pablo Kucynsky and advised by the WB, the IADB and the OECD—drafted a reform bill of the system, without social dialogue or previous actuarial study, with three pillars integrated into a single system and an extension of the role of the state (CPS, 2017). The bill shutdown  the public PAYG system (SNP) for new insured, with the current insured having the option to stay in the same

97 Freuderberg and Toscani calculations, 2019; Altamirano et al, 2019 estimate that it is 1.2% of GDP and project it to 3.1% in 2075.

system or switch to the new one with a recognition bond. The public system (as well as the current non-contributory pension) is replaced by a first pillar that is non-contributory, public and PAYG, which pays a basic pension targeted on the poor and lower-income groups; this pillar is managed by the current ONP. A second mandatory individual fully-funded pillar for all labor force newcomers (formal and informal, dependent and self-employed) who have an individual account maintaining the current contribution. The AFP current insured keep their savings, but they are transferred to the new administrators. Fiscal subsidies are granted to young Peruvians with low income as well as supplementary state contributions to the savings of low-income workers, as an incentive to their affiliation and savings. The subsidies decrease according to the income of the insured. The first pillar and the subsidies are financed by an addition to the VAT. An independent centralized agency (public or private) with high efficiency, professionalism, and transparency leading to economies of scale, is created and is in charge of collecting contributions, managing individual accounts, paying benefits, educating and advising the insured, charging 0.07% from the balance accounts for administrative expenses. AFP are replaced by up to five Investment Portfolio Managers (GCI), only in charge of the investment funds. The GCIs are selected by international bidding; they develop several investment strategies with lower or higher risk.[98] The GCIs charge a 0.6% fee on the balance at individual accounts. A *Comité de Notables* (Committee of Wise Men) is established, to regulate and supervise investments, made up of national and international experts of recognized prestige appointed by the Ministry of Economy and Finance. A market for annuities and simple and cheap scheduled retirements is developed. Repealed are the law that allows a 95.5% withdrawal of the balance at the time of retirement and restrictions imposed on withdrawal of 25% of the balance for the purchase of a first home. This bill was left in limbo in March 2018, when the president was accused of bribery and corruption, leading to his resignation.

98 The investment portfolios related to the life cycle would eliminate the risk run by workers, as they would be adjusted according to the age of the insured. The centralized agency would offer target-date fund options, while the GCI would manage feeder funds specialized in the life cycle portfolio asset class.

In 2019, the OECD (2019b) submitted a re-reform proposal; the influence of the 2017 proposal is noticeable in some similar aspects of this re-reform, but others aspects are different. Instead of shutting down the PAYG system, it remains and becomes the first (public) pillar, complementing the fully-funded pillar; all the insured must compulsorily contribute to both pillars and, at the time of retirement, receive pensions from the two; labor market newcomers have to join the new mixed system in order to reduce the transition period. In the public pillar, the pension calculation formula is adjusted so that the level of the benefit is associated with the contributions and to guarantee its financial sustainability; in addition, this pillar has to adapt mortality tables and pensions to demographic and macroeconomic factors. The minimum number of years of contribution to the public pillar is reduced to increase accessibility to pensions,[99] and a minimum pension is established—as in the 2017 project—, but it increases according to the years of contribution and is coordinated with the non-contributory pension. Another new component is that, in early retirement option, it equalizes the years of age between men and women (currently, women can retire five years earlier). The current private system becomes the second pillar (fully-funded), but with several innovations compared to the 2017 proposal: the fees are not set in the law but are based on capital returns, in order that the most effective administrators receive higher fees and vice versa; it equalizes the fees in the second pillar with the voluntary ones in a third pillar; it stipulates to improve and standardize the disclosure of the indicators of the administrators to make them more transparent and accessible and exert competitive pressure among said administrators; it eliminates the guarantee of minimum capital returns and changes the investment model towards a life cycle one, gradually reducing the risk according to the age of the insured. The latter is similar to the 2017 proposal although, differently, the OECD proposal gradually increases the contribution to the mandatory

99 Reducing the period of contributions from 20 to 15 years would allow more insured to receive a pension and would cost only 0.05% of GDP, while imposing the contribution to salaries in the 13th and 14th month would increase the RR by 3% (Freunderberg and Toscani, 2019).

savings pillar, but similarly grants matching supplementary fiscal subsidies to the contributions of low-income workers to reduce the costs that labor formalization entails. It also creates a centralized agency to collect contributions and obtain information from both pillars, but makes it an independent agency, not reporting to the Ministry of Finance. Similarly, it stipulates simplifying and standardizing the complex and confusing retirement options. It also eliminates the withdrawal of 95.5% of the fund, but in case that this fails, makes useful recommendations: establishes a limit that guarantees a minimum level of pension upon retirement combining the public and private pillars; if the insured has received fiscal subsidies and/or tax incentives, they cannot be withdrawn and the insured who withdraw their funds must pay a much higher premium for health coverage. Another innovation is that it reinforces the independence and framework for action of the Superintendence of Banks, Insurance and AFP, and establishes that its main objective is to improve the benefits of affiliates. It establishes a committee of experts, but different from the "*comité de notables*," as it is independent and responsible for the implementation and monitoring of the re-reform. Finally, it stresses an important aspect omitted in the 2017 proposal: the current mistrust in the system, which must be countered by promoting knowledge about it. This proposal seems to maintain the AFP, instead of replacing them with new administrators, and it does not properly specify the system financing method.

A 2019 IADB study (Altamirano et al., 2019) agrees with several recommendations from the two previous proposals, but adds some important and novel features. It establishes a system with four integrated pillars having the same structure of entitlement conditions, benefits, subsidies, and financing, which improves equity, transparency, and efficiency due to economies of scale. A first non-contributory pillar (the current one) for those not entitled to a contributory pension appears to be targeted on poverty, but does not reject a universal pension, as in Bolivia, and estimates its cost between 0.5% and 1% of GDP. A second pillar (similar to the OECD proposal) is based on the current public system (could pay a minimum pension) but switching from the PAYG system to a notional account system;[100] this pillar finances a deferred annuity or longevity insurance. The third pillar, individual fully-funded arises from the current private system. The second and third pillars must have a close relationship between contributions and the level of pensions. At the time of retirement, the insured receives pensions from both pillars. The possibility that "for some workers [the fully-funded funds (SPP)] may shift to a defined benefit/notional accounts mechanism (SNP)," remains open; an important aspect but unclear in the proposal. As in the two previous proposals, a centralized agency (public or private) is created; it is responsible for the collection, but also for managing disability, survival, and longevity risks, which could reduce the fees in the fully-funded pillar. A new component consists in determining a "target pension" of the system that will be a basis to decide the inter and intra generational solidarity level and will be informed to the insured so that they know what their pension will be at the time of retirement. In the fully-funded pillar the proposal recommends: to increase competition and reduce fees through the implementation of new AFP; bids to choose the AFP offering the lowest fee not only to thee insured that are the newcomers into the labor market but also part of those already affiliated, and delegate the administration of accounts to specialized pension operators to be selected by a bid. Furthermore, the investment must be transferred to generational funds of the style already mentioned in the two previous proposals. The fourth pillar is voluntary savings, which must be flexible and eliminate existing barriers such as the obligation of a five-year contribution in the SPP, in addition to being expanded to allow self-employed and other informal workers to join and contribute when and how they wish without any other requirements other than opening an account in an AFP; it introduces a default assignment for the insured not choosing due to lack of knowledge. A key aspect not analyzed in the other proposals is to ensure the financial sustainability of all PAYG systems, including the ONP and separate

100 This method has aspects similar to the PAYG and the fully-funded systems: active workers contribute to the system and pay for retirees' pensions; the amount of pensions is determined by the contributions that are accounted for in a virtual individual account and a rate of return is added; the money collected is allocated to pay current pensions; at the end of his/her working life, the insured receives an annuity based on the accumulated amount in the virtual individual account, his/her life expectancy and the rate of return, as done in the defined contribution systems. The state guarantees the solvency of the system.

regimes, through a framework law that establishes standardized criteria for all systems (retirement ages, entitlement conditions, average base salary, etc.), as well as sustainability factors that adjust benefits according to aging. This measure is good for future newcomers to these regimes, but the study does not clarify whether these rules will be applied retroactively to current affiliates or whether their acquired rights will be respected; neither it mandates such regimes to make actuarial valuations. As in the OECD proposal, the regulation of the integrated system (including separate regimes) is reinforced through a single agency (today, the superintendence−-SBS— only supervises the AFP), which will also be in charge of coordinating the pillars of the system. Finally, alternatives are given—as the OECD does—if withdrawals of funds cannot be eliminated: restricting withdrawal to insured with very low balances or above the balance required to guarantee an annuity or scheduled retirement, and making the purchase of longevity insurance mandatory with the amount withdrawn. This proposal, like the previous one, does not specify what to do with the AFP and how to finance the solidarity PAYG component of the new integrated system.

A Multiparty Congress Commission is developing a re-reform proposal that would be submitted at the end of November 2020, which would unify the two systems integrally under an independent public agency (Organismo Público de Pensiones: OPP) and three pillars. A first pillar would grant a basic pension targeted to 65-year-and-over persons (Pensión 65), gradually expanded to all the poor, financed by the fiscal authorities, and managed by the OPP. A second mandatory pillar would have two components and separate accounts: a) a collective risk component with contributions paid by the insured, the employers, and the state, which would grant a guaranteed minimum pension with redistributive effect, administered by the OPP that would absorb the SNP, the ONP, and Pensión 65 (the OPP would be responsible of the centralized collection, the insured registry, the collective risk accounts, the payment of the minimum pension, and the establishment of guidelines for investments made by "fund managers"), it would have a Consolidated Public Fund of Pension Reserves with a seed capital provided by the state; and b) an individual risk component that would pay an additional pension based on individual savings and their capital returns, managed by multiple-nature administrators. A third voluntary pillar of individual savings for the insured, with or without social security purposes, would provide an additional pension or used for buying a house or for other objectives. The proposal would gradually incorporate self-employed workers with incentives for their affiliation. It would also create the *Oficina de Promoción de Cultura Previsional* (Office for the Promotion of Social Security Culture) ascribed to the Ministry of Education (Redacción, 2020; Comisión Especial Multipartidista, 2020a, 2020b).

## Summary

The four proposals in Peru have been submitted by a conservative president, the OECD, the IADB, and the Peruvian Congress. The first three proposals point out the AFP failures (for being little or not competitive at all, earning high profits and fees, as well as for the fact that their investments do not match the interests of the insured). The first proposal eliminates and replaces AFP with new managers; the second suggests taking away from AFP the administration of individual accounts; the third recommends multiple measures to improve AFP; and the fourth indicates that there will be multiple-nature AFP; the OECD proposal points out the mistrust of the insured to the AFP. On the other hand, all the proposals reinforce the state's role in the pension system: recommending a central collecting agency (in the first and fourth proposals said agency also manages the individual accounts and pays pensions), establishing a public PAYG pillar, expanding non-contributory pensions financed by the state, granting fiscal incentives to the low-income insured, and two proposals reinforce the public supervisory agency. As for Colombia, two proposals support a mixed model with four pillars, while two others propose eliminating the public system, but while one places the fully-funded scheme as the main pillar of the system, the other eliminates the mandatory contributions to AFP. All proposals extend the basic pension for the protection of poverty financed by fiscal authorities, and one expands the state subsidies to the BEPS. Furthermore, two proposals advise strengthening the superintendence of the system or creating a new specialized public agency, while all proposals (except that of ASOFONDOS) identify the failures of the private system and propose several measures to improve it.

## C. LESSONS FOR BRAZIL

This section: 1) summarizes the characteristics of the Brazilian pension system, its generous entitlement conditions and benefits, and the impact of the aging process; 2) analyzes the 2019 parametric reform and its restriction of entitlement conditions and benefits to reduce fiscal spending; 3) evaluates the financial-actuarial situation, the impact of the parametric reform, and the projections for the future; and 4) summarizes the failed proposal for a structural reform towards a fully-funded system, as well as some lessons for Brazil regarding the evaluation of structural reforms in Latin America made herein in order to illuminate future reforms in Brazil.

### 1. Characteristics of the Brazilian Pension System

Brazil is the largest country in terms of territory and population in Latin America. It has kept a pure public PAYG system, with no reserve other than a contingency one. The 1988 Federal Constitution—enacted after the return to democracy—recognized social security as a constitutional right and established important rules. Five parametric reforms were approved since this constitution, in 1998, 1999, 2003, 2005 and 2019.

The Brazilian pension system is one of the most fragmented in the region and embraces four main subsystems and other separate regimes; all of them are PAYG systems except one: a) *Regime Geral de Previdência Social* (General Social Security Scheme: RGPS), a pure PAYG system administered by the Instituto Nacional de Seguridad Social (INSS) that covers workers in the private sector and is divided into two programs: urban, typical of contributory schemes, and rural, semi-contributory. b) *Regime Própio de Previdência Social da União* (Pension Scheme for Union Government Employees: RPPS), a simple PAYG system including a general program for federal government officials, but also about 2,400 separate regimes administered by the federal government, states, and municipalities with different entitlement conditions, benefits, and financing. c) *Regime de Previdência Complementar* (Supplementary Pension Scheme: RPC) for additional voluntary savings, administered by many private firms or not-for-profit civil entities, which can be of two types: "closed," having most of the insured and capital, a fully-funded scheme, established by one or more employers or by unions, usually chosen by large companies; and "open," which can be DC, DB, or variable contribution, not necessarily related to employment, for salaried and self-employed workers, as well as other individuals, managed by insurance companies, paying an annuity or lump sum, usually chosen by small- and medium-sized enterprises; this subsystem was analyzed in section IV-5-b (SEPT, 2020c). d) Non-Contributory Pension Scheme (Continued Benefit: BPC) that grants a pension equivalent to a minimum wage to persons over 65 years of age lacking a contributory pension or to the disabled or families with an income of less than a quarter of the minimum wage.

Brazil's coverage is the highest among public systems (except for Bolivia regarding non-contributory pensions): the EAP coverage was 56% in 2018 (the fourth highest in the entire region; it expanded by 19 percentage points in 2000-2014, one of the fastest in the region; ECLAC, 2018). Self-employed workers have compulsory coverage and a 39% affiliation, while the coverage of the older adult population was 87.8% (both the third highest) (Table 5). The 1988 Constitution guaranteed the rights of the most vulnerable groups of the population and forced the government to provide funds to pay social security benefits and, if necessary, to implement specific taxes or increase their rates. Social solidarity is quite strong, particularly in non-contributory pensions that have significantly reduced poverty, especially after 1988. In 1978-1988 there was no progressive effect on income distribution in social security transfers among deciles of family income; however, in 1988-2012, said transfers increased 26 percentage points in the first decile (lowest income) and 31 points in the second, but 6 points in the ninth and 10 points in the tenth (highest income). Rural workers also expanded their coverage and received substantial transfers (Matijascic and Kay, 2014). EAP female coverage was 56% in 2018 and that of the older adult women was 86%, both ranked as the fourth highest in the region (Appendices 1 and 2); on the contrary, there was a wide gap in the contribution density: men 70% and women 53% (ECLAC, 2018).

The entitlement conditions at retirement were quite generous. Both in the RGPS and the RPPS it was possible to retire by time of service (seniority) or by a combination of age and years of contribution: in the first alternative, 30/35 years of contribution (women/men) were required regardless of age in the RGPS and 25 years in the RPPS (the last ten years in the same post); in the second alternative, the retirement ages were the same in the two regimes 60/65 (women/men) and 15 years of contribution. In the rural scheme, ages were reduced by five years for both sexes. In 2015, the average gross replacement rate (RR) in the first alternative was 80% (the sixth highest in the region); therefore, an insured employed in the public service with 20 years and not changing posts in the last ten years could retire at age 45 years and a RR of 80% (100% before the 2003 parametric reform). In the second alternative, the RR was 52% (seven points above the 45-year minimum stipulated by the ILO; Table 10). But the calculation of the RR excluded the 20% of the lowest salaries in the 15 years of contribution, took a base of 70% of the average, and added 1% for each year of contribution until reaching a RR of 100%.[101] A comparison with other eleven countries in the OECD—including the most developed—showed that Brazil had the laxest conditions (Matijascic and Kay, 2014). Lastly, all pensions are adjusted to the CPI (Table 5).

The foregoing indicates that the Brazilian pension system has very high costs and they worsen because its population aging is "advanced." Only two countries in Latin America (Cuba and Uruguay) are ranked as "very advanced" and two others as "advanced" (Argentina and Chile). The 2019-2060 demographic projection shows that the population growth rate—which was 2.9% in 1960-1970 and declining to 0.8% in 2010-2020—will be zero in 2040-2050 and will

101 If the insured died, 100% of the pension was transferred to the spouse and his/her dependents until reaching adulthood (except when disabled) and, afterwards, the spouse received 100%.

decrease by 0.2% in 2050-2060. The productive cohort of the population (ages 16-59)—which was 63.8% in 2019—will drop to 52.1% in 2060, while the elderly population cohort (60 years and over) will grow from 13.8% to 32.2% hence the ratio of active workers per one pensioner will contract from 4.6 to 1.6 within the same period. Finally, the life expectancy at the age of 65 will grow by six years for men (from 13 to 19 in 2000-2060) and by eight years for women (from 15 to 23). These trends "will imply radical transformations in the actuarial aspect of social security... because of the increase in expenses for benefits and of the reduction in revenue" (SEPT, 2020a: 4).

## 2. The 2019 Parametric Reform

The pension system was quite generous but the parametric reforms implemented during the governments of Fernando Henrique Cardozo in 1998 in the RGPS, and of Luis Ignacio Lula da Silva in 2003 in the RPPS introduced limitations, although they were less than those of the original proposals due to strong opposition in congress (Kakahodo and Savoia, 2008).

On February 20, 2019, the newly elected neoliberal president Jair Bolsonaro submitted to Congress a pension reform bill that included a constitutional amendment. Its main goal was to reduce the fiscal cost of the pension system related to the commitments made by the 2016 tax reform, through the restriction of entitlement conditions and benefits in the RGPS and the RPPS. The proposal led to strong opposition from social organizations and from Congress as it restricted entitlement conditions and the amount of pensions. There was no broad social dialogue in a highly polarized climate (ECLAC, 2018). The reform bill passed the two rounds of voting in the Chamber of Deputies and the Senate, with significant amendments, but was approved by Congress at the end of October and became law on November 12, 2019. It came into effect in March 2020 (SEPT, 2019). An important change is that now it is easier to make constitutional amendments on pensions, especially in the civil servant system (RPPS), now regulated by a special code. The amendments in the entitlement conditions, calculation of pensions, adjustment, and other key aspects are summarized below, both in the RGPS and in the RPPS, before and after the reform. The RPPS parametric reform is limited to federal civil employees, but excludes states, municipalities, and other entities which maintain their conditions, although they could change them.

Retirement by time of service, regardless of age, was eliminated by the reform. The other alternative—retirement by age—required, in the RGPS urban sector, 65 years of age for men and 60 for women, both with 15 years of contributions (in the RPPS 60/55 years of age plus 35/30 years of contributions). In both regimens, the age of men was set at 65 years (an increase of five years in the RPPS), and that of women increased to 62 (seven years more in the RPPS and two years in the RGPS). In the RGPS, the years of contribution of men rose to 20, but in the RPPS they were reduced to 25 years—10 in the public sector and the last five in the same post;[102] ages must be adjusted every four years according to the increase in life expectancy. Teachers can retire with five years less and those working with hazardous materials with 7 or 10 years less. In the RGPS for the rural area, the previous conditions are maintained: 60/55 of age and 15 years of contribution. The original proposal to equalize the age of women with that of men at 60 and increase the years of contribution to 20 years to align the conditions in the RGPS (urban and rural schemes) and in the RPPS, was rejected by Congress due to its impact on coverage reduction. The RR calculation was tightened: in the RGPS, the base of 70% on the average salary was reduced to 60% (also, the previous deduction on the average of 20% of the lowest salaries was eliminated); the addition of 1% for each year of contribution after accumulating 15 years, was increased to 2%, but the years of contribution for women were increased to 20. Previously, to achieve a 100% RR, 30 years of contribution were needed, but this requirement was increased to 40 years for men and 35 for women. In the RPPS, the RR was 100% of

102 The original proposal was 65 years of age and 25 years of contribution for both sexes; in this case, 40% of the insured would not have been able to access pensions.

the average salary and now the insured are subject to the same rules as the RGPS. In order to receive 100%, they must contribute 45 years; however, they do not have a cap on the pension so they can receive a higher benefit. State governments must implement their own supplementary pension system for their employees something being done with a wide debate. As for the non-contributory pension system for the poor, the age of 65 years remains; the proposal to increase it to 70 was defeated.

