Summary of the main presentations 13th FIAP International Seminar[1]

“The Multipillar Pension Systems: Investing in the Future”

International Seminar organized by the International Federation of Pension Fund Administrators (FIAP) and the Pension Savings Fund Managers (AFAP) of Uruguay[2]

Montevideo, Uruguay, September 24 and 25, 2015

[1] Document prepared by FIAP.
[2] Integración, Sura, República and Unión Capital.

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I. Introduction

The International Federation of Pension Fund Administrators (FIAP) and the Pension Savings Fund Managers (AFAPs) of Uruguay (Sura, Integración, Republica and Union Capital), organized the 13th FIAP International Seminar entitled "The Multipillar Pension Systems: Investing in the Future." The meeting was held on September 24 and 25, 2015, in the Radisson Montevideo Victoria Plaza Hotel in Montevideo, Uruguay.

The main objectives of this seminar were to examine the lessons learnt and the recommendations arising from experiences with multipillar pension systems in different countries, including the so-called fourth pillar, and the discussion of proposals for increasing the expected returns and safety of investments in the long term and the pension amounts obtained by members.

The seminar coincided with the celebration of the 20th anniversary of the promulgation of the Law that created the individual savings system in Uruguay, as well as the holding of the 19th FIAP Annual Assembly. As on former occasions, we had international experts and participants from different parts of the world (FIAP member countries and others), including government officials, legislators, officials of international agencies, representatives of pension fund managers, mutual funds and insurance companies, and other personalities related to the financial sector and social security.

This document summarizes the main presentations delivered in the seminar.

FIAP will soon make available to the public at large a book (in English and Spanish) with all the presentations delivered in this seminar.

To review the seminar program and the presentations delivered, please visit the following link.

II. Summary of Presentations

Main Conference

Moshe Milevsky[3] - Savings and investment decisions for a safe and reliable retirement

- Interest rate and life expectancy increases severely impact pensions.

- The problem is exacerbated with volatility of the financial market and life expectancy at retirement. The standard deviation of both variables is approximately 55%.

- Longevity of money: How long will my money last, taking into account what I have, what I withdraw, and the interest rate.

- The volatility of longevity is of the same order of magnitude as the volatility of the return on investments in the stock market. A risk management strategy is required for both. The development of insurance and RV products should be encouraged in order to help manage these risks; this is important for economic and psychological reasons.

- Key message: The longevity of money should exceed the longevity of life.

- New alternatives for the decumulation phase:

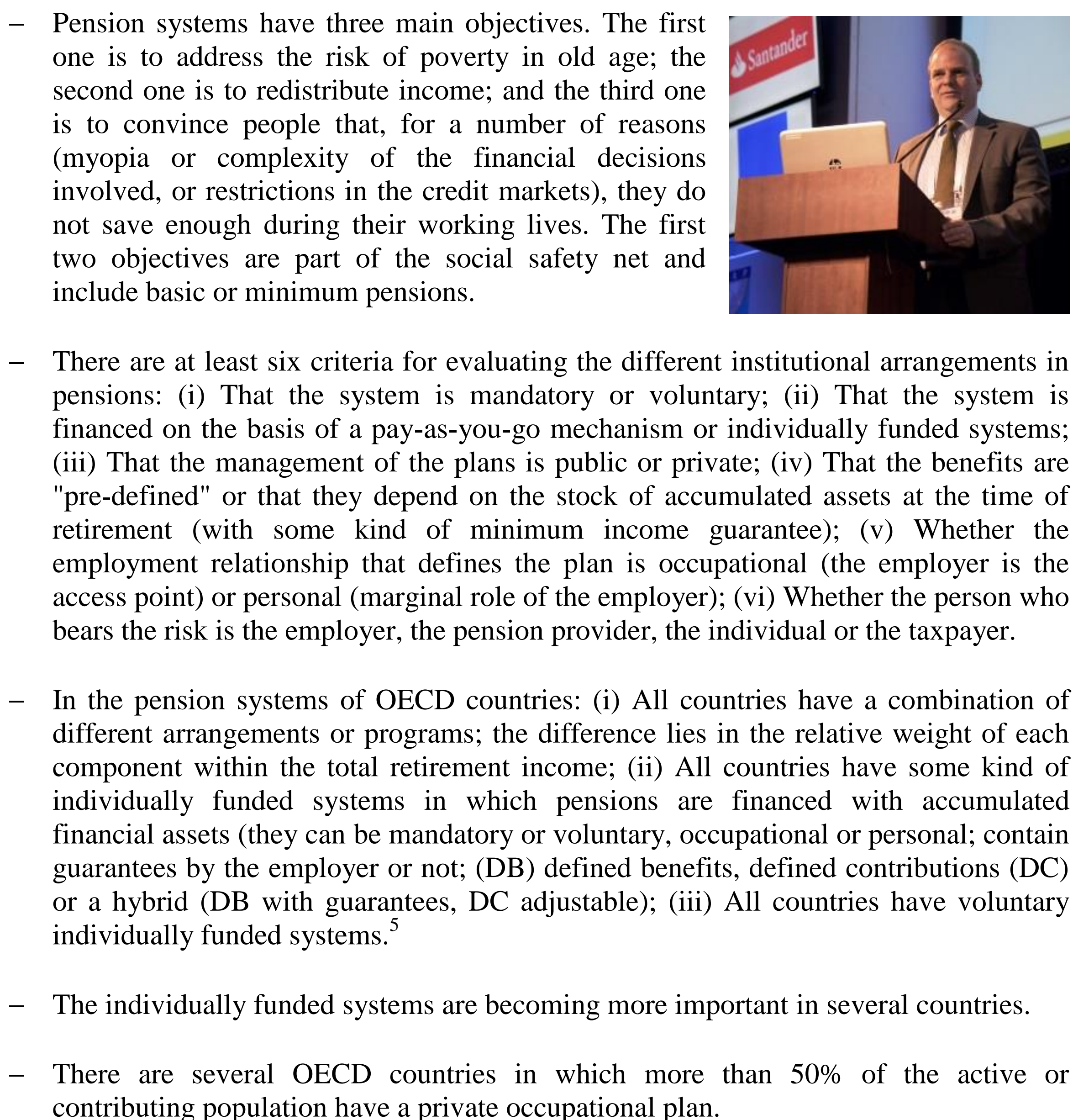
  - All studies and efforts have focused on the accumulation phase
  - Tontines (used in England in 1693): Participants earn on interest and a mortality credit.
  - The tontine rate is high at the outset to compensate for the lack of "mortality credit" and decreases when the mortality credit starts increasing.
  - The difference with the Life Annuity (LA), is that in the tontine the "mortality credit" belongs to the participants and not the life insurance companies.
  - When options increase, prices improve.

- Greater efforts must be made to educate people in a very simple (and entertaining) way regarding the longevity of their money.

[3] Moshe Milevsky is a Full Professor at the Schulich School of Business, York University, and Executive Director of the IFID Centre (Toronto, Canada).

Block 1: Multipillar Pension Systems

1. Christian Daude[4] - Multipillar pension systems: Recent trends in OECD countries



- Pension systems have three main objectives. The first one is to address the risk of poverty in old age; the second one is to redistribute income; and the third one is to convince people that, for a number of reasons (myopia or complexity of the financial decisions involved, or restrictions in the credit markets), they do not save enough during their working lives. The first two objectives are part of the social safety net and include basic or minimum pensions.

- There are at least six criteria for evaluating the different institutional arrangements in pensions: (i) That the system is mandatory or voluntary; (ii) That the system is financed on the basis of a pay-as-you-go mechanism or individually funded systems; (iii) That the management of the plans is public or private; (iv) That the benefits are "pre-defined" or that they depend on the stock of accumulated assets at the time of retirement (with some kind of minimum income guarantee); (v) Whether the employment relationship that defines the plan is occupational (the employer is the access point) or personal (marginal role of the employer); (vi) Whether the person who bears the risk is the employer, the pension provider, the individual or the taxpayer.

- In the pension systems of OECD countries: (i) All countries have a combination of different arrangements or programs; the difference lies in the relative weight of each component within the total retirement income; (ii) All countries have some kind of individually funded systems in which pensions are financed with accumulated financial assets (they can be mandatory or voluntary, occupational or personal; contain guarantees by the employer or not; (DB) defined benefits, defined contributions (DC) or a hybrid (DB with guarantees, DC adjustable); (iii) All countries have voluntary individually funded systems.[5]

- The individually funded systems are becoming more important in several countries.

- There are several OECD countries in which more than 50% of the active or contributing population have a private occupational plan.