The insured and the employer contributions are gradually increased according to salary scales. In the RGPS, previously the employee rate was 8% on a salary lower than the minimum wage (R$1,752) and increased to 9% and 11% on higher salaries; these rates were applied to the full salary. The reform changed the tax base to progressive aliquots, i.e., the percentage is not applied to the full salary, but to the excess salary in each scale.[103] The reform maintained the two lower rates of 7.5% and 9%, but on a lower salary scale, whereas the third rate of 11% increased it to 12% and added a fourth rate of 14% on a salary ranging between R$3,134 and R$6,101 (the latter is the taxable cap and is the same as before). The employer contributes 20% of the payroll, but not everything is allocated to pensions, since a portion goes to monetary benefits of sickness, maternity, and accidents, and there is no explicit distribution between the two types of benefits (there is no cap on the taxable salary). Therefore, it was not possible to determine whether the minimum standard of 50% is met, because the RGPS employer's contribution is not entirely allocated to pensions. In the RPPS the minimum employee contribution is the same as in the RGPS 7.5% on an equal salary (also in progressive aliquots), but it gradually increases to 22% and on a much higher salary (R$40,747). The federal constitution does not stipulate an employer contribution, bearing this responsibility to the Union, the states and municipalities laws. However, another law establishes a minimum amount equal to

103 For example, in a monthly salary of R$6,000, 7.5% is applied to the minimum wage of R$1,045; the following 9% to the salary scale ranging from R$1,045.01 to R$2,089.60; the following 12% to the scale ranging from R$2,089.61 to R$3,134.40; and 14% to the upper scale ranging from R$3,13441 to R$6,101. The total contribution is the sum of the four aliquots.

the percentage paid by the employee and a cap of twice that percentage, i.e., at least all have to pay between 7.5% in the lower scale and 22% in the higher scale, but they can pay double each rate, therefore, there is a huge variation in the contributions among all public agencies. In all cases, in the event of a deficit, the public agency must cover it, but the 2019 reform authorized the federative entity to impose a contribution to retirees or pensioners to help reducing the deficit, which is equivalent to a reduction in the pension, and could also transfer it to the working employee.

In conclusion: a) It could not be determined if the minimum standard of 50% is met in the RGPS, but it is met in the RPPS. b) The reform reduced the burden on the insured with the lowest income and increased it on the insured with the highest income (same limit in the RGPS but no limit in the RPPS), which had a moderate progressive effect on income distribution Ideally, the limit would have been increasing it on the RGPS and eliminating it on the RPPS. c) The RPPS total contribution is higher than RGPS's, having a strong impact on the financial balance of both systems. In this regard, the Minister of Economy warned that the introduction of progressive aliquots in the RGPS (even with the addition of a rate in the group with the highest income) would reduce the income of such scheme because most of the insured do not belong to the higher salary scales. d) The authorization to the Union—in case of a deficit—to be able to impose a contribution on pensioners or increase it on active workers is aimed at reducing the fiscal deficit, but would have negative repercussions on the amount of pensions and on the workers' burden (Fazio, 2020; Schwarzer, 2020).

Since the parametric reforms of 1998 in the RGPS and of 2003 in the RPPS, undertaken by center-left governments, there has been a process of standardization of the entitlement conditions and benefits between both regimes, as well as a process to restrict them with the purpose of making said systems more financially and actuarially sustainable. The neoliberal government continued this process with the 2019 parametric reform. Nevertheless, the very high pension costs have not yet been resolved, especially in the over two thousand separated public regimes (which are not subject to the new 2019 regulations). Said regimes are probably facing severe financial-actuarial disequilibria that make them unsustainable, despite the high fiscal subsidies and that they have regressive effects on income distribution, because their insured earn an income higher than in the RGPS; the same is true among federal civil employees with lower salaries.

## 3. The Impact on the Financial-Actuarial Disequilibrium

Due to all reasons explained above, the spending on public pensions in Brazil over GDP grew steadily from 4.6% in 1995 to 6.9% in 2006, 8.2% in 2016, and 11.1% in 2018[104] (ECLAC, 2018). The latter is the highest in the region, therefore, it was ranked first in the group with "higher" pressure on pension financial sustainability; Argentina and Uruguay follow, both with 10.7% of GDP (Arenas, 2020). The annual growth rate of GDP averaged 1.4% in 2000-2019 (ECLAC, 2019b). Although we lack a similar rate of increase for the annual average pension spending, it is very likely that it far exceeded the GDP growth rate. It is virtually impossible to rank Brazil in the region regarding the size of the total contribution. In the RPPS the minimum contribution is 15% and the maximum contribution is 44% (it should be recalled that these are progressive aliquots), so it would be the highest in the region, twice the total contribution of Uruguay, which has the oldest pension system (Table 5). It is impossible to determine the RGPS total contribution as we do not know exactly the amount of the employer's contribution.

In 2015-2019, the RGPS balance of revenue and expenses showed a deficit that grew from 1.4% to 2.9% of GDP. Its main component was the rural regime, which represented 59% of the total deficit; in 2019, the rural deficit was R$217,600 million or US$40,296 million (SETP, 2020b). The latest RGPS financial projection for the next 41 years (2021-2060), considering the 2019

104 For several years, there has been a debate on whether the deficit is manipulated by not integrating all INSS revenue in the calculation and using funds for areas other than pensions.

parametric reform, shows that: real revenue will increase from 5.5% of GDP in 2021 to 5.9% in 2060, while expenditures will rise from 8.5% to 13.5%, and the deficit financed by the state will grow from 3.0% to 7.6% within the same period. At the 2020 exchange rate, the deficit in 2060 would be R$4,544,577 million or US$841,588 million. Such study did not include an actuarial cost projection (SETP, 2020a).

In the RPPS, there are two alternative calculations of the actuarial equilibrium and of the deficit for federal civil servants in 2020-2094: the "open group" in which it is assumed that employees who retire, resign, or die are replaced, and the "closed group" in which it is assumed that employees who leave the system are not replaced (the latter is created in order to estimate the capital stock that is necessary to balance the regime for the existing group). The open group is the relevant one and the actuarial deficit (the actuarial present value of future contributions from which the actuarial present value of future benefits is subtracted) is projected at R$1,063,643 million or US$196,971 million. As for GDP, the deficit will grow from 0.68% in 2020 to a peak of 0.83% in 2027 and then decline until disappearing in 2091. The main reason for this decline is the parametric reform that came into force in March 2020 (there was already a reduction of 12.9% regarding such deficit in 2019-2020) as the future generation enters the system with the new rules. An additional reason is the creation of the supplementary system of public employees that results in a deficit in the first 20-25 years and then disappears (Schwarzer, 2020). The actuarial study warns that, despite its decline, "the actuarial deficit is high, requiring a review to guarantee equilibrium" (Ministério da Economia, 2020: 7). However, the RPPS financial deficit is lower than 4% of the RGPS financial deficit, probably due to the fact that the former has a much higher contribution, especially from the employer, and also that the state finances any resulting deficit. Therefore, the RGPS actuarial deficit must be several times higher than the RPPS actuarial deficit. On the other hand, to the best of my knowledge, the RPPS data for federal civil servants (open group) exclude servants from states, municipalities, and other entities, and the 2012 actuarial study found that such schemes with over 400,000 inhabitants faced severe deficits in the actuarial equilibrium, while smaller municipalities had a better equilibrium (ECLAC, 2018). The ratio of active workers per one pensioner within the RPPS civil servants varied in 2019, but mostly was low; e.g., in the Legislative Branch it was 0.6, in the Executive Branch 0.8, and in the Judicial Branch 2.7 (Ministério da Economia, 2020). Information on this ratio could not be obtained from the state and municipal schemes.

Adding the financial deficit in 2060 of the federal civil servants (open group) of R$174,224 million and the RGPS deficit of R$4,544,577 million, a total deficit of R$4,718,801 million is calculated (US$873,852 million at the exchange rate of 2020) of which 96% correspond to the RGPS and 4% to the federal civil servants (open group). As for GDP in 2060, the deficit was 7.6% in the RGPS and 0.3% in civil servants, for a total of 7.9%. It is not possible to calculate such sum on the actuarial deficit as it is not available from the RGPS.

In section IV-5-b, the two methodologies for calculating the actuarial deficit were explained: the WB's and the ILO's. The latter—considered the correct one—suggests that the actuarial projection of the deficit must take into account the future income from contributions (and capital returns), as well as a potential reduction in expenses. In Brazil, the RPPS contribution rate from the third salary stage is already very high; therefore, the only way to restore the equilibrium would be reducing expenses that implies an increase in the current retirement age of 65/62 which, pursuant to the 2019 law, must be reviewed every four years in accordance with the increase in life expectancy due to the advanced aging process. This is why the parametric reforms of 1999, 2003, and 2019 intended to reduce the differences between RPPS and RGPS. The RGPS total contribution could not be calculated because the employer contribution cannot be disaggregated, nevertheless, such total contribution must be lower than that of the RPPS, hence it may be increased in order to balance this system.

## 4. The Frustrated Attempt at a Structural Reform and the Lessons Learned for Brazil from this Study

At the time of the proposal of the parametric reform and constitutional amendment, the government planned to add a clause that would allow it to propose a structural reform to replace the current PAYG system with a fully-funded system, but it never did it. Paulo Guedes, Minister of Economy, Ph.D. in Economics from the University of Chicago, who studied with Milton Friedman (Bloomberg, 2018), proposed such system, but had some similarities and differences to the Chilean model: a) workers would contribute 10% of their salary to fully-funded individual accounts and the pension would be based on the amount accumulated in such accounts plus capital returns (as in Chile); b) a minimum pension equal to a minimum wage would be ensured to low-income insured (similar but not equal to Chile); c) the worker or his/her union would choose the administrator of his/her accounts among three options: private, regulated by the government, administered by the state, or administered by the National Treasury through government bonds (in Chile there was no option, only private administrators); and d) the current insured (or their union) could choose between staying in the shutdown PAYG system or switching to the new fully-funded system. Labor force newcomers would have to join the new system (as in Chile, except for the union option). It was reported, with no evidence, that the reform would save R$1,236,500 million (US$228,980 million) and that the impact of the new system on the future budget would be zero or minimal in the short term (Federal Senate, 2019; Folha de São Paulo, 2019; Revista Exame, 2019). The structural reform was not formally proposed and the government has not brought it up again.

From the performance evaluation of private systems in 1980-2020 conducted herein, many important lessons can be learned by Brazil about the attempt to introduce a fully-funded system:

- The Brazilian system is the most fragmented in Latin America, not only with the two main regimes (RGPS and RPPS) but with more than two thousand separate regimes, regarding which no actuarial evaluation has been conducted in more than eight years and which would take long to unify. In 1979, Chile had 35 of these regimes and 33 of them were shut down, unified, and their conditions standardized by the 1980 structural reform. In Costa Rica, there were 19 regimes and it took four decades to shut them down to new affiliates; the Judiciary Branch regime still exists and was recently reformed. The other countries with significant fragmentation are Argentina and Mexico. In Argentina, the structural reform managed to unify about half of the state regimes, but the rest and hundreds of other several types of university-graduate professional regimes still remain. In Mexico, the two main systems (IMSS and ISSSTE) continue and only a couple of separate regimes have been incorporated in the last 23 years.

- Minister of Economy Guedes claimed, with no evidence, that the impact of the new system on the future budget would be zero or minimal in the short term. The transition cost of the Brazilian pension system would be higher than in any other Latin American country with a structural reform, since Brazil also has the highest number of insured in the region and generous benefits: its spending on public pensions of 11% of GDP is the highest; the projected RPPS actuarial deficit of federal civil employees (open group) is R$1.6 trillion (a bit more than what Minister Guedes said the structural reform would save) to which the deficit of over two thousand other regimes in states and municipalities should be added. In Chile, the cost of the transition at its peak was 7% of GDP and 40 years later it is still around 1%. Also, Chile could finance the deficit with budget surpluses, while Brazil has had deficits (an annual average of -5% in 2009-2019), and the transition period will take 70 years. A comparison of the transition costs in various countries shows that in Brazil these costs would be equivalent to 202.6% of GDP, 1.5 times the cost of Chile and 5.5 times that of Mexico (both substitutive reforms) and the average annual cost would be 6% of GDP compared to 0.5% to 1.1% in Mexico (Nakahodo and Savoia, 2008). Due to the high cost, resources allocated to other social areas, such as health and education, would have to be used. Former Chilean Pension Superintendent Guillermo Larraín (2019) provided a conservative estimate claiming that the cost of the transition would be 100% of GDP and advised Brazilians to forget about a substitutive reform and, at the most, to adopt a mixed model. All this explains why the reform bill was never formally submitted to congress, as it would have faced an opposition well-documented on the cost of the transition.

- It is revealing that the minister of economy and the president, both neoliberals, did not propose a single alternative of private AFP, but submitted two other public options for the workers or their unions to choose. This monograph has proved the high administrative cost and profits of the private AFP resulting in the reduction of pensions, due to little or no competition (proven with multiple indicators), as well as the fact that the risk is undertaken only by the worker and not by the AFP and, like most of the promises of privatizers, this one has not been kept. On the other hand, the additional voluntary savings in Brazil is the most successful in the region, reaching R$1,980,484 million in 2019 (US$366,756 million) and 20% of GDP, i.e., 24 times the sum of all the voluntary funds of the eight private systems. Although 15 million insured contribute to these funds, they are only 14% of the labor force; therefore, incentives should be provided to expand the number of savers.
- Brazil has to undertake another parametric reform of its two main PAYG systems and begin the difficult process of unifying and standardizing the thousands of separate regimes. Only this would lead to significant savings in administrative expenses. Brazil must also conduct a consolidated actuarial valuation and 100-year projections of all pension regimes with a simulation of the effect on the sustainability of measures to reduce spending to a financeable level, as well as of the impact in increasing the RGPS employer's contribution, disaggregating the portion allocated to pensions. Based on the foregoing, a social dialogue should be promoted, with representation of the sectors involved, about the type of changes that would be implemented (see section VII—Recommendations—of this monograph), together with a massive education campaign so that the people may understand why said changes are necessary in order to guarantee future pensions. Due to the advanced aging process, the longer the reform is postponed, the harsher its conditions.

# VI.

# CONCLUSIONS

## A. PERFORMANCE EVALUATION OF PRIVATE PENSION SYSTEMS

Performance evaluation of the nine private pension systems within the last four decades, according to the selected aspects/principles, is as follows:

### 1. Social Dialogue

Most structural reforms were not preceded by a social dialogue. Two of these reforms were imposed by authoritarian regimes with no social dialogue, whereas two others were approved under a democratic regime, but with significant manipulation and practically no social dialogue. The remaining reforms were developed under democratic regimes—most of them based on lengthy and heated debates, some manipulation, and a varied social dialogue approach.

## 2. Coverage

Coverage was measured by household surveys, which are conducted uniformly in all countries, based on contributing insured, and considered the most accurate method. In contradiction to what reformers promised, economically active population (EAP) coverage dropped in all private systems after the reform started; then, it grew. However, in the five less socially-developed countries, it only covers 21% to 38% of the EAP (ILO minimum standard states a minimum coverage of 50%) and it is very difficult to be extended. Reformers made no promises on the older-adult population (65 years and over) coverage by contributory and non-contributory pensions. Such coverage increased in all countries, mainly owing to the extension of non-contributory pensions by the state—still five private systems are below the adult-coverage average of 71% for the entire region, including public systems (one private system lacks non-contributory pensions and the coverage of another system has stagnated). The analysis determining whether the private system has had any impact on coverage was negative, as no difference was found when comparing it with the coverage of public systems, particularly regarding older-adult population; the level of economic development of the countries is what seems to determine coverage.

Today, supporters of structural reform are trying to justify EAP's low coverage by arguing that this is not a problem of the private system but of an exogenous factor: labor force informality; although reformers predicted that the reform would extend formalization. It was shown that the design of the reform was a factor in the low coverage since the private system has been unable to face the exogenous obstacle. On the contrary, the analysis of groups that are difficult to incorporate—most of them informal groups (self-employed workers, domestic-service employees, employees of micro-enterprises, and agricultural workers)—indicated that many countries have developed successful public policies to extend coverage to such groups, instead of waiting several generations so that formalization may spread as the only way to increase the EAP coverage.

## 3. Social Solidarity and Gender Equity

Reformers neither addressed social solidarity nor gender equality. The principle of social solidarity was replaced by the principle of equivalence: the pension is based on the fund accumulated in the individual account of each insured; therefore, there are no transfers between generations, income groups, and genders; if solidarity mechanisms are available, they are external to the private system, financed by fiscal authorities. In contrast to the neoliberal idea that the state must play a subsidiary role, it has been fundamental and, without its support, the private system could not exist: the state makes affiliation to the system mandatory, finances the cost of the transition from the public to the private system, sets a public body that regulates and supervises the private system, introduces or expands non-contributory pensions and finances them, makes contributions to improve low contributory pensions up to a limit at which such contribution ends, and finances inclusion measures in the contributory system intended for certain excluded groups. Also, reforms endured anti-solidarity elements, such as the elimination of the employer's contribution in Chile and Peru. Therefore, the worker makes all contributions in violation of the minimum ILO standard that the worker must not contribute over 50% of the total contribution and, in the majority of countries, the worker also pays fees and premiums. Reforms excluded powerful groups with separate schemes providing generous benefits and receiving fiscal subsidies, such as the armed forces (in Chile they implemented the private system, but were excluded from it), as well as civil servants, congressmen, judges, teachers, etc. provoking a heavy tax burden. The average pension of the Chilean armed forces ranges between 3.2 and 7.3 times the average contributory pension of the regular private system and, compared to the non-contributory pension, between 6.4 and 14.6 times; military pensions are financed 90% by fiscal authorities and take 0.9% of the GDP, while non-contributory pensions take 0.7% from the GDP; 69% of Chileans oppose the armed forces having a system different from the rest of workers. Finally, in low-coverage countries, the majority of the uninsured population finances—through consumption taxes, like VAT—part of the coverage of the insured minority and, in some cases, part of the transition costs.

Gender discrimination results from the labor market and the pension system itself. Although gender inequalities prevail in both private and public systems, the latter are relatively more neutral or positive, as they grant the minimum pension with fewer contribution years, apply the pension formula to the last years of working life, and use unisex mortality tables. Private systems accentuate gender inequalities: most reforms increased the years required to obtain a minimum pension, being more difficult for women to qualify (the average number of years required are 24.3 for private systems and 17.6 for public systems); in addition, contributions are paid throughout the entire working life, and gender-differentiated mortality tables are applied, all resulting in lower pensions for women. EAP female coverage rose slightly in 2009-2018 but dropped in two countries and, in the five least developed countries, it is below the 50% stipulated by the ILO minimum standard. Coverage of older women increased more than that of the EAP and did not decrease in any of the nine countries (however, in two of these countries, it only covers 12% and 17%). This was mainly due to the extent of non-contributory pensions financed by the state and benefiting women. In two countries the state compensates women for the time they spend raising their children.

## 4. Sufficiency of Benefits

Reformers promised that the amount of the private pension would be suitable to maintain the pre-retirement standard of living, because very high replacement rates (RR) would be paid—"up to 70% of salary at the end of active life," and would be higher than the pensions of the public system. These promises have been disproved by RR calculations conducted by the IADB for 18 Latin American countries (eight with private systems and ten with public systems), posting an average RR of 64.7% in public systems and of 39.8% in private systems. In countries with DB (either a pure scheme or the remainder of the closed public system) RRs are higher than the minimum of 45% recommended by the ILO, while the RRs of four private DC systems are lower than such minimum standard (including Chile with 39%). The three mixed systems including a DB pillar—as well as the public system in the two parallel models—go far beyond the minimum standard; only RRs of two public systems are below said minimum standard, and Haiti is one of them. Similar calculations were obtained by the OECD, which includes the Dominican Republic (excluded in the IADB comparison) having the lowest RR (23%) among 19 countries.

Recent studies in private systems ratify low RRs, and also prove that the insured will face one of the following two problems: only 27% to 28% of the insured in the private system will receive a pension compared to 59% in the public system; and only 30% of those insured in the private system between 51-60 years of age will receive a higher pension than those insured in the public system. The Mexican government has admitted that two promises of the structural reform have not been fulfilled: the insured entitlement to a minimum pension is very poor and the amount of pension is lower than expected. In Chile, 95% of affiliates in the private system will not build up the required savings in individual accounts, not even if they work for decades and have a proper salary, because external factors—such as capital returns of pension funds and the ups and downs of the stock market—affect pensions. These factors prevent people from reaching a pension higher than US$389 per month; some men aged 60-65 years will receive either an annuity of US$51 per month or a scheduled retirement of US$64, while women in this age range will receive even less.