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[4] Christian Daude is a senior economist and head of the unit for Colombia and Greece in the Economics Department of the OECD, where he leads the team in charge of economic studies, macroeconomic forecasts and the structural monitoring of both countries.

[5] Examples. A) Occupational defined benefit plans: (i) Mandatory (Korea, Netherlands); (ii) Voluntary (Germany, Canada, Finland, Japan, United Kingdom, United States). B) Occupational defined contribution plans: (i) Mandatory (Australia, Chile, Korea, Mexico, Sweden, Turkey); (ii) Voluntary: (Germany, Canada, USA, France, Japan, Poland, Czech Republic, Slovak Republic; (iii) Default enrollment (USA, Italy, New Zealand, United Kingdom).

- Regarding public pensions, the OECD is of the opinion that the sources of funding for retirement should be diversified, which means that the individually funded systems are complementary and do not substitute public pensions. Furthermore, public pensions require a balance between adequate levels of pensions and fiscal sustainability.
- Non-contributory public pensions are part of the social protection network and must be financed from the general budget with tax revenue.
- Population aging poses different challenges for the pension systems: higher rates of dependence give rise to problems of financial sustainability for the PAYGO systems; a longer lifespan in retirement (in relation to the years of contribution) gives rise to sustainability issues for the PAYGO systems and inadequate pensions for the individually funded systems.
- Regarding the individually funded systems, the OECD is of the view that their design must be improved in three areas: consistency, adequate levels of pensions, and efficiency.
- **Coherence**: The system must be globally consistent; the accumulation and payment phases must be in harmony; consistency is required for monitoring all the risks that affect income during retirement.
- **Adequate pensions**: CD plans are complementary to all sources for financing retirement; they are an integral part of the total retirement income; they are designed (contribution rates, contribution periods, decumulation phase, etc.) bearing in mind that they are a complement for achieving a total retirement-income level goal.
- **Efficiency**: Investment strategies that reduce extreme negative risks must be chosen (for example, default semi-automatic strategies for people close to retirement age); and the payment phase must be adequately structured to avoid the longevity risk: programmed withdrawal versus life annuity.

2. Rodrigo Acuña[6] - How to strengthen the multipillar pension systems in Latin American?

- **Major advances due to the introduction of the individually funded systems in the region**

  (i) There was a structural change in the operating principles and the characteristics and structure of the incentives of the PAYGO systems, when switching from PAYGO systems to individually funded systems.

  (ii) The above had very significant impacts in different areas of the performance of the pension systems. One of them, and part of the main motivations that led to the reforms in the 80s and 90s, is the **financial sustainability** of the contributory systems in the long term, which was seriously jeopardized in the PAYGO systems due to the financial problems they faced (caused by demographic trends and the drop in the ratio of assets to liabilities). In the individually funded systems, the problem of financial

[6] Rodrigo Acuña is a partner of PrimAmérica Consultores, a company specializing in social security, pensions, savings, life insurance and finance, a professor at the Executive Development Center of the Catholic University of Chile, in the Diploma in Investment for the Long Term and Retirement, and external advisor to the International Federation of Pension Fund Administrators (FIAP).

sustainability is resolved by directly linking the paid-in contributions to the benefits provided, regardless of other matters that need to be addressed (particularly the issue of the **adequacy of pensions**).

The example of Chile:

- ✓ Without the 1981 reform, the financial deficit of the PAYGO system would have increased in the long term, tending towards levels of the order of 8% of GDP towards the 2050s (despite the fact that significant parametric reforms were made during the 70s, and the fact that the contribution rates of the PAYGO systems were very high: more than 20%, compared to the 10% rate in the individually funded system).
- ✓ In Chile, the 1981 reform generated an operational deficit in the former pension system, and this increased during the transition, reaching levels of almost 5% of GDP (due to the switching of contributions from the PAYGO systems to the individually funded systems). However, after the completion of the transition stage, and over time, the financial deficits of the PAYGO regimes of the former system have been decreasing, and will tend to disappear towards the 2050s.

(iii) The release of public budget funds that has been occurring over time, has enabled funding other social programs, including non-contributory pensions. The 2008 reform in Chile, which created the solidarity pension system, was mostly funded with the resources provided by this release of funds.