Partly due to the low RRs of private systems, made worse by the economic crisis caused by the pandemic, a large number of countries is approving the withdrawal of funds from individual accounts before retirement; i.e., in Peru 95.5% can be withdrawn, another 25% for housing and 25% for those having a small balance in their individual accounts, as a result of which the fund has been virtually vanished. In four other countries (including Chile) an amount ranging between 10 and 100% can be withdrawn under different circumstances.

One promise that has been kept is the principle of equivalence: private systems have strengthened the ratio between contribution and the amount of pension. However, a minimum RR of 45% could not be attained, and then social solidarity and gender equity were sacrificed.

## 5. Administration and Reasonable Administrative Costs

Reformers promised that strong competition among pension fund administrators would increase efficiency and reduce administrative costs, as the insured—having freedom of choice—would join and transfer to the best administrators, i.e., those charging lower fees and paying higher pensions. Said freedom of choice, at the time of the reform between the public and private system, did not work or was quite limited in most countries: in three countries all the insured were forced to change to the private system, in others all labor market newcomers were forced to join such system. Also, there was an increase in the public system contribution or incentives were created to change to the private system. Often employers were the ones who decided to change administrators or pushed their employees to switch to the private system. Only in Colombia and Peru the insured could freely choose between the two systems. Transferring to the private system was also prompted by promises made by reformers, pledging that there would be better pensions and lower administrative costs. These promises have not been fulfilled.

More importantly, in most countries competition has not worked at all. The number of administrators has significantly decreased due to mergers and closures; concentration in the two largest administrators has grown or stagnated in the majority ranging between 68% to 100% in five of them (there is a duopoly in El Salvador). The annual percentage of affiliates changing administrators shows a declining trend and ranges between zero to 1% in five countries and between 2% to 3% in another two. The high cost of freedom of choice for pension fund administrators led to restrictions in many countries, reducing the number of times they can be changed (i.e., once a year or every two years) and encouraging industry collusion. Administrative costs are high and typically steady: between 23% to 30% of the deposit in five countries, reducing the future pension. The Mexican government has admitted that administrative costs are higher than international benchmark costs. Profit as a percentage of net patrimony ranges between 20% to 48% in four countries and between 12% to 16% in another four. Said profit was steady or increased in four countries during the global financial crisis of 2007-2008. In Chile, salaries paid to executive officers amounted to US$26 million in 2019, while allowances amounted to US$4 million, compared to an average annual old-age pension of US$1,323.

Before the structural reforms were implemented, virtually all public systems in the region had tripartite representation (workers, employers, and state) in pension administration. The reforms fully transferred pension management to private for-profit companies, with no representation of workers (with one exception) who are the owners of the funds. In mixed systems, tripartite participation is still present in the DB public pillar, as well as in the parallel system in Colombia, but not in the private pillar/system. There is also no participation of workers and employers in the regulation, administration, and control of supervisors of private pension funds—a role virtually exclusive to the state, except for one country. The insured does not participate in the decision on the investment of the pension funds; private administrators do this. On the contrary, all public pension systems maintain tripartite representation except one system, and retirees and pensioners do participate in three countries.

A positive feature of the reform is that pension fund administrators improved the information provided to the insured and reduced the time for processing pensions. However, there is a great lack of knowledge among the insured preventing them from making informed decisions, i.e., how to choose the pension fund administrators offering the lowest administrative costs, the highest returns, and paying the best pensions, as well as how to choose among multifunds and retirement plan options.

## 6. Financial and Actuarial Sustainability

Reformers made multiple promises regarding financial-economic aspects of the private system: The ownership of the individual account and the private administration of the system will encourage the insured to contribute promptly to their individual accounts and reduce evasion; the general fund and the invested capital will grow posting high capital returns; a good portion of the investment will be in domestic stocks, and aging will adversely impact the long-term sustainability of public systems, but will not affect private systems due to their design and fully funding. Contrary to the first promise, the proportion of contributing affiliates decreased in all countries after reaching a zenith; based on the first year available, this proportion also declined or stagnated, except in Chile; the worst falls took place in El Salvador (42 percentage points) and Mexico (28 points). One of the reasons that led to this drop was employer evasion and payment delays, which was ratified in four private systems. Ratifying a reform promise, the capital accumulated in the fund has actually grown, although with notable differences among countries: in Chile and Mexico the capital exceeds US$200,000 million, but is less than US$12,000 million in four countries, while as a percentage of GDP it amounts to 80% in Chile, but less than 25% in seven countries; however, the administrators control a very high percentage of GDP, granting them great power. Voluntary saving has not been successful: in five countries it ranges from zero to 0.4% of GDP and in another two 2%; nevertheless, in the Brazilian public system, voluntary savings funds amount to US$366,756 million and 20% of GDP—24 times the sum accumulated in all private systems.

In most private systems, the promise that structural reform would diversify the investment portfolio has not been met: concentration on the two major instruments range between 80% to 90% in four and between 62% to 76% in the other five. The largest investment is in public debt, which ranges between 61% to 82% in four countries. This was typical in old public systems, and still exists in four private systems, as they lack a developed stock market with enough traded instruments. The second largest investment is in foreign instruments: From 36% to 45% in three countries including Chile because there are not enough national instruments traded on the stock market, which was established at the end of the 19th century (diversification is appropriate, but up to a certain limit where volatility risk is very high). Investment in domestic stocks—which reformers predicted would result in a great benefit—is zero in four countries and ranges between 6% to 16% in the other five. The gross real capital return on the investment was very high between the creation of the system and 1999 (due to the scarcity of instruments, which inflated its value); during the 2007 financial crisis this capital return dropped between 19% to 26% in three countries and between 2% to 9% in another four. With the recovery in 2010-2019 (the longest in history), the capital return grew, but in such period, it did not recover the average capital return achieved from the creation to 1999 in five countries and matched it in two countries. Only in 2019 the initial capital-return average was exceeded in five countries, but in El Salvador and Uruguay it was still lower. If the net real capital return (deducting administration fees) were published, it would be even lower than the gross capital return.

The analysis of financial-actuarial sustainability demystifies four key arguments adduced by reformers:

**a)** The "implicit debt" of public pension systems is defined by the WB, strictly based on private insurance, as the present value of all future benefits of current and future pensioners, less the amount of the initial reserve of the system—a definition that was used to replace public pension systems with private systems as the only way to balance them in the long term. The ILO, according to the public finance approach, adds at the end of the previous WB sentence: *less the value of all contributions made by current and future insured*, i.e., by means of periodic parametric reforms, either the contribution can be increased or the expense reduced in order to balance the public system (for example, increasing the retirement age or modifying the pension formula).

**b)** The "defined contribution" (DC) is a self-proclaimed key feature of private systems because, in theory, its contribution should not be increased over time as in public "defined benefit" (DB) systems, but currently supporters of private systems state that in order that DC systems keep existing, their contribution will have to be increased, as happens with DB systems.

**c)** Contrary to the reformers' claims, the "fiscal cost of the transition" of making explicit the implicit debt resulting from converting public systems into private, has been considerably higher than the initial projection. It has taken longer than expected and it will grow in the next  years in most countries, leading to severe fiscal problems.

**d)** It is argued that "aging makes public systems unsustainable, but does not affect private ones," but now private system supporters argue that they are facing the challenge of an aging population, as an increasing number of pensioners have to be financed for even longer periods. Therefore, it is necessary to increase the retirement age. However, to maintain the equilibrium, public systems must implement periodic parametric reforms, without which these systems would not be sustainable in the long term considering the system maturity and aging of the population, as similarly occurs with private systems.

A recent study conducted by ECLAC on public pension spending concerning the GDP in this region, including seven out of nine private systems (as well as Argentina), has ranked them according to their financial sustainability, and based on indicators such as aging and elderly coverage. Using these indicators and adding others (generosity or harshness in benefits—such as RR and retirement ages—, existence or non-existence of multiple generous separate regimes, size of the contribution regarding spending, and design flaws in structural reforms), the situation of five private systems of various types is analyzed below,  specifying whether a parametric reform has been implemented or not:

### Uruguay

Uruguay has the highest pension spending as it is the most aged country, with the most mature system and several separated regimes, high coverage and generosity of benefits (including very low retirement ages and an RR of 72%). Therefore, despite the very high contribution, the public pillar has experienced a deficit financed by fiscal transfers. Nevertheless, such deficit was reduced between 1982 and 2016 and it is expected that its decrease will continue until 2025, but then will grow to 2.5% of GDP in 2065, which is manageable. Currently, a commission is studying parametric measures to improve the equilibrium.

### Costa Rica

Costa Rica is less aged than Uruguay and its system is not as mature. Costa Rica's system has only one separate regime (judiciary), and the coverage is similar, but the RR is much higher (90%) and, although the retirement age is five years higher to the Uruguayan, there is an expensive early retirement with less age and less years of contributions, which is a key cause of the increase in pension spending. On the other hand, its contribution is the third lowest among the nine systems. Several actuarial studies (most of them based on the WB's approach explained above) have projected a short-term reserve disequilibrium and depletion; to face it, parametric reforms have been implemented: contribution increase and diversion of income from another entity, as well as a proposal to eliminate or substantially reduce early retirement, which would extend the equilibrium until 2035 (before that, another parametric reform must be carried out); the separate regime of the judiciary enjoys very generous benefits and has been reformed: increasing the retirement age, reducing RR, setting a cap on pensions and increasing contribution.

### Panama

Panama ranks in an intermediate position among the nine countries, its level of aging is moderate, and the system is the least mature among the nine countries. On the other hand, its coverage is the fourth highest, there are multiple separate regimes, RR is 88% (higher than Uruguay), retirement ages are low, the state makes a contribution to individual accounts, it has the third lowest contribution (lower than Costa Rica's and half of Uruguay's), and there is high evasion and payment delays. The old public system was closed and stopped receiving contributions, but it pays 99% of all pensions, thus generating a growing deficit. In 2003, the ILO recommended increasing the total contribution by 4 percentage points by 2013, which was actually done, but it was necessary to continue gradually increasing it another 10 points until 2050, which has not been done yet, therefore, it is projected that the reserve will be exhausted in 2024; there is no information on the separate regimes, but it is known that they are experiencing an actuarial disequilibrium. As of November 2020, the necessary parametric reform had not been announced.

## Mexico

Mexico has a moderate aging, a system that has not yet matured, relatively low coverage, 64% of the insured will not receive a pension, and a very low contributory pension. Nevertheless, there are over 1,000 separate regimes with generous benefits and the insured affiliated with the main system (IMSS), at the time of retirement, may choose between a pension based on the formula of the closed DB public system (RR of 107%) and the pension resulting from the amount accumulated in the individual DC account (RR of 44 %). Therefore, the vast majority will choose the first pension option that is financially unsustainable (in 2021 the first cohort of the reform begins to retire). As a result, public pension spending has grown 4.8 percentage points more than the GDP growth and will continue to increase. A reform bill in congress introduces fundamental changes that could constitute a re-reform because the private system is maintained but improves most of the principles of social security: it extends the coverage of non-contributory pensions and the access to the minimum contributory pension guaranteed by the state; it expands social solidarity because the state contribution and its social quota are reallocated to improve the minimum pension of the insured with the lowest income, and it also increases (by 8.7 percentage points) the employer's contribution to increase access to and the amount of pensions; it lacks  specific provisions on gender, but the previous measures would favor women through non-contributory pensions and through the increase of lower pensions; it improves the adequacy of benefits with an projected 40% increase in the average replacement rate, although it is below the ILO minimum standard; it reduces the fee paid to the administrators pursuant to international benchmarks, and states CONSAR's obligation to send annual reports, as well as another ten years after the reform implementation. It has not been reported whether the necessary actuarial study has been conducted to guarantee the financial-actuarial sustainability of the new benefits based on the new revenue, and no budget items have been committed  to finance und such expenses. The bill admits that two promises of the structural reform have not been fulfilled: the lack of access to the minimum pension by the majority of the insured and a lower-than-expected pension amount; it also acknowledges  that the administrative cost is higher than the international cost average; it suggests that the aging process affects the private system, and implies that the defined contribution must be increased to improve low pensions.

### The Dominican Republic

The Dominican Republic has an incipient aging, the second youngest private system, the second lowest coverage of the older-adult population (because it has not implemented the mandate of the structural reform to establish the non-contributory pension) and it never issued the recognition bond. On the other hand, the retirement age of men is the lowest among the nine countries, there are numerous separate regimes that are unbalanced, there is a debt for evasion and payment delay equivalent to 82% of the pension fund in individual accounts, and the lowest contribution and the lowest gross real capital return of the nine countries. A parametric reform in 2020 implemented insufficient measures focused on reducing administrative fees, but it did not approve the increase in age and waived the debt surcharges.

## B. EVALUATION OF THE RE-REFORMS IN ARGENTINA, BOLIVIA, CHILE, AND EL SALVADOR

The re-reforms in Argentina (2008)[105] and Bolivia (2010)[106] closed the private pillar/system and transferred all the insured and funds to the public PAYG system, while the re-reforms in Chile (2008) and El Salvador (2017) maintained the private system; the Chilean re-reform improved coverage, social solidarity, gender equity, and financial sustainability, while the Salvadoran re-reform focused on reducing the fiscal deficit. The first three re-reforms improved several failures of the structural reforms, but not the Salvadoran one. Here is a summary of the evaluation results:

105 The discussion on the Argentine re-reform in FIAP (2020b) covers less than four pages, while the ILO chapter on such subject (Bertranou et al., 2018) covers 23 pages and its conclusion on the risk of the system's unsustainability is similar; FIAP ignores that chapter.

106 FIAP (2020b) explains, in only half a page, what it does not consider a re-reform in Bolivia, while my chapter in the ILO book (Mesa-Lago, 2018a) covers 42 pages on the subject, where I prove that it is a re-reform. I also analyze the changes in coverage, social solidarity, gender equity, and administration; I document the risk of financial insolvency in much greater detail than FIAP does; FIAP also ignores said chapter.

## 1. Social Dialogue

The most extensive dialogue took place in Chile, where the commission in charge of the process had representation from all sectors involved and 92% of its recommendations were incorporated into the reform law. The Bolivian government conducted negotiations and entered into an agreement with the most important union federation, but the employers' federation and other relevant sectors were not consulted. A wide debate was held in the National Assembly and the law was approved by a two-thirds majority of the government. In Argentina there was little public discussion and few debates in Congress; the law was quickly approved by a significant majority of the government, supported by the two largest union federations, the opposition of employers and AFJP and with no input from experts, civil society, and other stakeholders. El Salvador had the least dialogue: the government reached an agreement with other political parties to prepare an integrating proposal that was approved with a wide margin in the Assembly.

## 2. Coverage

The impact is measured between 2009-2010 and 2017-2018, except for El Salvador where we only have 2018 data. Chile incorporated self-employed workers on a mandatory but gradual basis and made them eligible for other benefits that they previously lacked; EAP's contributory coverage grew seven percentage points, but there was a slight decrease in the coverage of self-employed workers; the coverage of the older-adult population by contributory and non-contributory pensions expanded by five percentage points due to the creation of the *Pensión Básica Solidaria* (Basic Solidarity Pension: PBS) covering 60% of the poorest households. Bolivia reduced the retirement age by five years for both men and women, as well as the years of required contributions, which significantly expanded the number of retirees; EAP coverage either grew five points or stagnated depending on whether administrative figures or surveys were used; self-employed workers coverage increased one point, and that of the older-adult population regarding contributory and non-contributory pensions (mostly for the latter) reached 98%

in 2008 due to the expansion of Renta Dignidad, but it remained static afterwards; nevertheless, it is the highest in the region. Argentina approved measures, before the re-reform, in order to extend contributory coverage, allowing the insured to retire without fulfilling the 30-year required contributions, also to self-employed workers who lacked complete documentation, but EAP coverage remained static; older adult coverage increased by six percentage points (2007-2009) but had lost them in 2018. The Salvadoran re-reform took no action, hence failing to comply with the mandate of the 1996 structural reform to extend coverage to groups difficult to incorporate; coverage cannot be measured because there is only one year for observation, but statistics show that in 2018 both coverages were below the zenith previously reached.

## 3. Social Solidarity and Gender Equity

Social solidarity improved in Argentina and Bolivia when the private pillar/system that lacked social solidarity closed and when all the insured were transferred to the public system with intergenerational solidarity. Likewise, Argentina extended the contributory system for lower-income groups and expanded social inclusion of the older-adult population to mothers as for non-contributory pensions. Bolivia universalized and reduced the age for Renta Dignidad; it created the semi-contributory pension, as well as a solidarity fund and a solidarity contribution charged to the employer and high-income insured. The Chilean re-reform infused social solidarity in the private system by creating two solidarity benefits financed by the state: the *Pensión Básica Universal* (Universal Basic Pension: PBU) and the *Aporte Previsional Solidario* (Solidarity Pension Contribution: APS) complementing the contributory pension of those with low incomes and generating progressive effects.[107] The Salvadoran re-reform of 2017 neither extended nor improved the non-contributory pension, but created three new benefits for the insured that are not entitled to a regular pension (the BET, the BEP, and the

107 A 2019 law increased the amounts of the PBS and APS by 20%; a bill in congress imposes a 6% contribution to the employer to improve lower pensions plus an increase in fiscal support to improve low RRs for women and expand solidarity benefits.

BL) although only 2% of the insured requested these benefits and 98% preferred the refund of the balance; the *Cuenta de Garantía Solidaria* (Solidarity Guarantee Account: CGS) aimed to reduce the fiscal deficit and it finances the new and old DB benefits with a contribution from employers and another one from retirees; despite the adjective "Solidarity", the account has not improved this aspect of the system. Separate regimes still exist (particularly those of the armed forces, except in Costa Rica) and some were added in Argentina and Bolivia.

All the re-reforms, except for the Salvadoran one, have partially compensated insured mothers for the time they spend raising their children: Argentina granted a non-contributory benefit when they have seven or more children and lack resources; Bolivia reduced one year of contributions for each child born alive; and Chile granted a bonus for each child born alive that accrues annual interest and becomes effective at the time of retirement (in case of divorce, a judge can order the transfer of up to 50% of funds accumulated in individual accounts during marriage from one spouse to another, which is usually the woman). All three countries have increased female participation in pensions, particularly due to the expansion of non-contributory pensions where they now have a majority. Gender-differentiated mortality tables were eliminated in Argentina, Bolivia, and El Salvador, but continue in Chile. The Salvadoran re-reform did not introduce other measures to improve gender equity. Important gender gaps still exist in all countries, i.e., the average female RR is much lower than that of men and a smaller percentage of women than men will be able to retire as they do not have the required years of contributions.

## 4. Sufficiency of Benefits

All re-reforms improved benefits, although to varying degrees. Argentina significantly increased the maximum and the average amount of contributory pensions, as well as the minimum pension and the non-contributory pension. This reduced the percentage of poor older adults by 25 percentage points in 2003-2009, but in 2020, due to the pandemic and crisis, the general average RR was 55 percentage points below the minimum basic basket of goods for women and below 38 points for men. Bolivia maintained the contributory regime with individual accounts, but added a semi-contributory regime with a fiscal solidarity subsidy as well as a non-contributory regime fully funded by the state; the Renta Dignidad beneficiaries almost doubled in 2007-2012 and 83% of them lacked another pension; the monthly sum is very low, but it is the only source of income that half of the poor receive. In Chile, the number of PBS and APS beneficiaries doubled in 2008-2012, reducing poverty by three points among the older-adult population; the value of the PBS is 50% higher than the previous non-contributory pension and increased income by 72% for those insured in the poorest quintile; the APS also raised the level of contributory pensions, although the RR is still very low.[108] As mentioned above, El Salvador added three new benefits but set a limit of US$2,000 on the contributory pension, which did not exist before; also, the deposit in the individual account of the insured was reduced from 10% to 8% and the resulting difference was transferred to the CGS. Three re-reforms maintained or improved the indexation of pensions, however, in El Salvador they are still subject to the government's discretion.

## 5. Efficiency and Reasonable Administrative Expenses

In Argentina and Bolivia with the transfer to the public system, competition disappeared. Argentina removed all fees and the premium; the state agency that manages the public system cannot impose fees—there are no figures on its administrative expenses. In Bolivia, the two previous private administrators (AFP) are still collecting fees, managing individual accounts, investing funds, and paying pensions even after the Public Manager was founded. Chile tried to stimulate competition through: a biennial bid that assigns new labor force entrants to the AFP that offers the lowest fee, which is also applied to previous affiliates (but most of the insured is still affiliated with the two main AFP, despite they charge the highest fees), the authorization of banks to manage individual accounts, substitution of the selection of commercial insurance companies from a bid by each AFP to a collective bid including all, creation of

108 A law that was passed in 2019 increased the PBS and the APS benefits.

a new AFP, which resulted in less concentration for the two main AFP and in more annual transfers. It also set a Pension Education Fund to educate people on the pension system, as well as centers to answer public inquiries and help the insured in claiming benefits and making decisions.[109] Tripartite representation (workers, employers and state) was not restored in any country, but Argentina established an advisory board and Chile a commission of users to monitor the re-reform—none of these bodies has decision-making power. El Salvador ordered that the risk committee and a (not yet established) new actuarial committee are made up, in addition to the government representatives, by one worker and one employer representative. The Salvadoran re-reform took no action to increase competition between the two AFP that hold a duopoly.

## 6. Financial-Actuarial Sustainability

The contribution was kept unchanged in Argentina at 21%, the highest percentage in the region after Brazil and Uruguay, but after 2007 the employer contribution was reduced in order to increase employment. In Chile it remained at 13.8%, but the disability and survivor premium were transferred to the employer who must pay 6% if the pending bill at congress is approved. Bolivia increased the total contribution to 17.4%, which could reach 32.7% and become the highest in the region. El Salvador raised the contribution to 15% and imposed a contribution to retirees and pensioners. In Bolivia the insured pays almost three times the amount contributed by the employer and in Chile the insured pays 86% of the total contribution; both countries violate the ILO minimum standard stating that the worker must not pay more than 50% of the total contribution.

The fund's capital, between the year before the re-reform and 2020, doubled in Chile, amounting to US$215,400 million in 2019, but dropped 33% in March, in the midst of the crisis, and then recovered in September, although it was still

109 The bill in congress reduces AFP' brokerage fees, prohibits fees for mutual fund investments, and imposes a limit on fees

4% below the zenith; with respect to the GDP, it dropped from 80.8% to 72.9%, but then rose to 81.2% respectively in the period. In Argentina the fund increased 48% in 2008-2017 (US$67,052 million), but declined 44% in 2020; with respect to the GDP it declined  from 12% to 9%. In Bolivia it decreased by 42% (US$2,886 million); with respect to the GDP it diminished from 28% to 7%. In El Salvador the fund grew by 17% in 2017-2019 (reaching US$11,700 million), and as a percentage of GDP it increased 5 points; there is no data for 2020. Only the insured faces the risk of a drop in fund value and the capital return, although the bill in Chile returns a portion of the fees to the insured when performance is negative.

The most concentrated investment of the fund is  in El Salvador, where 82% corresponds to public debt, which grew in 2017-2019. Therefore, El Salvador had the lowest capital return of the fund among the nine private systems. In Argentina, investment in public debt increased from 63% to 70% in 2008-2019 and also rose to 13% in loans granted to the insured and beneficiaries (with very low capital return), while stock investment declined and there is no investment in foreign instruments; real gross capital return is not reported. In Bolivia, 57% of the portfolio in 2019 was invested in bank deposits (with an increasing trend) and 37% in public debt (both with low capital return), therefore, the real gross capital return dropped to an annual average of 5%. Chile had the most diversified portfolio, but with the highest foreign instrument concentration, 43% in 2019, thus its real capital return dropped dramatically in the five multi-funds between January and March 2020 due to the economic crisis, although it had partially recovered in September.

The financial-actuarial sustainability of Argentina, Bolivia,[110] and El Salvador re-reforms is at risk. None of these countries conducted previous actuarial studies; El Salvador did it but in the year after the reform and Bolivia five years later.

110 The closure of the private system/pillar in Argentina and Bolivia eliminated fiscal transition costs, but the obligations of the insured who were transferred to the public system must be financially guaranteed in the long term.

Argentina has an advanced aging, a very mature system (the ratio of active workers per one pensioner is 1.3), the fifth highest older adult coverage, generous benefits extended by the parametric reform and the re-reform (RR of 80% , low retirement age of women, reduction of the years of contribution for retirement), and hundreds of separate regimes experiencing disequilibria (the most fragmented system after Mexico); therefore, its contribution is the fifth highest in the region and its pension spending is the highest among the eight countries ranked by ECLAC (it increased from 7% to 11% of GDP in 2000-2017 and doubled the average GDP growth). Before the re-reform, the public pillar suffered a strong actuarial deficit financed by the state, but the transfer of US$25,500 million from such pillar to the public system temporarily eliminated the deficit. It is projected that a growing deficit will take 3% of GDP in 2050 (the contribution rate should increase by 13 percentage points to pay expenses). In 2020, a law added—on an optional basis—five years to the retirement age and tightened the pension formula, but stronger parametric reforms are needed.

Bolivia has an incipient aging, an immature system, a RR of only 31% (the third lowest in the region) and, despite these conditions, its contribution of 15.2% is the seventh highest among the 20 Latin American countries. This may be explained by the facts that its coverage of the older adults is the highest in the region, the re-reform reduced the retirement ages by five years, as well as the years of contributions required, which led to a six-fold increase in retirements. Therefore, its pension spending of 3.8% of GDP is the eight highest among 20 countries; the 2015 actuarial study projected that, in 2031, the financial balance will be negative, and the contribution rate would have to be increased between 126% and 931% to restore equilibrium; the solidarity fund would show a deficit in 2022. By October 2020 there was no parametric reform bill.

El Salvador has moderate aging, a young system, the third lowest coverage of older adults in the region, and a single separate regime of the armed forces (but it is experiencing an actuarial disequilibrium); the 15% contribution is the highest among the nine private systems after Uruguay and tied to Colombia's; its pension spending increased from 2.1% to 2.7% of GDP in 2000-2017 and exceeded the average GDP growth by 1.5 points per year; ECLAC ranks El Salvador among the three lowest countries regarding the financial sustainability pressure. However, the reserves of the two closed public systems were depleted in 2000-2002 (the deficit was financed by transfers from the private system); the 2018 actuarial study projected a net actuarial older adult rate of 66% of GDP (with the WB approach); the 2017 re-reform increased the contribution by two points, but added three new DB benefits to be financed by the FGS, which is projected to result in a growing deficit as of 2027; the actuarial committee stipulated by the re-reform had not been established by October 2020.

Chile has advanced aging, the most mature private system, the second highest coverage of the older-adult population, a solidarity pension system (although it only takes 0.7% of GDP), but an RR of the private system of only 38%, the fourth lowest in the region; pension spending decreased from 5.7% to 3.1% of GDP in 2000-2017 and it is projected to decrease to 2.1% in 2030 (it will not disappear until 2050), the average annual growth of such spending was 3.7% lower than the average annual GDP growth. Therefore, ECLAC ranks the financial sustainability pressure as "low." The costs of the transition have been financed by annual fiscal surpluses, the re-reform underpinned the financial sustainability with the creation of a reserve fund financing the new benefits, subject to actuarial reviews every three years, as well as every five years to evaluate the effects of key variables on RRs and financial needs; the advisory board supervises fiscal sustainability and studies potential modifications required.

The best performance of the re-reforms is recorded in social solidarity (except for the maintenance of separate regimes) and gender equity, administrative aspects (except for social participation that has not been restored yet, although with a slight improvement in two countries), sufficiency of benefits (except for a very low RR in Chile), and coverage (growing in Chile and Bolivia and stagnant in Argentina and El Salvador). The weakest performance has been in social dialogue and, particularly, in financial sustainability (in three countries). All of the re-reforms moved forward in most social principles, however, Argentina, Bolivia, and El Salvador face serious long-term challenges in financial-actuarial sustainability.

## C. RE-REFORMS PROPOSALS IN COLOMBIA AND PERU

The two parallel models combine a private system (RAIS in Colombia and SPP in Peru) and a public system (RPM and SNP respectively), which compete against each other, without any coordination. In both countries, the public system share in the total number of active insured has declined over time (more in Colombia than in Peru) and was a minority in 2020, which means that the PAYG system includes the majority of pensioners but the minority of contributors exerting strong sustainability pressure, more in Colombia than in Peru.

Colombia has moderate-advanced aging, a mature public system, three separate generous and expensive regimes receiving fiscal subsidies, the lowest retirement ages among private systems after El Salvador, the public system RR is 73%, and only 36% of the total insured contribute to the public system. Considering these high-cost indicators, there are a few that reduce spending: the older adult coverage is the fourth lowest coverage among the nine private systems and there are nine countries in the region with greater coverage, the minimum pension in such system is not granted when the insured has other income, and the non-contributory pension does not cover the nutritional requirements of the indigence line and has declined in recent years. The contribution is the highest among private systems except for Uruguay, which has the highest costs. There is a serious problem of inequity: in the public system, 80% of fiscal subsidies are received by 20% of the highest-income population and part of the affiliates (most of them low-income affiliates) subsidize the highest-income pensioners, while in the private system the insured who fail to meet the requirements to receive a pension subsidize pensioners receiving a minimum wage pension; the richest 1% receive as much in pensions as the poorest half of the population. The public pension spending regarding the GDP grew from 1.4% to 4.5% in 2000-2017 and the average annual growth of these pensions exceeded such GDP growth by 5.2 percentage points, thus ECLAC ranks Colombia as the fourth country with the greatest ("medium") financial sustainability pressure among the seven private systems plus Argentina. The IADB estimates that the public system deficit was 3.8% of GDP in 2013 (its reserves were exhausted in 2003) but, due to the decline in affiliates to this system, the deficit would drop to 2.1% in 2025 and 1.7% in 2075; it also projects that the pension debt in 2013-2075 will take 129% of GDP, while ECLAC believes that the public system will not face financial problems until 2030 but they will worsen thereafter.

Peru has moderate aging, older adults have the third lowest coverage among private systems, retirement ages are the highest among these systems (equal to those of Costa Rica and Mexico), the RR is 39%—lower than the minimum standard of 45% set by the ILO, the non-contributory pension is low, only received by people living in extreme poverty and has not been adjusted to the cost of living, hence it has lost value, 60% of the insured will not be entitled to a pension for not meeting 20 years of contributions, and a parametric reform made changes to reduce the cost of the public system; the only element that increases the cost is a dozen separate PAYG systems that are very expensive and experience financial-actuarial disequilibrium. On the other hand, the private system is experiencing serious problems, the worst is that the insured can extract 95.5% of the balance in their individual accounts before retirement, in addition to several other withdrawals that are virtually vanishing the fund. Public pension spending decreased from 4.7% to 1.6% of GDP in 2003-2017, and its average annual growth was 4.6 points lower than the GDP growth mentioned above; the fiscal cost was only 0.2% of GDP in 2017 and it is projected between 0.1% to 2% of GDP by 2050. Therefore, ECLAC ranks Peru as the country with the least financial sustainability pressure among the eight investigated.

Neither the first Peruvian bill nor the reform proposals in those two countries have undergone a prior actuarial study; a strong public debate has been started in this regard, except for the first Peruvian bill that was secret.

Most proposals in Colombia recommend a mixed system integrating both systems (with four pillars): the public system undergoes a parametric reform (including an increase in low retirement ages) and becomes the basic PAYG pillar, while the private system is transformed into a second complementary pillar with several reforms to the AFP. At the time of retirement, the insured receives a basic pension from the PAYG pillar and an additional one from the funded pillar (similar to the three existing mixed models). The proposals also agree on a first pillar of non-contributory pensions that must be expanded, all proposals support close coordination between the various pillars, and one proposal endorses the creation of an independent supervisory agency that regulates and monitors the entire system, including separate regimes. One proposal suggests the creation of a semi-contributory voluntary savings regime especially for the informal sector, with a tax incentive that matches individual contributions. Two radical proposals close the public system, one (from the AFP) enthrones the private funded system as the most important or practically the only one, adding, as an appendix, a small public element, while the other eliminates the obligation to affiliate and contribute to the AFP, and makes it voluntary.

Two bills and several proposals in Peru generally follow the guidelines of a mixed system with several integrated pillars, but with significant additions: the bill that did not pass replaced the AFP by managers exclusively in charge of the investment of the funds; one proposal changes the current investment model for another one with a life cycle that gradually reduces risk based on the age of the insured; another proposes to determine a "target pension" in which the level of inter- and intra-generational solidarity is decided in advance and the insured are informed on the amount of their pension at the time of retirement. All of them reinforce the state's role, three point out AFP failures, and the current bill creates a public agency in charge of the integrated system and its essential components. The Peruvian proposals either eliminate current withdrawals of funds or suggest alternatives on how to restrict them or what are the options if such targets are not achieved.

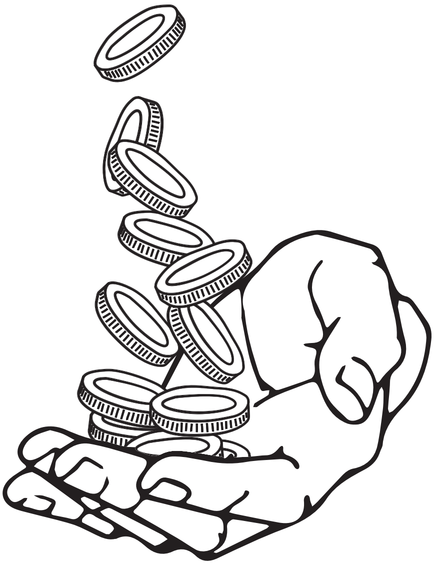
None of the Colombian or Peruvian proposals have been implemented; Colombia has put off the re-reform several times and seems unlikely to be passed, while in Peru a congressional reform commission is completing a bill to be presented by the end of November 2020.

## Summary: Increase in the Role of the State and AFP Decline

The four re-reforms increased the role of the government by carrying out the transfer from the private to the public system and/or by creating/expanding the benefits financed by the state, together with new public management agencies. The AFP disappeared in Argentina, but still exist in the other three countries, although with more restrictions in two of them. Argentina created a Bicameral Commission in Congress that monitors the public system funds and its evolution and may make recommendations, but not binding; an advisory board of the public fund (also with no binding power) and other public agencies conduct external supervision, so there is no unified autonomous superintendence, as in the case of Chile. In Bolivia, the Public Manager is autonomous, although under the supervision of a governmental agency; the two AFP that were supposed to disappear, are still performing their previous functions, the Public Manager administers and pays the universal non-contributory pension; the powers of the Executive Branch on the pension system were substantially increased. Bolivia and Chile closed the previous autonomous Superintendence that supervised the private system/pillar and replaced it with a new state agency of diverse unity, nature, and independence. In Chile, within the twelve years in 2008-2020, there has been a gradual but constant trend to reduce AFP functions and increase the role of the state. The new Chilean Superintendence of Pensions is still autonomous and unified its control over the entire pension system except for the armed forces and the police; likewise, the state finances the PBS and the APS, improves social solidarity and gender equality, promotes competition, and guarantees the financial soundness of the system. In El Salvador, on the one hand, the role of the state as funder of benefits was contracted, transferring the financial burden of the old DB benefits and those added by the re-reform to workers, employers, and pensioners; it transformed the substitute system into a mixed one by introducing a PAYG component managed by a state agency.

The re-reform proposals in Colombia and Peru point out AFP failures and strengthen the role of the state. In Peru, the AFP are criticized by three of them for being little or not competitive at all, earning high profits and fees, as well as for the fact that their investments do not match the interests of the insured; one proposal transfers the investment from the AFP to new managers, another one suggests eliminating the administration of individual accounts, a third one recommends multiple measures to improve them, and the fourth and current bill draft reduces AFP functions to the second pillar individual capitalization component and made the AFP of multiple nature; the OECD points out the mistrust of the insured in the AFP. All the proposals reinforce the state's role: recommending a central collecting agency (in two cases also the individual account administrator and payer of pensions), establishing a first public PAYG pillar, expanding non-contributory pensions financed by the state, granting fiscal incentives to the low-income insured, and two proposals reinforce the public supervisory agency. The proposals in Colombia strengthen the Financial Superintendence and extend its scope to all pensions or create an independent public agency in charge of such functions and accountable to congress; they also expand the non-contributory pension financed by the state, eliminate inequities in the public and private systems, require independent actuarial studies projecting future costs and making them public to ensure the sustainability of the system, write off contributions to mothers for each child born alive with fiscal funding, modify the AFP fees, end the minimum capital return, and eliminate fiscal subsidies to separate regimes. The reform proposal in Mexico could be considered a re-reform.

My documented critical review in this monograph of private pension systems does not imply by default that public PAYG systems or CPCs in Latin America do not face financial-actuarial problems. In fact, these problems are analyzed herein regarding the public systems or pillars of Argentina, Bolivia, Colombia, Costa Rica, Panama, Peru, and Uruguay. I have also analyzed the remaining public systems in other publications, except for Haiti.



# VII.

# RECOMMENDATIONS

## 1. The Need for Comprehensive, Standardized, Reliable, and Timely Statistics

Today, there is a deep statistical gap that is essential to solve in order to have the essential updated information to make diagnoses, propose any reforms, and conduct actuarial studies. There are multiple international and regional agencies that compile statistical information, but it is published by long intervals of time, it does not cover all the essential aspects—especially financial ones—and there are contradictions among them. Every three years, the ILO (2018) publishes the *World Social Protection Report*, a very valuable report including statistics—among other programs—of contributory and non-contributory pensions, their legal and effective coverage, entitlement conditions, contributions, amount of benefits, tax expenses, etc. However, as it is a global report and covers all social security benefits, the data is several years behind and there are certain key financial aspects not covered, such as financial balance, investment of funds and their capital return. The IADB posts standardized results Online (SIMS) of household surveys on contributory and non-contributory pension coverage related to a series of significant variables; its access is free but not easy, the user has to complete a process and the survey figures usually do not match with the administrative figures. There are no statistics on other aspects of pensions, although the IADB conducts country studies and comparative analyses of the region. Every six months, the AIOS publishes standardized statistics of coverage, AFP administrative aspects, accumulated capital, portfolio distribution and capital return. These figures are useful and have been used extensively in this document, but they are only limited to private systems, which is why it is impossible to, for instance, estimate the total coverage of the EAP in the parallel and mixed models or what percentage of the total insured is in the PAYG component and in the fully-funded component. Also, they publish gross capital return figures (net capital return figures are needed), etc. The OECD annually publishes *Pensions at a Glance*, with very useful data that changes each year, but only includes three Latin American countries (Brazil, Chile, and Mexico); it also conducts country studies. ECLAC, in its *Statistical Yearbook* includes a few statistics on pensions and a recent issue of the *Social Panorama of Latin America and the Caribbean* (2017) has focused on pensions. It also publishes some studies in its monographic series; the most recent issue—quoted in this monograph—dealt with public pension spending. The U.S. Security Administration in collaboration with the ISSA posts, approximately every three years, *Social Security Programs Across the World: The Americas*, including very valuable comparative legal information on coverage, entitlement conditions, contributions, managing agency, etc., but there are no financial or other statistics. The WB and the IMF do not publish regular statistical series on Latin American pensions, but occasionally conduct studies on specific countries.

It would be ideal for these organizations to agree to publish, at least annually, a statistical bulletin showing all the standardized and updated key indicators of the 20 public and private Latin American pension systems. This would be a useful experiment of cooperation in a neutral area and of great importance for these agencies (which often have divergent positions) in their technical country studies, as well as in their comparative analyses of the region and also within countries.

## 2. Establishing Social Dialogue

This monograph has documented how reforms—regardless of their nature—have often not been preceded by a broad, open, and transparent social dialogue, with the participation of all sectors involved. To this end, the government should appoint an independent commission of experts with tripartite representation (workers, employers, and government), as well as scholars, retirees, pensioners, and other relevant groups, so that it develops a diagnosis used as the basis for recommendations on the type of reform needed and its basic guidelines, which should be incorporated into the reform bill. This commission would have access to all documents and statistics prepared by ministries and autonomous agencies and would be financed by the national budget. Some models for such commission are that of Costa Rica, created in 1998 for the structural reform, and that of Chile created for the 2008 re-reform and the frustrated attempt at a second re-reform in 2015. The participation of some prestigious international experts has been positive, either as commission members or to hold meetings to discuss its diagnosis and recommendations. The commission should conduct opinion polls and hold meetings with employers' and workers' federations in order to obtain inputs that are important to its work. It should also request an internal study of the cost of the proposed reforms, as well as an ex-post actuarial valuation simulating the results and costs of alternative proposals and their long-term sustainability. All the commission documents must be made public for citizen transparency and discussion purposes. This procedure would not only enrich the reform but would also confer legitimacy to it. Approval by a referendum or plebiscite of all proposed reforms should be considered (as done in Uruguay).