(iv) Greater equity among workers. In the individually funded systems, all workers have the same rights and obligations, regardless of the industry or enterprise in which they work, or the fund manager they are enrolled in. That was not the case in the PAYGO systems in the region, where there were large differences in contribution rates, benefits and eligibility conditions. Added to the above, the lowest income sectors, woman and the more vulnerable, were generally the ones in the worst relative condition. A high percentage of this segment of workers could not access a pension because they did not meet the requirements for obtaining one, and therefore fully or partially lost the contributions paid in during their working lives. On the other hand, the higher-income sectors, which usually have a better contribution payment behavior in these systems, did manage to meet the requirements, and received pensions. Another important point regarding equity is that there is a significant financial commitment of the public budget in financing the contributory PAYGO systems. For example, in the case of Colombia, approximately 3.8% of GDP is currently destined to financing PAYGO systems, whereas, on the other hand, 0.1% of GDP is destined to financing the means-tested non-contributory pensions in the lower income sectors, reflecting considerable inequality in the PAYGO systems, which is corrected in the individually funded systems.

(v) Decrease in the hidden under-coverage of the PAYGO systems. Many workers were contributing to the PAYGO regimes, and therefore inflated the coverage figures for these regimes in the active stage. But when they finally reached retirement, they received no benefits and were therefore not really covered by the pension system, despite the fact that they appeared as having been covered during the active stage. In Chile, one in two people reaching retirement age in the PAYGO systems end up not receiving any benefits, because they do not meet the requirements (in Peru, the figure is 2 out of 3 people).

(vi) The opacity of information in the PAYGO regimes switched to the transparency we now observe in the operation and management of the AFP system, which enables analysis and criticism of certain aspects of the functioning of the system and proposals for improvement.

(vii) The pension fund managers in the countries of the region have obtained good results.

- ✓ Returns: The average return (without discounting commissions) fluctuates between a real annual average of 6.5% and 8.6%, a figure substantially higher than what was initially expected. This is without discounting commissions.
- ✓ Commissions: There has been a decreasing trend in commission amounts, notwithstanding additional measures that could encourage competition between the different fund managers to improve pension benefits. For example, it is estimated that commissions have dropped approximately 90% over a period of 17 years in Mexico. And in Chile, if we compare the peak of commissions in 1983 to the commissions in place today, including the disability and survival insurance premium, we observe a drop of approximately 50%.
- ✓ Quality of service of the fund managers: According to the different indicators being produced by a number of supervision agencies, the quality of service has been adequate.

(viii) They have had positive macroeconomic impacts: The creation of the individually funded systems led to a higher annual growth of the GDP of between 0.3% and 0.6%, depending on the country. This was due to its effect on the labor, savings and investment and capital markets, financial development and factor productivity.

– **Main challenges of the pension systems**

(i) Improve contribution coverage and density. The cause of low coverage and contribution density is structural (high rate of informality in countries; low average income of workers and problems of evasion and avoidance of contributions), but it is also due to the design of pension schemes. The long-term solution to this problem is the development of countries and an increase in per capita income.

(ii) Providing adequate pensions and replacement rates to all workers. There is a gap between the pensions and replacement rates expected when the individually funded systems were created, and those that exist at present. In Chile it was found that the average replacement rate was 87% for men and 58% for women, (considering mandatory savings, voluntary savings and the benefits of the solidarity pension system, for members with 10 or more years of contributions.) In Peru, the replacement rates for people who have contributed on a more or less regular basis, are more than 60%. Given the low coverage, the low contribution density, high informality and the declining trend of returns and interest rates, the challenge lies in how to provide adequate pensions and replacement rates to all workers, even those with low contribution behavior.

(iii) Achieve consistency between the design, parameters and pension objectives of the system. It is true that the individually funded systems do not define benefits, since they depend on the accumulated balances in the individual accounts. However, this does not justify public policies requiring certain reference rates to be obtained by members, depending on their contribution behavior.

- ✓ Considerable changes have occurred in many variables that affect the quality of pensions since the individually funded systems have been in place, such as for example: (i) Coverage and contribution density have been lower than what was expected at the outset; (ii) Return on investment has been good, but has tended to decrease in recent years (in the last 5 years, they have fluctuated at a real annual average of approximately 2% to 5%); (iii) Life expectancy has increased in the past and will continue to do so in the future (in Chile there has been an increase in life expectancy of about 6 and 7 years, for men and women, respectively); (iv) Interest rates for converting accumulated balances into pension flows have decreased (in Chile the interest rates on the sale of life annuities by insurance companies have dropped by more than 3 percentage points in the last 15 years).
- ✓ Apart from these factors affecting the quality of pensions, there have been no changes in the retirement age and the contribution rate (main parameters defined by law) since the individually funded systems were created. Thus, the challenge is to generate an institutional framework that will enable reviewing and adjusting these main parameters, to make them consistent with the proposed replacement rates for members.