## 3. Extending Coverage

In five of the nine systems (Peru, El Salvador, Mexico, Colombia, and the Dominican Republic—and also in Bolivia), the EAP contributory coverage ranges between 21% to 38%, less than the 50% recommended by the ILO; also, these countries have the largest informal sector, but successful practices have been identified to expand coverage:

**a)** Setting gradually the mandatory legal affiliation, starting with professional self-employed workers hired with a minimum income (as is done in Costa Rica, Uruguay, Chile, Colombia, and in the current bill draft in Peru), then other unionized self-employed workers, such as taxi drivers, etc., would follow;

**b)** The legal obligation, by itself, would not necessarily extend coverage, hence the recommendation would be to equalize the percentage paid by the self-employed workers to that of salaried employees and adjust their pensions actuarially, or grant a state subsidy or a solidarity contribution as a matching incentive upon registration and payment of contribution to low-income self-employed workers (as done in Costa Rica, Bolivia, and Peru—recently), which would imply less costs than granting these workers a non-contributory pension at the end of their working life; another alternative would be to award them benefits granted to salaried workers (Chile);

**c)** In the Dominican Republic, the contributory-subsidized program that was designed by the structural reform in order to incorporate self-employed workers must be implemented;

**d)** Domestic-service employees have mandatory coverage in most countries but it is not implemented; to achieve this, their working conditions have to be regulated, their unionization and collective bargaining promoted, a minimum tax base established, and a home inspection developed and sanctions on tax-evaders imposed, especially to employers (Uruguay and Costa Rica);

**e)** Likewise, salaried agricultural workers (especially in large plantations) or cooperative members must have mandatory affiliation (Uruguay and Costa Rica);

**f)** It is advisable to combine pension coverage with health coverage as the latter is usually more important for these groups than the former;

**g)** Designing ad hoc plans for informal workers having contributions and benefits tailored to their payment capacity and actuarially adjusted;

**h)** Other additional measures to incorporate the informal sector are: simplifying registration procedures, making payment periods more flexible, establishing the monotributo (unified tax regime, as in Uruguay and Argentina), enabling post offices, banks, and smartphones for the collection of contributions and payment of pensions, sending reminders to affiliates through personalized periodic messages (by mobile phones, emails, and similar means) with projections of the pension they will receive at the time of retirement (Mexico);

**i)** Offering unpaid family workers a voluntary affiliation with incentives such as those mentioned.

Non-contributory pensions have increased older adult coverage, reduced poverty, reinforced social solidarity, and improved gender equity, at a cost of less than 1% of GDP, although in several countries their amount is very low (Bolivia and Mexico); the following policies are recommended:

**a)** The two countries with the lowest coverage—the Dominican Republic with 19% and El Salvador with 14%—should, the former, implement a subsidized regime and, the latter, resume the extension of coverage which is now stagnant. Both of these countries could argue that it is impossible for them to afford the cost of extending coverage or increasing benefits, but they subsidize separate privileged and expensive regimes (see section 5) and, additionally, it would be necessary to investigate whether they are actually able to increase the tax burden as a percentage of GDP, especially through income taxes;

**b)** Contributory and non-contributory pensions must be integrated in order to avoid duplication and fraud (as in Chile, Costa Rica, and Uruguay);

**c)** In Mexico there is a great fragmentation of contributory and non-contributory programs. If these programs were integrated "it would be possible to increase net pensions, ...reduce administration costs, ...obtain significant savings from fiscal resources, and reduce perverse incentives in the labor market" (Azuara, et al., 2018: v);

**d)** Argentina should establish a unified program of non-contributory pensions, mean tested and targeted on the poor, as well as end the arbitrary pensions granted by Congress;

**e)** The Renta Dignidad database in Bolivia would have to be cleaned of any duplications and fraudulent beneficiaries, and take effective measures to include potential beneficiaries excluded from coverage due to their language, lack of information on their rights and/or proper identification; and

**f)** Conducting a study in all countries to measure, on a standardized and comparative basis, the impact of non-contributory pensions on poverty, and their potential effect on the formal sector, as well as on affiliation and payment of contributions to the contributory system.

## 4. Expanding Social Solidarity

Social solidarity is usually external to the private system; several measures are suggested to expand it:

**a)** In Peru, restoring the employer contribution (the current bill does this) and, in Chile, passing in congress the law that imposes a 6% contribution to the employer;

**b)** In Uruguay, the fact that workers pay approximately two-thirds of the total contribution (violating the ILO minimum standard stating that workers must not pay more than 50% of the total contribution) must be corrected (in Panama, workers pay 68% of the total contribution to the pension program, but employers pay the total contribution to the health program);

**c)** Granting a solidarity state contribution to improve low contributory pensions up to a ceiling where this contribution ceases (as in Argentina, Chile, Mexico—where a bill in congress increases such contribution—and Uruguay);

**d)** Expanding non-contributory pensions that have played a key role in extending older adult coverage;

**e)** Also, expanding non-contributory pensions would help to reduce educational and residence (urban and rural) gaps, in coverage by all pensions for older adults, as these gaps are smaller in this program than in the EAP contributory coverage because non-contributory pensions are paid to the poor who are more concentrated among those with no or only elementary education and among rural residents; and

**f)** Eliminating the glaring inequalities in the two parallel systems in Colombia (as established by various reform proposals).

## 5. Integrating the Separate Privileged Regimes

The persistent fragmentation of several systems with entitlement conditions and generous benefits and fiscal incentives—especially the armed forces regime in all countries, except Costa Rica—requires:

**a)** Especially in the more fragmented systems of Argentina, Bolivia, Mexico, and the Dominican Republic (Panama, to a lesser degree), a thorough reform to standardize the conditions and benefits of separate regimes to the general system, being fully financed by the insured and with no fiscal subsidies. As this would probably require very high contributions, entitlement conditions would have to be tightened and benefits reduced;

**b)** The exclusion of the armed forces in Chile, where they imposed the private system, but were excluded from this system to preserve their privileged regime—whose cost are equivalent to those of all non-contributory pensions—, is particularly inequitable and such regime should be integrated as most of the population claims;

**c)** In Mexico the two main programs for the private and public sectors should be integrated (the public sector has better conditions than the private one);

**d)** The gradual process of integration of 19 separate regimes in Costa Rica and the recent parametric reform of the judicial system are good role models.

## 6. Improving Gender Equity

Any discrimination created by the labor market must be faced in all countries with appropriate actions:

**a)** Equal pay to women and men for the same work;
**b)** Promoting greater female participation in the labor force through training;
**c)** Expanding public and free or subsidized day care centers so that women can increase their participation in the labor force; and
**d)** Formalizing employment contracts for domestic-service employees.

To overcome discrimination resulting from the system itself, other measures are required:

**a)** Expanding EAP female coverage in Peru, El Salvador, Mexico, Colombia, and the Dominican Republic where it is less than the 50% stated by the ILO minimum standard;
**b)** Establishing the non-contributory regime in the Dominican Republic and expanding the coverage of older adult women for such pensions in El Salvador (coverage is 12% and 17% respectively in these two countries);
**c)** Compulsorily incorporating domestic-service employees in El Salvador and Mexico,[111] as well as executing the legal coverage mandate in the rest of the countries following the successful practices of Uruguay and Costa Rica;
**d)** Offering voluntary affiliation to domestic workers (housewives);
**e)** Equalizing the retirement age for both men and women in Chile, Colombia, El Salvador, and Panama;
**f)** Replacing sex-differentiated mortality tables with unisex tables in all countries (following the example of public systems such as Argentina and Bolivia and of the private system in El Salvador);
**g)** Equalizing the disability and survivors' premium for both men and women (as in Chile);
**h)** Compensating women for the time they spend taking care of their children by granting them one year of contributions or a bonus for each child born alive (as in Bolivia, Uruguay, and Chile; and as stated by a re-reform

111 Those countries that have not ratified the 2011 ILO Convention on Domestic-Service Employees should do so.

proposal in Colombia),[112] it should also be considered to compensate women for taking care of the elderly and disabled at home;

**i)** When the spouse holding the pension gets divorced, half of the fund in the individual account should be shared with the other spouse, usually a woman; and

**j)** The measures recommended to extend the coverage of self-employed workers would favor women, because they are overrepresented in this type of work.

## 7. Increasing the Adequacy of Benefits

The average RR of the nine systems is 39.8%—well below the minimum standard of 45% set by the ILO.

**a)** FIAP's proposal to improve RRs is increasing contributions; nevertheless, we have not seen an actuarial study showing that such increase achieves the minimum RR. Actually, the 2020 Mexican proposal in congress (so far not supported by a published actuarial study) is a RR of 40%, i.e., five points below 45%. Also, FIAP: has supported state contributions to individual accounts in order to improve low contributory pensions (as in Bolivia, Chile, Mexico, and Panama) or as an incentive to incorporate self-employed workers (as in Costa Rica, or a contribution of the solidarity account as done in Bolivia); has requested increases in retirement ages; and has approved the expansion of non-contributory pensions financed by fiscal authorities. On the contrary, FIAP has not offered—in order to increase RRs—to reduce AFP high fees, advertising expenses, profits, and remunerations of the directors, proven in this monograph. In other words, any help provided by workers, employers, and the state to improve the RRs is welcome, but with no sacrifice by the AFP. Any solution must include the AFP giving up some of their benefits in order to improve the RRs; otherwise, it would be inequitable.

112 In Argentina, mothers with many children and without resources are entitled to a non-contributory benefit.

**b)** Countries where the adjustment of contributory pensions is left to the discretion of the government (El Salvador, Mexico, Panama, and Peru) should introduce CPI or wage adjustments.

**c)** The Dominican Republic must issue the recognition bond—a right of those who contributed to the old public system that would increase their pensions.

## 8. Improving the Administration and Reducing Costs

It has been shown that competition does not work in most countries (there is a duopoly in El Salvador and Bolivia) and that administrative costs are high and substantially reduce future pensions amount (both regarding the old-age program and the annuities); to face these problems it is advised to:

**a)** Establishing, in all countries, multiple-nature administrators (private, public, cooperative, mixed), same rules for all, following Uruguay's example, where a public administrator has successfully operated for many years (there are also multiple administrators in Colombia, Costa Rica, Mexico, and the Dominican Republic);

**b)** Holding bids every two years where the AFP that offers the lowest fee takes the new affiliates (as in Chile and Peru), as well as a portion of those already affiliated, and stipulating that no AFP can exceed by 50% the lowest fee in the market;

**c)** Setting limits on fees and premiums (as in El Salvador and the Mexican bill in congress that sets the limit according to the average of four countries), as well as on commercial expenses;

**d)** Supporting fees on capital returns (which already exists in several countries) replacing fees on salary, which does not offer incentives to the AFP to improve their performance;

**e)** Introducing electronic transfers among the AFP (as in Chile);

**f)** Connecting the AFP with the volatility risk in the stock market by creating a fund with contributions from the AFP when there are profits in such market, in order to return fees or assist the insured in the event of losses or economic crises (as in the bill in Chilean congress);

- **g)** Imposing strict measures to prevent senior state officials and autonomous agencies (such as pension superintendencies) from accepting positions on the AFP board of directors (for example, disqualifying them while they are in office and for certain period of time after ending their jobs);
- **h)** Restricting excessive profits by the AFP and disproportionate payments to their managers and directors;
- **i)** Publishing comparative indicators on the AFP performance, in a simple and understandable way, in the media so that the insured can make an informed selection;
- **j)** Increasing competition among insurance companies for disability and survival risks and ensuring that there is no collusion between insurance companies and the AFP; another alternative is to take the coverage of such risks back to the social insurance institute, as in Colombia, Costa Rica, and Mexico (upon prior research of the efficiency and cost of both alternatives);
- **k)** Encouraging the creation of insurance companies that offer annuities;
- **l)** In Bolivia, the new government should advance the date for the Public Manager to take over the AFP duties, set in the constitution and laws, and
- **m)** In Chile, the advisory board and the commission of users should more accurately assess the impact of the reform on fees and premiums.

## 9. Restoring Social Representation in the Administration

Workers are the owners of individual accounts, but they have no representation in their administration in the private systems/pillars (as occurs in the public systems/pillars) or in the superintendence; therefore, it is recommended to:

- **a)** Establishing that workers have representation on the AFP board of directors and creating a committee of affiliates in each AFP (as proposed by a law in the Chilean congress);
- **b)** Creating advisory boards with representation of workers and employers in order to advise the superintendencies and setting in them a unit for the protection of affiliates (proposed re-reform in Colombia);

**c)** Implementing, in El Salvador, the actuarial committee established by the re-reform law with representation of workers and employers, in addition to the government; and

**d)** Complying, in Bolivia, with the constitutional mandate stating that the Public Manager has representation of workers, employers, and the government.

## 10. Improving Information and Knowledge

Surveys show little or no knowledge of the pension system among the insured and the population; also, workers do not choose administrators based on their lower fees and higher capital returns on their investments but based on advertising and on salespeople efforts who charge a commission for each affiliate they bring on; to mitigate these problems it is advised to:

**a)** Simplifying the information on the performance of the administrators and the superintendence; as this information is highly technical, it needs to be adapted to the educational level of the majority of the insured;

**b)** Educating the insured and the general population through a pension education fund or a strategic education plan, and through the insertion of a social security subject in the school curriculum (as in Chile, Mexico, Costa Rica, and the bill draft in Peru, respectively);

**c)** Obliging the AFP to finance pension education programs addressed to all their insured and also offering more information to make a better selection among the multi-funds in seven countries and switches among them; and

**d)** Creating a unit in the superintendencies to assist the insured in their selection of multi-funds, annuities, or scheduled withdrawals, as well as regarding other inquiries.

## 11. Strengthening Compliance

In all private systems, a declining trend was found in the affiliates who contribute, which is due, among other causes, to evasion and payment delays. This and other problems of avoidance and under-declaration of taxable salary were also documented; non-compliance contributes to the deficit in public systems/pillars, as well as to a lower accumulation in individual accounts and in the pensions amount; to alleviate this problem it is recommended to:

**a)** Establishing centralized collection by a state agency in Chile, El Salvador, and Panama where it does not yet exist (it has just been recommended in El Salvador and in the bill draft in Peru), with the purpose of achieving economies of scale, simplifying payments, matching information of the tax system with that of pensions, and better detecting delinquent employers;

**b)** Investigating which portion of the low and declining contribution of affiliates is due to evasion and delay payments and which portion is due to other causes;

**c)** In private systems, the insured worker must play a more active role in detecting a payment delay in the employer's contribution by verifying the periodic report sent by the AFP, and the latter should notify workers immediately about any delay—education of the insured is needed to achieve this;

**d)** Changing the calculation of the average salary when it is based on the last years of work, as this encourages under-declaration in previous years, as well as over-declaration in recent years to obtain a higher pension (ECLAC, 2018);

**e)** Introducing *the monotributo*, which unifies all contributions and taxes in a single payment (as done successfully in Argentina and Uruguay);

**f)** Requiring payment of all contributions and no payment delay in order to have contracts with the state, obtain certificates from the public registry, and receive tax incentives (as in Costa Rica);

**g)** Imposing strong sanctions on those violating the law (Costa Rica implemented "the social security crime") including imprisonment sentences that are dully executed and advertising in the media about private and public companies that evade or default state agencies;

**h)** Setting monetary sanctions and fines not in the law (as they devalue quickly) but in percentages;

**i)** Strengthening inspection and introducing monetary incentives to inspect small- and medium-sized enterprises; and

**j)** Creating specialized judicial bodies in charge of hearing non-compliance offenses, in order to reduce the accumulation of cases and the delay in their solution and, also, to create labor conciliation centers to reduce trial cases (as established by Mexico's labor reform).

## 12. Diversifying the Investment Portfolio

To diversify the AFP investment portfolio, the following actions are proposed:

**a)** The Superintendence must play a more active role to avoid an excessive concentration of funds invested in one or two instruments—a risky attitude has been the consecutive increase by the Superintendence of limits on foreign investment in Peru;

**b)** Likewise, encouraging investments in new instruments such as infrastructure, mortgage bonds issued and guaranteed by specialized banks (but not in personal loans or direct investment in the construction of houses, as they have had adverse results)[113] and national development bonds also issued and guaranteed by banks for the promotion of industry, agriculture, tourism, and technology;

**c)** In Costa Rica, Uruguay, the Dominican Republic, and El Salvador, between 61% to 82% of investment is concentrated on public debt and its diversification is essential;

**d)** The Salvadoran re-reform put an end to the excessive future concentration of the investment of fully-funded funds in public debt instruments to finance the transition, but still most of the investment is in such instruments (CIP) with relatively low capital return and continue to be issued, which must be stopped or gradually reduced;

**e)** Public collective funds in Argentina[114] and Bolivia (here also the individual account fund) need to diversify their investments in order to reduce excessive concentration in public debt and bank deposits, respectively, which pay low or negative real returns;

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113 For further information on this topic and for other investment recommendations, please see the latest edition (2020) of the OECD's annual survey on pension fund investment.

114 In Argentina, funds transferred from the individual accounts that were merged with the fund of the public PAYG system must be invested pursuant to strict legal regulations that maximize their return and minimize their risk.

**f)** A moderate share in foreign instruments may help diversification and improve long-term capital returns (several countries prohibit such investment), but the very high concentration in Peru and Chile (a little less in Colombia) in these instruments exposes to high risks and losses when global crises occur, therefore, more balanced limits are to be imposed between the objective of increasing capital returns and that of reducing risk; and

**g)** Allowing a wider choice in investment strategies while maintaining the default life cycle option to protect those insured that are close to retirement and then prevent slumps in the stock or annuity markets (OECD, 2015; this is also proposed in re-reforms of Colombia).

## 13. Evaluating Capital Returns to Increase Them

Comparing capital returns in these countries is quite difficult; current series are of short-term basis and gross return. Some countries only publish the nominal capital return and generally there is no accessible information on the capital return of specific instruments; therefore, the following is necessary:

**a)** Developing historical statistical series standardized in all countries on real *net* capital return (deducting the administrative cost and adjusted for inflation);

**b)** Publishing in all countries the real net capital returns by instrument so that the insured and the superintendence can judge whether the investment is yielding a proper performance; and

**c)** Granting binding power to the investment recommendations made by the users council in Chile and to those made by the advisory board in Argentina.

## 14. Creating a More Attractive Climate for Additional Voluntary Savings

Until now, additional voluntary savings have not been successful in the nine private systems, but they have actually been quite successful in Brazil, where there is a public PAYG system; in order to stimulate such savings, it is appropriate to:

**a)** Deferring income tax until the additional saved funds are withdrawn;

**b)** Equalizing the fees charged to mandatory and voluntary savings;

**c)** Eliminating barriers such as meeting a five-year permanence period in the mandatory system to contribute to the voluntary savings (Peru) or meeting a waiting period to withdraw sums from the voluntary fund (Mexico that is eliminating this barrier through a bill in congress);

**d)** Introducing new techniques (Mexico) such as automating accounts, digital files, electronic deposits, biweekly reminder text messages to savers' mobile phones, Facebook campaigns for those who already have accounts and report balance, and advertising campaigns in the media and transportation; and

**e)** Setting a pre-established automatic voluntary savings mechanism by discounting an amount from the payroll of formal salaried workers, with an opt-out option; transferring a portion of the income tax return to voluntary savings and adding a percentage for said savings to all credit card purchases with an opt-out option.

## 15. Restricting the Withdrawal of Funds from Individual Accounts

To mitigate the conflict between, on the one hand, the urgent and severe need experienced by the insured due to the pandemic and the economic crisis and, on the other hand, the danger that the pension systems collapse, whose main objective is to guarantee a minimum income during old age, disability, and to survivors, the following is proposed:

**a)** In Peru, multiple withdrawals of funds before retirement should be reversed or restricted to prevent them from being used for consumption, as evidence shows. To attain this, it would be necessary to reduce their amount and set as a condition to allow withdrawals that the sum withdrawn is returned within a given period after the pandemic or that they are invested in micro-businesses that may financially help the insured in the future;

**b)** The state should provide aid to people in need during the pandemic and recession, following the policies recommended by regional and international organizations such as the IADB, the ECLAC, and the ILO;

**c)** To face COVID-19 and the crisis, deferring contributions to the AFP, which would allow placing more public resources in capital spending, leading to employment reactivation;

**d)** The insured with sufficient funds could withdraw a reasonable percentage from their individual account to build a house or make the principal payment on a mortgage, after assessing their ability to comply with these payments; and

**e)** The law should warn the insured who withdraw the funds, that they will not be able to receive non-contributory pensions in the future, and this provision would be informed to, and should be accepted by, those who make the withdrawals.

## 16. Reinforcing the Equilibrium with Actuarial Studies

Financial-actuarial sustainability is essential to ensure compliance with all the key principles of the pension system; here are some country-specific recommendations:

**a)** In Chile, keep complying with the periodic actuarial valuations stipulated by the 2008 re-reform and ensuring that the necessary budgetary funds are allocated for the payment of solidarity benefits;

**b)** In Costa Rica, approving, in early 2021, the key proposal to eliminate or reduce early retirement (the main problem that the public pillar is facing) and conducting an actuarial study to determine if such proposal and the 2020 parametric reform will require another parametric reform by 2035;

**c)** In El Salvador, choosing the members of the actuarial committee stipulated by the 2017 re-reform in order that this committee may recommend measures to face long-term commitments, especially to face the CGS deficit projected as of 2027;

**d)** In Mexico, the current reform proposal in congress is positive, but it will not resolve the current disequilibrium (mainly caused by the option to choose between the pension formula of the closed DB system and the one resulting from the fund accumulated in the individual account). Also, the projected increase in the average RR from 30% to 40% should be validated by an actuarial study (if already been conducted, it should be made public);[115]

**e)** In Panama, it is essential to immediately conduct an actuarial valuation due to the severe and current financial and actuarial disequilibria;

**f)** In the Dominican Republic, the modest 2020 parametric reform is not enough to restore the equilibrium in the general system (it did not increase the low retirement ages, which was essential); therefore, actuarial studies must be conducted to determine the necessary measures to achieve this objective, as well as in the multiple separate regimes that are experiencing disequilibrium;

**g)** In Uruguay, the newly appointed reform commission must have an actuarial valuation of its proposals; one of the most debated changes will be the increase in the very low retirement age.[116]

As for the re-reforms, Argentina did not conduct a prior actuarial valuation; as far as is known, it has not conducted one afterwards and the 2017 parametric reform is probably insufficient, while Bolivia conducted an actuarial study in 2015 that detected sustainability problems (it projected that the solidarity fund will have a deficit as of 2022 and the financial unbalance around 2031) and five years have passed since then. Therefore, both countries (and El Salvador) should conduct an actuarial study, preferably done by an international specialized organization, in order to evaluate the results of the re-reforms and project the equilibrium of their public systems in the long term. Re-reform proposals in Colombia and Peru—the majority of which propose a mixed model—must be subjected to a prior actuarial valuation. The separate regimes in all countries require urgent actuarial studies in order to integrate them and restore the equilibrium.

115 To increase income in Mexico, the proposal is to transfer all or part of the 5% that is contributed to the housing fund into the pension program.

116 The chairman of the current commission to reform pensions proposes an increase from 60 to 65 years of age, doing this gradually and protecting from the increase to the insured who are close to retiring; after they turn 65 there would be automatic indexation to life expectancy (Saldaín, 2020).

## 17. Unifying, Expanding the Scope, and Making the Supervisor Independent

A unified supervisor, with real independence and reinforced power is essential for both private and public systems.

**a)** In Chile, the Superintendence of Pensions that regulates and supervises all pensions should include the armed forces;

**b)** Also, there is only a one superintendence in Costa Rica (there is one in the Dominican Republic but with less power); the rest of the countries should follow this example and implement a unified superintendence (without excluding any regime), which is truly independent and specialized in pensions (in Colombia it would be advisable to separate it from the Financial Superintendence and in Peru to separate it from the Superintendence of Banking and Insurance);

**c)** In Argentina, the public fund (FGS) should be converted into an autonomous institution, not managed by ANSES but by a collective technical body and without government intervention, while the recommendations of the congressional commission should be binding;

**d)** In Bolivia, the supervisory agency should not be under the "tutelage" of a ministry and be clearly independent from the executive branch; and

**e)** CONSAR in Mexico should extend its supervision to all separate regimes with entitlement conditions and very generous benefits, subsidized by fiscal authorities.

## 18. What Model for the Reform?

In this monograph I have consistently argued that any type of reform must be adapted to the peculiarities of each country, because it has been proven that a reform model for all countries does not work—as was proven when Bolivia and El Salvador copied the Chilean substitute model, these countries lacked the essential conditions that Chile had in the labor market, in the capital market, etc. It would, therefore, be a flagrant contradiction to recommend here only one re-reform model. As general guidelines, first, I recommend a series of requirements that must be met by any type of reform; second, I offer some general observations based on this monograph; and third, I outline three alternative models (*given as examples that are not exhaustive*) that countries should take into account.

**a)** Mandatory Requirements to be Met by any Type of Reform:

- Be preceded by a broad social dialogue with the participation of all pertinent sectors, with the purpose of maximizing the reform consensus and legitimacy, as well as by a public educational campaign explaining to citizens the problems entailed and the need for solutions with alternatives; it is advisable to conduct a plebiscite or referendum to consult citizens' opinion on the reform.
- Conducting actuarial studies by specialized international organizations or private companies with *an impeccable reputation*; these studies would show concrete conclusions in understandable language, as well as equally accurate and intelligible recommendations, and must be published and disseminated with full transparency.
- Conducting an in-depth technical diagnosis and designing the reform carefully, taking into account the peculiarities of each country. Also, said diagnosis should be published and discussed.
- Pursuing as a main objective the improvement of all the principles of social security including long-term sustainability; goals such as reducing the fiscal deficit, setting measures to increase capital accumulation, and developing the stock market are laudable, however, they should be subordinated to the fundamental principles of social security.
- Establishing a mechanism by an independent agency, with the participation of the sectors involved, in order to monitor the implementation and follow-up of the reform, issuing annual performance reports and evaluations every five years.

**b)** General Remarks

- The structural reform was sold as a panacea by supporters in the countries and by international financial organizations; caution should be taken to avoid presenting the re-reform or the public PAYG system as panaceas, without taking the necessary precautions.

- A re-reform that closes the private system/pillar and transfers the insured and their funds to a public system is feasible, but it would be necessary to consult the insured who are in such system/pillar and perform this re-reform with the precautions indicated above, particularly on financial sustainability; because the Argentine, Bolivian, and Salvadoran re-reforms face long-term sustainability risks. None of them conducted a previous actuarial study and not all were preceded by a broad social dialogue.
- The replacement of the private fully-funded system for the public PAYG system is also feasible, provided that such system is financially and actuarially balanced. Therefore, not only a prior actuarial study is an essential requirement but also, if the scaled premium system is chosen,[117] it must specify the contribution increase in each stage and, in any case, a firm commitment from society to support said increases is needed, in addition to periodic actuarial reviews to adjust it.
- The re-reform does not necessarily have to close the private system. The Chilean case shows that this model can be maintained if several principles of social security are improved with a process that has continued since the 2008 re-reform implemented by a center-left government and which a neoliberal government is continuing. The reform proposed in Mexico by a left-wing government, now being considered by congress, also maintains the private system, but introduces changes in the principles of social security, although not as profound as in Chile, and there are doubts about financial-actuarial sustainability. On the contrary, the Salvadoran re-reform is not a good example to follow because its fundamental objective was to reduce the fiscal deficit and it overlooked key problems such as expanding coverage, especially to excluded groups, as mandated by the structural reform law. Finally, the re-reform should follow the recommendations given in this monograph on changes in the administrators, including the shared sacrifice of its benefits and not only depending on the action and financial support of the state.

117 In this actuarial regime, "scales" are established in stages; in each step the contribution must be increased to maintain the equilibrium.

**c)** Three Optional Models to Consider:

- The DB system with notional individual accounts that works in Italy, Latvia, Poland, and Sweden: active workers contribute to the system and pay for retirees' pensions; the amount of pensions is determined by the contributions that are accounted for virtually in an individual account and a rate of return is added; the resources collected are allocated to pay pensions in progress; at the end of his/her working life, the insured receives an annuity based on the accumulated amount in the virtual individual account, his/her life expectancy and the rate of return, as done in the defined contribution systems; the state manages the system and guarantees its solvency.
- A sovereign fund such as the funds of two public corporations of teachers in California (CalPERS and CalTRS): both added together amount to US$620,000 million, a greater amount than that of the combined funds of all the AFP in the region; administered by a non-profit public agency (with a technical board and representatives of workers and employers); individual capital accounts and DC. This fund would unite all the AFP, achieving economies of scale (by eliminating multiple boards of directors and commercial managers) and a consolidated fund that would have more bargaining power (Meunier, 2019).
- A mixed system as already exists in Costa Rica, Panama, and Uruguay and currently being debated in Colombia and Peru (with significant additions): i) a solidarity pillar of non-contributory pensions for all the poor financed by fiscal authorities; ii) an actuarially balanced PAYG solidarity pillar that pays the main pension (or a basic pension covering essential needs), financed by worker and employer contributions (complying with the standard establishing that no more than 50% will be paid by the worker) and, if necessary, by the state; iii) a supplementary individual fully-funded pillar (conducting a prior referendum to decide if it should be mandatory or voluntary is advisable) and with measures to ensure strong competition by multiple administrators (including a state administrator) with equal rules for all, to avoid profiteering and involve the administrator in the risks of stock market volatility; and iv) a voluntary savings pillar without obstacles, with incentives and multiple administrators.

I hope that this monograph, which I have tried to be as objective as humanly possible—offering arguments and analyses documented with reliable statistics and over 200 bibliographic sources—may contribute to a serious and in-depth debate on the pension reform achieving universal coverage, with social and gender equity, sufficient pensions, efficient administration with minimal costs, and guaranteed financial-actuarial sustainability.

# References


1. Activa Research (2020), *Pulso Ciudadano*, Santiago, survey conducted between January 24-30.
2. Asamblea Legislativa (2020), *Adhoc Ley de Pensiones*, San Salvador, September 24.
3. Asociación Brasileña de Entidades Cerradas de Previsión Complementaria—ABRAPP (2020), *Consolidado Estatístico* (Brazil).
4. Acuña, Rodrigo et al. (2015), *Cómo Fortalecer los Sistemas de Pensiones Latinoamericanos: Experiencias, Lecciones y Propuestas*, Volume 1 (Santiago de Chile: SURA Asset Management).
5. AFAP República (2020), *Information on voluntary savings from all AFAP*, October 10.
6. AFP Crecer (2020), *Memoria de Labores 2019* (San Salvador).
7. Altamirano, Álvaro et al (2018), *Presente y Futuro de las Pensiones en América Latina y el Caribe* (Washington DC: BID).
8. _____ (2019), *Diagnóstico del Sistema de Pensiones Peruano y Avenidas de Reforma* (Washington DC: BID División de Mercados Laborales).
9. Álvarez, Ignacio (2020), E-mail to the author from Director of AFP UNO, Santiago de Chile, February 11.
10. Antolin, Pablo (2009), "Private pensions and the financial crisis: How to ensure adequate retirement income from DC pensions," *Financial Market Trends*, 2009: 2, 1-21.
11. Arenas de Mesa, Alberto (2010), *La Historia de la Reforma Previsional Chilena: Una Experiencia de Política Pública* (Santiago de Chile: OIT).
12. _____ (2019), *Los Sistemas de Pensiones en la Encrucijada: Desafíos de la Sostenibilidad en América Latina* (Santiago de Chile: CEPAL).
13. _____ (2000), "Cobertura previsional en Chile: Lecciones y desafíos del sistema de pensiones administrado por el sector privado" (Santiago de Chile: CEPAL, *Serie Financiamiento del Desarrollo* 105).

14. _____ (2020), *Los Sistemas de Pensiones en América Latina: Institucionalidad, Gasto Público y Sostenibilidad Financiera en Tiempos del Covid-19* (Santiago de Chile: CEPAL)
15. Argote, Felipe (2018), *Crisis del Seguro Social: El Colapso Final* (Panama City).
16. Asociación Internacional de Organismos Supervisores de Fondos de Pensiones—AIOS (2000 to 2019), *Boletín Estadístico*, 1999 to 2018 (Santiago de Chile: December 31).
17. Autoridad de Fiscalización y Control de Pensiones y Seguros—APS (2015-2020), *Boletín Informativo Estadístico*, from 2015 to June 2020 (La Paz).
18. Azuara, Oliver, et al. (2019), *Diagnóstico del Sistema de Pensiones Mexicano y Opciones para Reformarlo* (Washington DC: BID).
19. Banco de Previsión Social—BPS (2018), *Banco de Previsión Social: Pasado, Presente y Futuro* (Montevideo).
20. _____ (2020a), *Boletín Estadístico* (Montevideo).
21. _____ (2020b), *Información de Asesoría General de Seguridad Social*, Montevideo, September 25.
22. Barr, Nicholas (2002), *Reforming Pensions: Myths, Truths, and Policy Choices* (Washington D.C.: FMI Working Paper 139).
23. Barr, Nicholas and Peter Diamond (2008), *Reforming Pensions: Principles and Policy Choices* (Oxford: Oxford University Press).
24. Barriga, Francisca and Marco Kremerman (2020), *Pensiones sin Seguridad Social: ¿Cómo se Calcula el Monto de las Pensiones en Chile?* (Santiago de Chile: Fundación Sol).
25. Bertranou, Fabio, Carmen Solorio and W. van Ginneken, eds. (2002), *Pensiones No Contributivas y Asistenciales: Argentina, Brasil, Chile y Costa Rica* (Santiago de Chile: OIT).
26. Bertranou, Fabio, Oscar Centrángolo, Carlos Grushka and Luis Casanova (2018), "Argentina", in *Reversing Pension Privatizations: Rebuilding Public Pension Systems in Eastern Europe and Latin America*, Isabel Ortiz et al (Geneva: ILO), pp. 89-112.
27. Bertranou, Fabio, Oscar Centrángolo and Pablo Casalí (2018), "A mitad del camino entre Bismarck y Beveridge: La persistencia en los dilemas en el sistema previsional argentino," Buenos Aires, April.

28. Bertranou, Fabio and Guillermo Montt (2020), "La seguridad social en Chile, el futuro de las pensiones y el retiro el 10%," *Blog Opinión*, Santiago, July 17.
29. Boomberg (2018), "Milton Friedman's Brazil moment: Band of disciples take charge," December 12.
30. Borzutzky, Silvia (2019), "You Win Some, You Lose Some: Pension Reform in Bachelet's First and Second Administration," *Journal of Politics in Latin America*, pp. 1-27
31. Bosch, Mariano, Angel Melguizo and Carmen Pagés (2013), *Mejores Pensiones, Mejores Trabajos: Hacia la Cobertura Universal en América Latina y el Caribe* (Washington DC: BID).
32. Bosch, Mariano, et al. (2015), *Diagnóstico del Sistema Pensional Colombiano y Opciones de Reforma* (Washington DC: BID).
33. Caja Costarricense del Seguro Social—CCSS (2019), *Valuación Actuarial del Seguro de IVM con corte diciembre 2018* (San José: Dirección Actuarial y Económica).
34. _____ (2020a), *Estadísticas sobre cotizantes activos*, March.
35. _____ (2020b), *Informe de Planes de Fortalecimiento del Seguro de IVM* (San José: Grupo Interno Especializado, May).
36. Caja de Seguro Social—CSS (2018), *Datos abiertos de Panamá* (Panama City).
37. Cichon, Michael (2004), *Approaching a Common Denominator? An Interim Assessment of World Bank and ILO Positions on Pensions* (Geneva: ILO).
38. Colin, Francisco (2019), "The old-age pension system in Mexico: The promise of poverty in old-age?," *International Social Security Review*, 72:4, December, pp. 29-54.
39. Comisión Asesora Presidencial sobre el Sistema de Pensiones—CAPSP (2015), *Informe Final* (Santiago).
40. Comisión de Protección Social—CPS (2017), *Propuestas de Reformas en el Sistema de Pensiones, Financiamiento en la Salud y Seguro de Desempleo* (Lima: Resolución Ministerial No. 017-2017-EF/10).
41. Comisión Especial Multipartidista del Congreso (2020a), *Lineamientos Generales de la Reforma Integral del Sistema Previsional Peruano* (Lima, October).

42. _____ (2020), *Funcionamiento y Desempeño del Fondo Consolidado de Reservas Previsionales* (Lima).
43. Comisión Nacional de Seguridad Social—CNSS (2020), "Nuevas leyes constituyen avances en el sistema de seguridad social," Santo Domingo, February 13.
44. Confederación de la Producción y el Comercio—CPC (2016), *Informe de la Comisión Asesora de Pensiones de la CPC* (Santiago de Chile, December).
45. CONSAR (2017-2020), *Información Estadística*, Mexico City, *www.consar.gob.mx*
46. Consejo Coordinador Empresarial—CCE (2020), "Acuerdo para el fortalecimiento de las pensiones de los trabajadores del sector privado," Mexico City, July.
47. Conteúdo, Estadão (2029), "Guedes defende capitalição e diz que nova Previdência é primeira reforma," *Revista Exame*, April 17.
48. Cruz-Saco, María Amparo (2020a), "Cobertura, suficiencia y sostenibilidad de las pensiones," *El Comercio*, May 6.
49. _____ (2020b), "Devolución del 100% de los aportes a la ONP es inviable," *El Comercio*, June 26.
50. _____ (2020c). Information sent by e-mail to the author, Lima, September 29.
51. Cruz-Saco, María Amparo et al. (2018a), *La Desestructuración del Sistema Peruano de Pensiones* (Lima: Universidad del Pacífico).
52. Cruz-Saco, María Amparo et al. (2018b), *El Porvenir de la Vejez. Demografía, Empleo y Ahorro* (Lima: Universidad del Pacífico).
53. Cruz-Saco, María Amparo and Mirian Gil (2020), "The pension system in Peru: Parallels and intersections" (submitted for publication).
54. "¿Cuánto daría AMLO de pensión a los adultos mayores al mes...?" (2018), *El Universal*, August 16.
55. Durán, Fabio (2016), "Entendiendo la Sostenibilidad de las Pensiones IVM de la CCSS: Logros y Desafíos" (Ginebra).
56. ECLAC-STATS (2020), visited on September 1.
57. Economic Commission for Latin America and the Caribbean—ECLAC (2017), *Panorama Social de América Latina 2016* (Santiago de Chile)

58. _____ (2018), "Sistemas de Pensiones en América Latina," *Panorama Social de América Latina 2017* (Santiago de Chile).
59. _____ (2019a), *Panorama Social de América Latina 2018* (Santiago de Chile).
60. _____ (2019b), *Balance Preliminar de las Economías de América Latina y el Caribe 2019* (Santiago de Chile, December).
61. _____ (2020), *Anuario Estadístico de América Latina y el Caribe 2019* (Santiago de Chile).
62. Encuesta CEP (2019), "Estudio Nacional de Opinión Pública," Santiago de Chile, No. 84, December.
63. Eurasia Group (2020), "Pension withdrawal bill not a done deal but will force more concessions," July 9.
64. Fazio, Luciano (2020), *Advisor on social security in Brazil, answers to questions on contributions to RGPS and RPPS*, November 3-4.
65. Federación Internacional de Administradoras de Pensiones—FIAP (2017a), *Notas de Prensa*, No. 14, March.
66. _____ (2017b), "Declaración de la FIAP- XXI Asamblea Anual, Ciudad de México," *Informativo FIAP*, No. 50, November.
67. _____ (2017c to 2020a), *Marcha de los Sistemas de Pensiones*, No. 4 June-July 2017 to No. 5 August-September 2020.
68. _____ (2018), "Carteras de inversiones de los Fondos de Pensiones Latinoamericanos" (2018), *Notas de Pensiones*, No. 25, May, pp.1-9.
69. _____ (2019), *Sistemas de Pensiones de Cara a un Mundo Cambiante* (Santiago de Chile: FIAP).
70. _____ (2020b), *Reversiones: Mientras Europa Avanza hacia la Capitalización Individual, en América Latina Algunos Proponer Volver al Reparto* (Santiago de Chile, September).
71. _____ (2020c), "El retiro de fondos de pensiones por Covid-19," *Notas de Pensiones*, No. 48, September.
72. _____ (2020d), "Gobierno mexicano anuncia reforma al sistema de pensiones...," July 22.
73. _____ (2020e), "Informe de funcionarios de la OIT sobre reversiones de pensiones miente," Santiago de Chile, September 9.

74. Federación Nacional de Previdencia Privada y Vida—FenaPrevi (2020), *Estadísticas* (voluntary funds), Río de Janeiro.
75. Figueroa, Natalia (2020), "Retiro del 10% de ahorros previsionales: El debate por los fondos...," *El Desconcierto*, July 2.
76. Forteza, Álvaro and Guzmán Ourens (2012), "Redistribution, Insurance and Incentives to Work in Latin-American Pension Programs," *Journal of Pension Economics and Finance*, 11, pp. 337-364.
77. Forteza, Álvaro and Ianina Rossi (2018), "Ganadores y perdedores en las primeras generaciones luego de una reforma estructural de la seguridad social: el caso de Uruguay," *Apuntes*, 82, pp. 97-117.
78. Freixas, Meritxell (2019), "La gente pide sus ahorros porque se les vendió que era de su propiedad: Expertos analizan retiro de pensiones...," *El Desconcierto*, October 8.
79. Freunderberg, Christoph and Frederik Toscani (2019), *Informality and the Challenge of Pension Adequacy: Outlook and Reform Options for Peru* (Washington DC: IMF Working Paper WP/19/149).
80. Friedman, Milton (1962), *Capitalism and Freedom* (Chicago: University of Chicago Press).
81. Fundación Dr. Guillermo Manuel Ungo—FUNDAUNGO (2020), "El sistema de pensiones en El Salvador: Desafíos y recomendaciones," Power Point presentation, San Salvador, March.
82. Fundación Juan Bosch (2020), "Radiografía de la realidad social," Santo Domingo, February.
83. Gálvez, Recaredo and Marco Kremerman (2020), *Pensiones por la Fuerza: Resultados del Sistema de Pensiones de las Fuerzas Armadas* (Santiago de Chile: Fundación Sol, June).
84. Gill, Indermit, Truman Packard and Juan Yermo (2005), *Keeping the Promise of Social Security in Latin America* (Washington D.C.: World Bank).
85. Gobierno de El Salvador (2014), *Sistema Previsional de El Salvador: Diagnóstico y Evaluación de Escenarios* (San Salvador: Ministerio de Hacienda, BCR y SSF).
86. Gobierno de México Hacienda (2020), "Anuncia reforma para fortalecer el sistema de pensiones," México City, July 22.
87. "Gobierno no alcanza los votos...," *El Mercurio*, January 24.

88. Grushka, Carlos (2016), "Perspectivas del Sistema Integrado Previsional Argentino y de ANSES, años 2015-2050," Universidad de Buenos Aires, Technical Report.
89. "Guedes diz que capitalição tem capacidade de criar milhõnes de empregos" (2019), *Folha de São Paulo*, April 5.
90. Guillion, Colin, et al. (2000), *Social Security Pensions: Development and Reform* (Geneva: ILO).
91. Hidalgo, Martín (2020), "Congreso aprueba ley sobre retiro del 25%...," *El Comercio*, March 4.
92. Holzmann, Robert, Estelle James, Alex Börsch-Supan, Peter Diamond and Salvador Valdés Prieto (2001), "Comments on Rethinking Pension Reform: Ten Myths about Social Security Systems by Peter Orszag and Joseph Stiglitz," in *New Ideas about Old-Age Security: Towards Sustainable Pension Systems in the 21th Century*, in R. Holzmann y J. Stiglitz, eds. (Washington D.C.: World Bank), pp. 57-89.
93. Iglesias, Augusto (2005), "Mercados de trabajo y cobertura previsional" in *El Fortalecimiento de los Nuevos Sistemas Previsionales* (Santiago de Chile: FIAP/ASOFONDOS), 73-89.
94. Iniciativa Ciudadana para las Pensiones—ICP (2017), *Propuesta para una Solución Integral para las Pensiones* (San Salvador).
95. Instituto Nacional de Estadística—INE (2020), *Estadísticas* (La Paz).
96. Instituto Nacional de Estadística y Censos—INEC (2019), *Estadísticas de Seguridad Social* (Panama City).
97. Inter-American Development Bank—IADB-SIMS (2019), Data Base SIMS, visited in September 2019. *www.iadb.org/en/sector/socialinvestments/sims/home*.
98. International Labor Organization—ILO (2003), *Valuación Financiera y Actuarial de la Caja de Seguro Social* (San José: ILO/Panamá/R2).
99. _____ (2017), *World Social Protection Report 2017-19* (Geneva: OIT).
100. _____ (2018), *Social Protection for Older Persons: Policy Trends and Statistics 2017-19* (Geneva: Social Protection Papers No. 17).
101. _____ (2020a), World Social Protection Database. *www.social-protection.org/gimi/WSPDB.action?id=32) visited on September 22*.

102. _____ (2020b), *Panorama Laboral 2019 América Latina y el Caribe* (Geneva).
103. International Monetary Fund—IMF (2019), *The Future of Saving: The Role of Pension Systems Design in an Aging World* (Washington DC: SDN/19/01).
104. International Social Security Association—ISSA (2016), *Desafíos Mundiales para la Seguridad Social* (Geneva).
105. International Social Security Association/U.S. Social Security Administration—ISSA/US-SSA (2020), *Social Security Programs Throughout the World 2019. ww1.issa.int/country profiles*; visited on September 22 and October 14, 2020.
106. Jackson, Richard (2017), *Las Pensiones Voluntarias en las Economías Emergentes* (Alexandria, VA: Global Aging Institute).
107. "La Reforma Pensional: Controversia Analítica"—compilation of 8 articles on pensions in Colombia (2018), *Economía Colombiana*, No. 352 (April-June).
108. Larraín, Guillermo (2019), "Pensiones: El modelo chileno, pero muy reformado," *El País*, February 27.
109. Ley No. 21.190 (2019), "Mejora y Establece Nuevos Beneficios en el Sistema de Pensiones Solidarias," Santiago de Chile, December 9.
110. Ley 9906 (2020), "Ley para resguardar el derecho de los trabajadores a retirar los recursos de la pensión complementaria," San Jose, September.
111. Ley 27.426 (2020), *Reforma Previsional*, Buenos Aires, December 19.
112. López, Fernando (2016), "Industria de AFP chilena: ¿Cuánto gana y cuánto debería ganar?," *Revista de Análisis Económico*, 31: 2, October, pp. 1-10.
113. Lora, Eduardo (2018), "Escrutinio al régimen de pensiones de ahorro individual solidario," *Economía Colombiana*, No. 352, April-June, pp.18-29
114. Lora, Eduardo and Luis G. Mejía (2020), "Reformas para una Colombia Post-covid-19," Bogotá: Fedesarrollo.
115. Martínez, Juliana and Diego Sánchez-Ancochea (2019), *La Búsqueda de una Política Social Universal en el Sur: Actores, Ideas y Arquitecturas* (San José: Editorial UCR).

116. Martínez, Magdalena (2018), "El gobierno uruguayo castiga al número uno del ejército por criticar la reforma de las pensiones militares," *El País*, September 20.
117. Mata, Ariel (2020), "Pensiones como conocimiento actuarial y actores políticos: El caso de IVM en Costa Rica," *Tesis de Licenciatura en Ciencia Política*, Universidad de Costa Rica, San Jose, November 10.
118. Matijascic, Milko and Stephem J. Kay (2014), "The Brazilian pension model: The pending agenda," *International Social Security Review*, Vol. 67, No. 4, pp. 71-93.
119. Matus, Alejandra (2020), *Mitos y Verdades de las AFP* (Santiago de Chile: Aguilar).
120. Melinsky, Pellegrini and Asoc. (2015), *Estudios Matemáticos Actuariales del Sistema Integral de Pensiones [in Bolivia]* (Buenos Aires, June 15).
121. Melinsky, Eduardo (2018), "Informe Valuación Actuarial Decreto 787-2017" (San Salvador: February 16).
122. Mesa-Lago, Carmelo (1978), *Social Security in Latin America: Pressure Groups, Stratification and Inequality* (Pittsburgh: University of Pittsburgh Press).
123. _____ (1994), *La Reforma de la Seguridad Social en América Latina el Caribe: Hacia una Disminución de los Costos Sociales del Ajuste Estructural* (Santiago de Chile: CIEDESS).
124. _____ (1996), "Las reformas de las pensiones en América Latina y la posición de los organismos internacionales," *Revista de la CEPAL*, No. 60 (December), pp.73-94
125. _____ (1998a), "La reforma estructural de pensiones en América Latina: Tipología, comprobación de supuestos y enseñanzas," in *Pensiones en América Latina: Dos Décadas de Reforma*, Alejandro Bonilla and Alfredo Conte-Grand, eds. (Lima: OIT), pp. 77-164.
126. _____ (1998b), "Comparative Features and Performance of Structural Pension Reforms in Latin America," *Brooklyn Law Review*, Vol. 64, No. 3, pp. 771-793.
127. _____ (2000a), *Estudio Comparativo de los Costos Fiscales en la Transición de Ocho Reformas de Pensiones en América Latina* (Santiago de Chile: CEPAL, Serie Financiamiento del Desarrollo, No. 93).

128. _____ (2000b), *Informe sobre la Reforma de la Seguridad Social en Panamá* (Panama City: Fundación Friedrich Ebert).
129. _____ (2000c), *Evaluación del Proyecto de Reforma de Seguridad Social en la República Dominicana* (Santo Domingo: Fundación Friedrich Ebert).
130. _____ (2002), "Myth and Reality on Social Security Pension Reform: The Latin American Evidence," *World Development*, Vol. 30: No. 8, pp. 1309-1321.
131. _____ (2004), *Las Reformas de Pensiones en América Latina y su Impacto en los Principios de la Seguridad Social* (Santiago de Chile: CEPAL, Serie Financiamiento del Desarrollo, No. 144).
132. _____ (2005a), "Assessing the World Bank Report 'Keeping the Promise,'" *International Social Security Review*, Vol. 58 (July), pp. 97-117.
133. _____ (2005b), "Problemas de la Seguridad Social en Panamá y Recomendaciones para su Reforma," Panama City, Fundación Friedrich Ebert.
134. _____ (2008), *Reassembling Social Security: A Survey of Pension and Healthcare Reforms in Latin America* (Oxford-New York: Oxford University Press).
135. _____ (2009), "Las Pensiones de Seguridad Social en América Latina después de Tres Décadas de Reformas," in *Anuario Iberoamericano 2009* (Madrid: Real Instituto Elcano), pp. 79-99.
136. _____ (2012), editor and author, Re-Reforms of Privatized Pensions Systems (Munich: Zeitschrift für ausländisches und internationales Arbeits- und Sozialrecht). Versión castellana (2013), "Re-reformas de Pensiones Privatizadas en el Mundo: Argentina, Bolivia, Chile y Hungría", *Revista Trabajo*, Mexico City.
137. _____ (2018a), "Reversing Pension Privatization in Bolivia," in *Reversing Pension Privatizations: Rebuilding Public Pension Systems in Eastern Europe and Latin America*, Isabel Ortiz, Fabio Durán, S. Urban and V. Wodsak, eds. (Geneva: ILO, Department of Social Protection ), pp.113-154.
138. _____ (2018b), "Social Welfare and Structural Reforms in Cuba," in *Cuba in Transition* (Washington DC: ASCE, Vol. 27).
139. _____ (2019), "Propuesta de Estudio para Reformar el Sistema de Pensiones de Panamá," Pittsburgh, unpublished document.

140. Mesa-Lago, Carmelo and Katharina Müller (2002), "The Politics of Pension Reform in Latin America," *Journal of Latin American Studies* (August), pp. 687-715.
141. Mesa-Lago, Carmelo and Fabio Bertranou (2016), "Pension Reforms in Chile and Social Security Principles, 1981-2015," *International Social Security Review*, Vol. 69, No. 1, pp. 25-45.
142. Mesa-Lago, Carmelo, Diego Valero, Edgar Robles and Manuel Lozano (2017), "Estudio de cobertura en pensiones de los trabajadores independientes y asalariados informales en los países de AIOS" (Madrid: AIOS, Novaster, IADB).
143. Mesa-Lago, Carmelo and María Elena Rivera (2020), *Sistema de Pensiones en El Salvador: Institucionalidad, Gasto Público y Sostenibilidad Financiera* (Santiago de Chile: CEPAL Serie Macroeconomía del Desarrollo, No. 209).
144. Mesa-Lago, Carmelo, María A. Cruz-Saco and Mirian Gil (2021), "Pension coverage in Latin America: Determinant factors, inequalities and successful policies," *International Social Security Review*, Vol. 74, No. 2.
145. Mesa-Lago, Carmelo and Diego Valero (2020), "The New Wave of Pension Reforms in Latin America," in *Economic Challenges of Pension Systems: A Sustainability and International Pension Management Perspective*, Marta Peris-Ortiz et al, eds. (Switzerland: Springer), pp. 255-274.
146. Mesa-Lago, Carmelo, et al. (2020), *La Seguridad Social en Nicaragua: Diagnóstico y Recomendaciones para su Reforma* (Managua: Instituto Nicaragüense de Investigaciones y Estudios Tributarios).
147. Meunier, Francois (2019), "¿Siete AFP o un fondo soberano para los trabajadores chilenos?," *El Mostrador*, December 21.
148. Ministério da Economia (2019), *Congreso promulga Nova Previdência: Confia as Principais Mudanças*. *www.previdencia.gob.br/2019/11/confira-as-novas-regras-do-sistema-previdenciario-brasileiro*
149. _____ (2020), Anexo IV Metas Fiscais: IV.6. *Avaliação Aturial do Regime Própio de Previdência Social dos Servidores Civis* (Brasilia).
150. Ministerio de Economía (2020), *Informe sobre jubilación de las mujeres* (Buenos Aires: Dirección Nacional de Economía, Igualdad y Género, July 21).

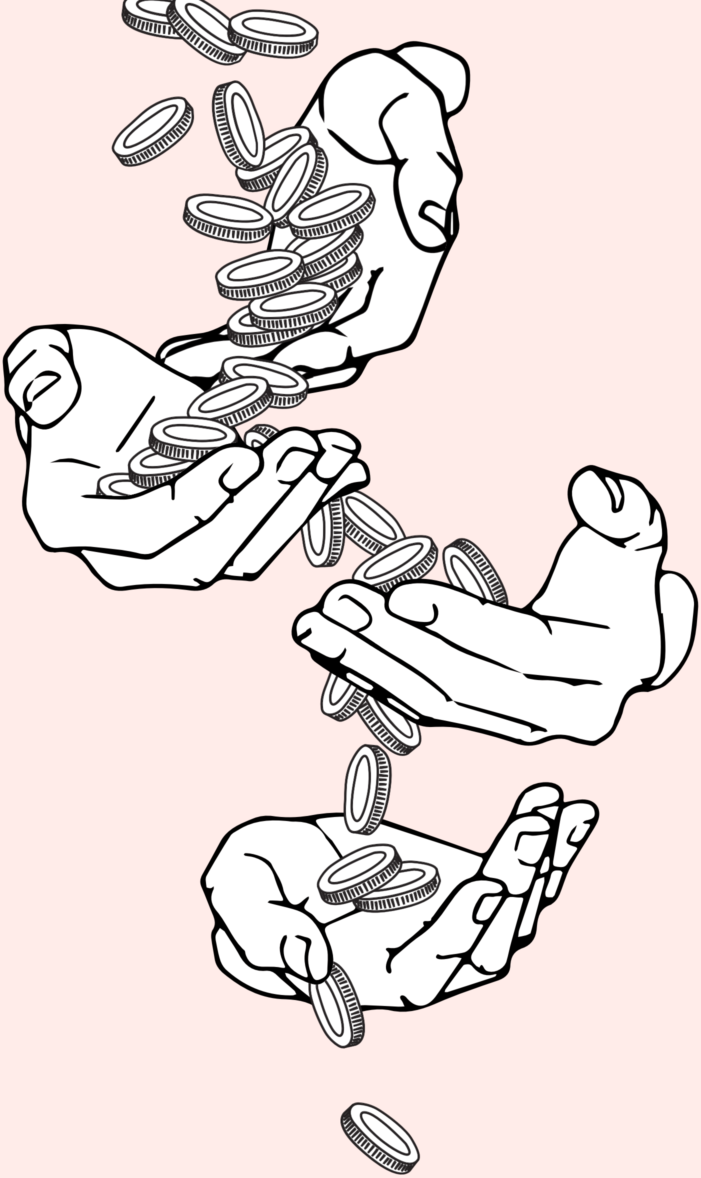
151. Ministerio de Hacienda (2020), "Informe Financiero Sustitutivo: Indicación al Proyecto de Ley que Mejora el Sistema de Pensiones Solidarias y de Capitalización Individual…," *Boletín* No. 12.212-13.
152. Ministerio de Trabajo y Seguridad Social—MTSS (2020), "Gobierno conformó comisión de expertos que trabajará en reforma del sistema de seguridad social," Montevideo, October 7.
153. Montenegro, Santiago (2018), "Principios para una reforma del sistema de protección a la vejez en Colombia," *Economía Colombiana*, No. 352, April-June, pp. 5-16.
154. Montes, Rocío (2018), "Chile planea reformar el sistema de pensiones…," *El País*, November 8.
155. Morón, Eduardo (2014), "Un debate sobre AFP mal informado," *El Comercio*, October 14.
156. _____ (2015), "Las pensiones chilenas en el diván," Linkedin, September 18.
157. Nakahodo, Sidney Nakao and José Roberto Savoia (2008), "A reforma da previdência no Brasil: Estudo comparativo dos governos Fernando Henrique Cardoso e Lula," *Revista Brasileira de Ciências Sociais*, Vol. 23, No. 23, pp. 46-58.
158. Neira, Cristian (2020), "Camila Vallejo denuncia trabas de la derecha…," *El Desconcierto*, April 29.
159. OECD, IADB and WB (2015), *Panorama de las Pensiones: América Latina y el Caribe* (Washington D.C.).
160. Oficina de Normalización Previsional—ONP (2019), Centro de Documentos, Lima, visited on September 17, 2020.
161. Oficina de Presupuesto del Congreso—OPC (2020), *Caracterización del Universo Poblacional del Sistema de Previsión Social Nacional* (Buenos Aires).
162. OIT/FUNDAUNGO (2020), *Reforma del Sistema de Pensiones en El Salvador en el Contexto de los Convenios Internacionales de Seguridad Social y las Buenas Prácticas Internacionales* (Geneva: OIT Oficina para América Central, Haití, Panamá y República Dominicana).
163. Organization for Economic Cooperation and Development—OECD (2013), *Pensions at a Glance 2013* (Paris).

164. _____ (2015), *Estudios de la OECD sobre los Sistemas de Pensiones: México* (París).
165. _____ (2019a), *Pensions at a Glance 2019* (Paris).
166. _____ (2019b), *Estudios de la OCDE sobre los Sistemas de Pensiones: Perú* (Paris, September).
167. _____ (2020), "Retirement savings in the time of Covid-19," June 22.
168. Ortiz, Isabel et al. (2017), *Universal Protection Floors: Costing Estimates and Affordability in 57 Lower Income Countries* (Geneva: ILO ESS Working Paper No. 58).
169. Ortiz, Isabel, Fabio Durán-Valverde, Stefan Urban and Veronika Wodsak (2018), *Reversing Pension Privatizations: Rebuilding Public Pension Systems in Eastern Europe and Latin America* (Geneva: ILO).
170. Orszag, Peter and Joseph Stiglitz (2001), "Rethinking Pension Reform: Ten Myths about Social Security Systems," in *New Ideas about Old-Age Security: Towards Sustainable Pension Systems in the 21th Century*, Holzmann and Stiglitz, eds. (Washington D.C.: World Bank), pp. 17-56.
171. Packard, Truman, et al (2019), *Protecting all: Risk Sharing for a Diverse and Diversifying World of Work* (Washington D.C.: World Bank)
172. Pérez-Montás, Hernando (2020), *Information on Dominican Republic*, Santo Domingo, October 5.
173. Pichardo, Arlette, Joan Guerrero and Carmelo Mesa-Lago (2020), *Suficiencia y Sostenibilidad de las Pensiones en la República Dominicana* (Santo Domingo: OSES-INTEC, January).
174. Pichardo, Arlette and Joan Guerrero (2020). Calculations made at author request, Santo Domingo, September 14.
175. Piñera, José (1992), *El Cascabel al Gato: La Batalla por la Reforma Previsional* (Santiago de Chile: Zig-Zag).
176. United Nations Development Program—UNDP (2018), *Indices and Indicators 2018 Statistical* Update 2018 (New York).
177. Puyol, Rafael (2017), "Tendencias demográficas hacen inviables a los sistemas de reparto," *FIAP Notas de Pensiones*, No. 21, December, pp.1-8.

178. Ramírez, Berenice (2019), "La necesaria construcción de un sistema público de pensiones para a sociedad mexicana," *El Trimestre Económico*, Vol. 86, No.344, October-December, pp. 967-1001.
179. Redacción (2020), "Organismo autónomo...," *Gestión*, Lima, October 14.
180. "Reforma de Pensiones: Principales Propuestas de la Indicación al Proyecto de Ley," Santiago de Chile, January 15.
181. República de Chile Senado (2020),"¿En qué va la tramitación del proyecto de reforma a las pensiones?," Santiago de Chile, March 13.
182. Rivera, María Elena (2020), Correspondence with the author, San Salvador, August 31.
183. Rodríguez, Ignacio and Pablo Vommaro, eds. (2018), *Desigualdades, Exclusión y Crisis de Sustentabilidad en los Sistemas Previsionales de América Latina y el Caribe* (Buenos Aires: CLACSO).
184. Rofman, Rafael and María Laura Oliveri (2011), *La Cobertura de los Sistemas Previsionales en América Latina: Conceptos e Indicadores* (Buenos Aires: Banco Mundial Oficina de América Latina y el Caribe).
185. Rofman, Rafael, Ignacio Apella and Evelyn Vezza, eds. (2013), *Más Allá de las Pensiones Contributivas: Catorce Experiencias en América Latina* (Buenos Aires: Banco Mundial).
186. Saavedra, Natalia (2019), "José Piñera no se cansa de sí mismo...," *El Mostrador*, February 20.
187. Saldaín, Rodolfo (2020), *La Era de los Nuevos Viejos: Longevidad, Trabajo y Jubilación en el Siglo XXI* (Montevideo).
188. Saldívar, Belén (2017), "Reforma a pensiones, reto para el nuevo gobierno," *El Economista*, Mexico City, November 7.
189. Sánchez, Carolina (2019), "Conoce la crisis de la CSS," *Mi diario*, Panama City, April 18.
190. Schwarzer, Helmut (2020), Answers to author's questions on RGPS and RPPS, November 3.
191. Schwarzer, Helmut, Pablo Casalí and Fabio Bertranou (2014), *El Papel de los Pisos de Protección Social en América Latina y el Caribe* (Lima: OIT).

192. Secretaría de Gobernación (2020), "Iniciativa con Proyecto de Decreto por el que se Reforman… Diversas Disposiciones de la Ley de Seguro Social y la Ley de los Sistemas de Ahorro para el Retiro," Mexico City, September 25.
193. Secretaría de Hacienda y Crédito Público—SHCP (2020), "Comunicado No. 061, Gobierno anuncia reforma al sistema de pensiones," Mexico City, July 22.
194. Secretaria Especial de Previdência e Trabalho--SEPRT (2019), Manifestatações Técnicas, *sa.previdencia.gob.bre/site/2019/04/PEC-6-2019-MANIESTACOES-TECNICAS-SEI_10128.100105_2019_01b.pdf*.
195. _____ (2020a), *Projeções Financeiras e Atuariais para o Regime Geral de Previdência Social-RGPS* (Brasilia, April).
196. _____ (2020b), *Resultado do Regime Geral de Previdência Social-RGPS* (Brasilia).
197. _____ (2020c), "O que é Previdência Complementar," Brasilia, June 22.
198. Senado Federal (2019), "Capitalição prevista na reforma da Previdência provoca incertezas," Brasilia, April 14.
199. "Senadores y No+AFP ingresaron proyecto para derogar el D.L. 3.500…," *El Desconcierto*, April 29.
200. Sepúlveda, Nicolás and Matías Jara (2020), "El escudo político que falló: Todos los nombres de la ex Concertación y la derecha se han puesto al servicio de las AFP," *Ciper*-Chile, July 24.
201. Sistema de Ahorro y Capitalización de Pensiones de Servidores Públicos—SIACAP (2020), Panama City, *siacap.gob.pa*, visited on October 14.
202. Sojo, Ana (2017), *Protección Social en América Latina: La Desigualdad en el Banquillo* (Santiago de Chile: CEPAL).
203. Superintendencia de AFP—SAFP (2007), *El Régimen de Capitalización y el Sistema Previsional 1994-2007* (Buenos Aires).
204. _____ (2008), *Boletín Estadístico Mensual*, 14: 3-10 (March-October).
205. Superintendencia de Banca, Seguros y AFP—SBSA (2019), *Memoria Anual 2019* (Lima).
206. Superintendencia de Pensiones (2020a), "Reforma Constitucional que Permite el Retiro del 10%..,.," Santiago de Chile, August 3.

207. _____ (2020b), *Estadísticas y Ficha Estadística Previsional*, Santiago de Chile, Fichas No. 89 y No. 94 (April and September) consulted on September 8 and October 17, respectively).
208. Superintendencia de Pensiones—SIPEN (2019, 2020). *Estadísticas Previsionales*, Santo Domingo.
209. Superintendencia de Pensiones—SUPEN (2020), *Estadísticas 2019* and *2020* (San Jose).
210. Superintendencia del Mercado de Valores—SMV (2020), Panama City, *datosabiertos.gob.pa*, visited on October 14.
211. Superintendencia Financiera de Colombia (2020a), *Fondo de Pensiones Obligatorias* (Bogota).
212. _____ (2020b), *Distribución de asegurados por sistema privado y público*, Bogotá, December 31, 2019.
213. SURA Asset Management (2015), "Colombia" in *Cómo Fortalecer los Sistemas de Pensiones Latinoamericanos: Experiencias, Lecciones y Propuestas* (Santiago de Chile), pp. 190-195.
214. "The Role of National Protection Floors in Extending Social Security to All" (2013), *International Social Security Review*, Special Issue, Vol. 66, No. 3-4 (July-December).
215. Universidad de Costa Rica—UCR (2016), "Estudio Actuarial del Seguro de Vejez, Invalidez y Muerte Administrado por la Caja Costarricense de Seguro Social (con corte al 31 diciembre del 2015)", San Jose, December.
216. Valero, Diego (2020a), *Calculations on voluntary contributions based on data from WB and FIAP 2019*.
217. _____ (2020b), interview in *Diario Libre*, July 15 and information on Dominican Republic, October 2.
218. Villar, Leonardo and David Forero (2018), "Elementos para una Propuesta de Reforma al Sistema de Protección Económica para la Vejez en Colombia," *Cuadernos de Fedesarrollo*, No. 53, March, pp. 1-82
219. Williansomn, John (1990), *Latin American Adjustment: How Much has Happened* (Washington D.C.: Peterson Institute for International Economics).
220. World Bank—WB (1994), *Averting the Old-Age Crisis: Policies to Protect the Old and Promote Growth* (Washington D.C.).



# APPENDICES

**Appendix 1.**

**Pension Coverage of the EAP and the 65-Year-and-Over Population in the Nine Private Systems, 2009-2018**

| Coverage (%) | Chile | | Colombia | | Costa Rica | | El Salvador | | Mexico | | Panama | | Peru | | Dominican R. | | Uruguay | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2017 | 2009 | 2018 | 2009 | 2018 | 2010 | 2018 | 2010 | 2016 | 2009 | 2017 | 2009 | 2018 | 2009 | 2017 | 2009 | 2018 |
| **General** | | | | | | | | | | | | | | | | | | |
| Contributors/EAP | 58.4 | 65.3 | 28.2 | 35.2 | 65.5 | 67.4 | 28.0 | 28.1 | 32.7 | 29.6 | 49.0 | 50.6 | 16.9 | 21.0 | 31.5 | 38.3 | 64.6 | 70.6 |
| Self-employed Workers | 25.7 | 24.0 | 9.7 | 13.2 | 46.2 | 47.8 | 3.0 | 2.1 | 1.6 | 0.6 | 8.8 | 7.6 | 0.3 | 0.3 | 0.0 | 1.6 | 41.0 | 44.3 |
| Pensioners/65+ pop | 83.7 | 88.9 | 21.5 | 54.0 | 42.0 | 65.5 | 14.0 | 14.0 | 50.1 | 75.0 | 44.8 | 80.8 | 25.6 | 49.2 | 12.7 | 18.9 | 84.5 | 86.8 |
| **Gender** | | | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | | | |
| Men | 61.2 | 67.1 | 28.5 | 35.8 | 69.7 | 71.4 | 28.2 | 29.7 | 32.3 | 30.6 | 49.7 | 50.2 | 19.8 | 23.7 | 28.8 | 35.4 | 66.9 | 70.7 |
| Women | 54.3 | 63.0 | 27.9 | 34.3 | 58.9 | 61.5 | 27.6 | 26.0 | 33.3 | 28.2 | 47.9 | 51.2 | 13.5 | 17.9 | 36.4 | 42.4 | 62.0 | 71.4 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | | | |
| Men | 83.8 | 89.1 | 26.6 | 58.2 | 54.8 | 73.3 | 19.4 | 17.1 | 56.2 | 77.6 | 52.0 | 82.7 | 33.5 | 53.9 | 16.7 | 21.3 | 84.8 | 88.1 |
| Women | 83.6 | 88.7 | 17.2 | 50.6 | 55.6 | 59.2 | 9.7 | 11.5 | 44.9 | 72.7 | 38.3 | 79.3 | 18.6 | 45.1 | 8.9 | 16.8 | 84.3 | 86.0 |
| **Location** | | | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | | | |
| Rural | 48.0 | 56.0 | 9.8 | 15.1 | 61.2 | 59.7 | 11.1 | 15.0 | 16.6 | 10.8 | 26.9 | 28.9 | 3.5 | 4.2 | 19.6 | 29.4 | 62.8 | 66.5 |
| Urban | 59.7 | 68.5 | 33.1 | 40.1 | 70.4 | 69.5 | 36.1 | 35.0 | 40.9 | 34.8 | 59.3 | 58.9 | 21.6 | 25.4 | 36.7 | 40.3 | 64.9 | 71.8 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | | | |
| Rural | 87.8 | 91.8 | 6.7 | 57.5 | 29.5 | 64.2 | 2.8 | 10.0 | 56.4 | 78.8 | 20.0 | 80.6 | 5.0 | 62.9 | 5.4 | 12.2 | 84.2 | 86.9 |
| Urban | 83.0 | 88.4 | 26.6 | 53.0 | 48.4 | 67.0 | 19.7 | 16.0 | 46.1 | 73.7 | 59.5 | 81.0 | 34.3 | 44.8 | 17.6 | 20.7 | 84.6 | 86.8 |
| **Size of enterprises** | | | | | | | | | | | | | | | | | | |
| Small | 32.1 | 20.9 | 7.7 | 10.4 | 40.9 | 46.2 | 5.0 | 4.0 | 7.8 | 5.5 | 10.2 | 10.3 | 0.9 | 1.4 | 1.2 | 0.0 | 41.5 | 48.2 |
| Medium | 75.3 | 57.1 | 53.4 | 62.1 | 73.7 | 81.2 | 45.7 | 44.4 | 53.1 | 45.5 | 56.0 | 61.7 | 16.7 | 30.1 | 52.3 | 10.3 | 83.8 | 91.0 |
| Large | 85.2 | 86.2 | 89.6 | 94.0 | 89.4 | 95.4 | 87.5 | 82.0 | 81.9 | 78.8 | 88.4 | 93.7 | 71.6 | 78.6 | 86.2 | 95.8 | 97.9 | 99.3 |
| **Household income/EAP** | | | | | | | | | | | | | | | | | | |
| Quintile 1 | 45.7 | 44.8 | 3.8 | 7.4 | 46.8 | 38.8 | 0.2 | 6.3 | 3.8 | 4.0 | 14.6 | 13.8 | 0.1 | 0.0 | 19.6 | 24.3 | 20.7 | 22.5 |
| Quintile 2 | 53.7 | 60.5 | 16.8 | 22.8 | 62.6 | 62.7 | 5.4 | 24.0 | 17.2 | 16.4 | 38.7 | 40.0 | 4.4 | 3.7 | 25.3 | 34.3 | 32.2 | 37.9 |
| Quintile 3 | 59.3 | 65.8 | 20.8 | 27.5 | 59.7 | 66.2 | 22.9 | 23.7 | 27.3 | 23.6 | 47.2 | 49.5 | 14.2 | 16.1 | 29.2 | 34.9 | 57.5 | 65.3 |
| Quintile 4 | 64.0 | 72.0 | 34.5 | 43.7 | 68.3 | 73.2 | 31.6 | 32.6 | 37.3 | 33.3 | 58.9 | 62.2 | 21.4 | 25.3 | 33.5 | 40.6 | 72.1 | 78.7 |
| Quintile 5 | 67.9 | 78.0 | 51.8 | 58.5 | 78.3 | 83.1 | 47.6 | 44.9 | 50.3 | 46.8 | 70.5 | 70.4 | 29.9 | 38.0 | 42.0 | 51.9 | 83.4 | 88.3 |
| **Education** | | | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | | | |
| Low (0-8 years) | 43.6 | 51.4 | 12.1 | 15.4 | 54.0 | 55.7 | 10.4 | 10.0 | 14.8 | 11.4 | 26.2 | 27.2 | 3.2 | 4.3 | 18.5 | 21.0 | 51.3 | 54.7 |
| Middle (9-13) | 58.0 | 63.6 | 32.3 | 36.3 | 67.5 | 67.7 | 38.0 | 35.8 | 34.5 | 30.2 | 52.0 | 50.5 | 14.0 | 16.7 | 32.6 | 40.5 | 68.1 | 72.3 |
| Superior (14+) | 73.0 | 74.3 | 64.5 | 66.6 | 87.0 | 86.2 | 69.3 | 56.0 | 57.4 | 51.8 | 77.3 | 74.2 | 44.0 | 47.2 | 61.2 | 65.6 | 87.2 | 90.0 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | | | |
| Low (0-8 years) | 85.7 | 91.4 | 16.7 | 51.4 | 37.1 | 62.7 | 7.3 | 9.5 | 49.0 | 75.2 | 32.1 | 80.6 | 17.3 | 49.3 | 9.8 | 18.4 | 85.7 | 88.5 |
| Middle (9-13) | 78.8 | 81.5 | 45.5 | 53.0 | 57.9 | 64.2 | 57.3 | 33.0 | 51.4 | 69.5 | 32.1 | 78.8 | 45.7 | 40.4 | 25.7 | 28.1 | 78.9 | 81.6 |
| Superior (14 +) | 78.8 | 81.7 | 65.7 | 78.0 | 74.9 | 83.0 | 64.8 | 42.3 | 58.0 | 75.2 | 87.8 | 85.6 | 73.1 | 68.6 | 53.3 | 59.7 | 84.0 | 87.0 |

Notes: Blank spaces mean that no figures are available . Costa Rica contributors/EAP and pensioners/pop. 65+ rural 2010, urban 2017. Dominican Rep. pensioners/ 65+ pop. education 2017. Uruguay contributors/EAP rural and urban 2017.
Source: Mesa-Lago, Cruz-Saco and Gil, 2021, based on IADB-SIMS, 2019.

**Appendix 2.**

**Pension Coverage of the EAP and the 65-Year-and-Over Population in Eight Public Systems, 2009-2018**

| Coverage (%) | Argentina | | Bolivia | | Brazil | | Ecuador | | Guatemala | | Honduras | | Nicaragua | | Paraguay | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2009 | 2018 | 2009 | 2018 | 2009 | 2018 | 2009 | 2018 | 2010 | 2018 | 2009 | 2018 | 2010 | 2014 | 2009 | 2018 |
| **General** | | | | | | | | | | | | | | | | |
| Contributors/EAP | 45.0 | 45.4 | 15.0 | 19.6 | 51.5 | 56.0 | 30.1 | 40.4 | 20.1 | 19.2 | 17.7 | 16.8 | 17.3 | 22.3 | 16.3 | 22.8 |
| Self-employed Workers | | | 2.6 | 3.9 | 26.5 | 39.3 | 13.9 | 22.0 | 0.2 | 0.3 | 0.8 | 0.9 | 0.1 | 1.5 | 1.4 | 1.1 |
| Pensioners/65+ pop | 90.1 | 84.2 | 96.7 | 96.8 | 89.0 | 87.8 | 51.7 | 53.6 | 10.4 | 12.2 | 6.6 | 9.8 | 20.0 | 24.1 | 16.6 | 50.8 |
| **Gender** | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | |
| Men | 45.4 | 46.0 | 16.8 | 21.0 | 53.5 | 56.2 | 30.6 | 40.3 | 19.2 | 19.6 | 15.2 | 15.8 | 16.8 | 20.0 | 16.8 | 23.0 |
| Women | 44.6 | 44.6 | 12.9 | 17.8 | 48.9 | 55.9 | 29.3 | 40.5 | 22.1 | 18.2 | 22.0 | 18.4 | 18.0 | 25.9 | 15.3 | 22.8 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | |
| Men | 88.1 | 81.8 | 96.5 | 96.9 | 92.3 | 90.9 | 53.1 | 55.8 | 12.9 | 14.6 | 7.5 | 11.5 | 23.0 | 24.3 | 15.8 | 48.6 |
| Women | 91.4 | 85.9 | 96.8 | 96.8 | 86.4 | 85.5 | 50.4 | 51.7 | 8.0 | 10.1 | 5.7 | 8.3 | 17.6 | 23.9 | 17.3 | 53.0 |
| **Location** | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | |
| Rural | | | 6.1 | 7.5 | 26.5 | 35.8 | 22.8 | 34.0 | 11.2 | 9.5 | 6.5 | 5.1 | 7.0 | 8.7 | 6.5 | 13.0 |
| Urban | 45.0 | 45.4 | 19.6 | 25.2 | 56.2 | 58.6 | 33.4 | 43.4 | 27.7 | 29.0 | 29.2 | 25.7 | 23.8 | 30.8 | 22.4 | 28.4 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | |
| Rural | | | 95.5 | 96.9 | 94.8 | 94.8 | 61.9 | 61.0 | 4.9 | 3.2 | 1.9 | 1.5 | 8.1 | 4.4 | 4.6 | 59.4 |
| Urban | 90.1 | 84.2 | 97.6 | 96.7 | 87.8 | 86.6 | 45.0 | 49.9 | 15.1 | 21.7 | 12.2 | 16.1 | 27.8 | 36.2 | 26.3 | 45.3 |
| **Size of enterprises** | | | | | | | | | | | | | | | | |
| Small | 14.2 | 11.7 | 2.4 | 4.6 | 32.1 | 36.3 | 14.1 | 22.8 | 2.3 | 2.4 | 1.0 | 1.3 | 2.0 | 1.7 | 5.0 | 3.9 |
| Medium | 67.4 | 68.9 | 23.3 | 56.2 | 70.7 | 74.8 | 38.1 | 53.5 | 35.6 | 36.1 | 33.1 | 32.1 | 42.2 | 40.4 | 38.7 | 45.4 |
| Large | 89.9 | 89.8 | 66.4 | 84.4 | 89.6 | 92.1 | 83.3 | 95.5 | 70.5 | 76.2 | 68.4 | 65.4 | 83.2 | 84.2 | 76.6 | 74.3 |
| **Household income/EAP** | | | | | | | | | | | | | | | | |
| Quintile 1 | 2.1 | 39.1 | 1.6 | 3.7 | 21.5 | 16.4 | 16.1 | 26.3 | 0.7 | 0.5 | 0.8 | 1.8 | 1.2 | 3.9 | 1.1 | 3.8 |
| Quintile 2 | 19.2 | 24.2 | 10.7 | 14.1 | 41.8 | 46.2 | 21.2 | 28.5 | 11.0 | 7.0 | 8.2 | 6.0 | 8.8 | 17.5 | 10.1 | 14.0 |
| Quintile 3 | 41.9 | 31.4 | 12.6 | 16.2 | 51.4 | 59.0 | 23.3 | 38.3 | 23.2 | 13.7 | 13.1 | 11.4 | 15.0 | 18.9 | 12.6 | 18.5 |
| Quintile 4 | 52.1 | 49.1 | 18.5 | 21.4 | 62.1 | 71.2 | 30.2 | 40.7 | 28.8 | 18.0 | 20.2 | 19.3 | 22.2 | 25.1 | 20.0 | 28.1 |
| Quintile 5 | 61.5 | 63.2 | 23.7 | 33.1 | 73.5 | 65.3 | 46.2 | 46.6 | 50.7 | 40.2 | 35.5 | 34.6 | 35.8 | 33.8 | 27.0 | 36.6 |
| **Education** | | | | | | | | | | | | | | | | |
| *Contributors/EAP* | | | | | | | | | | | | | | | | |
| Low (0-8 years) | 29.5 | 28.3 | 3.4 | 4.7 | 37.5 | 42.1 | 18.2 | 27.6 | 9.4 | 8.1 | 8.5 | 6.8 | 8.0 | 10.3 | 4.7 | 7.6 |
| Middle (9-13) | 43.9 | 42.1 | 10.5 | 11.9 | 59.5 | 55.7 | 24.4 | 37.9 | 39.8 | 33.0 | 33.7 | 26.1 | 23.2 | 26.7 | 17.5 | 21.6 |
| Superior (14+) | 61.4 | 60.8 | 48.2 | 52.4 | 80.3 | 76.1 | 59.3 | 70.0 | 57.2 | 62.4 | 62.6 | 56.9 | 50.1 | 56.4 | 50.8 | 50.8 |
| *Pensioners/65+ pop* | | | | | | | | | | | | | | | | |
| Low (0-8 years) | 91.2 | 88.4 | 96.4 | 97.5 | 88.4 | 88.6 | 50.1 | 50.3 | 9.0 | 12.4 | 3.4 | 4.7 | 16.8 | 19.0 | 11.5 | 53.5 |
| Middle (9-13) | 89.6 | 83.6 | 96.1 | 98.2 | 84.5 | 83.5 | 56.8 | 55.3 | 40.3 | 57.7 | 49.6 | 40.2 | 46.8 | 42.9 | 38.1 | 35.0 |
| Superior (14 +) | 85.4 | 75.0 | 100.0 | 90.9 | 85.6 | 86.4 | 66.2 | 77.5 | 59.6 | 56.6 | 46.1 | 47.2 | 70.6 | 80.8 | 67.9 | 51.2 |

Notes: Blank spaces mean that no figures are available. Self-employed workers in Bolivia, Ecuador, Guatemala, Honduras, and Paraguay are from 2016. In Brazil, several indicators are from 2017. In Nicaragua the size of the enterprise is from 2013.
Source: Mesa-Lago, Cruz-Saco and Gil, 2021, based on IADB-SIMS, 2019.

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**ISBN: 978-607-8642-82-3**

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