(iv) <u>Improve integration and complementarity between the different pillars of the pension system</u>.

- ✓ The individually funded systems were created in the 80s and 90s, with many enhanced features. Nonetheless, they were not sufficient for providing adequate replacement rates for all workers, with the risk that a significant portion of them would fall into poverty upon retirement.
- ✓ Due to the above, many Latin American countries began creating and developing non-contributory pension programs (or "social pensions") at an accelerated rate, as of 2000, in order to fight poverty and help individuals who reached retirement age with an insufficient pension amount.
- ✓ Challenges in terms of integration and complementarity of the different pillars:
  a. Care must be taken to avoid producing a vicious circle in the pension system, i.e., that the expansion of coverage and the increase in the amounts of non-contributory pensions do not discourage contributions to the contributory programs, and that this in turn does not cause a reduction in the benefits of the latter, once again bringing pressure to bear for greater coverage and higher non-contributory pension amounts (this vicious circle can be avoided with good planning and complementarity between the different pillars of the pension system for providing adequate pensions).
  b. The fragmentation of the pension systems must be reduced or avoided. There is significant fragmentation of both contributory and non-contributory systems in the countries of the region. In Mexico, for example, there is fragmentation of non-contributory pensions paid at a federal and state level. In Colombia and Peru there is fragmentation of the contributory pension programs, because the PAYGO and individually funded systems compete with one another parallel to them, causing efficiency, coverage and equity issues.

c. Efforts must be made to increase the role of the voluntary pension savings plans in the region. This market is very poorly developed, except for some countries like Colombia, Mexico and Chile, where the voluntary funds are approximately 5% - 6% of the mandatory funds (2% - 3% of GDP).

(v) Advance in the safety and stability of pension benefits. In the accumulation stage: (i) The freedom of choice that members have for choosing pension funds, and the restrictions imposed on them when choosing, especially when approaching retirement, must be reviewed; and (ii) The default options available to members who do not make important decisions must be analyzed. It is very important to assess and properly control the longevity and investment risks faced by members in the decumulation stag, especially in the programmed withdrawal mode, in which the creation of a longevity insurance makes sense.

(vi) Promote the advantages of the individually funded systems. There are many factors in the region that imposed certain straitjackets on the individually funded systems, preventing them from developing their full potential: (i) Regarding investments, there must be a move towards the extension and flexibilization of the investment opportunities of the pension funds; (ii) There must be progress in boosting competition between the different fund managers, in order to enhance their different pension attributes, and not only focus on the commissions issue, as has occurred lately; (iii) Pension modes and processes must be urgently improved; and (iv) It is also necessary to improve the advice and information provided by the authorities and fund managers to members.

– **Proposals for the integration and complementarity of pension systems**

a. Non-contributory Pillar:

- ✓ Increase its universality.
- ✓ Define the amounts of non-contributory pensions aimed at combating poverty.
- ✓ Benefits must not be so high that they discourage contributions to the contributory programs.
- ✓ Programs must be financed with public sector resources.
- ✓ Progress must be made towards achieving a greater overall savings culture among individuals, providing them with adequate mechanisms for the different sectors comprising the total number of workers within the labor markets.

b. Mandatory Contributory Pillar:

- ✓ Eliminate the competition between the PAYGO and the individually funded programs in several countries in which there is this competition, because it affects the efficiency, equity and coverage of those pension systems.
- ✓ Strengthen the individually funded systems (see point (vi).
- ✓ Eliminate the implicit taxes of members. Implicit taxes, like those existing in El Salvador, in which the new generations of members enrolled in the individually funded systems are obligated to invest in resources or public instruments with low returns even lower than in the market, with the disadvantages this entails in terms of the benefits they will be able to receive in future.

c. Voluntary Pension Savings Pillar.

- ✓ Review the characteristics of these plans, particularly liquidity. In several countries, members have no liquidity in voluntary savings and cannot withdraw them prior to retirement; liquidity is an important element for encouraging voluntary savings, but with certain restrictions or penalties if the savings are withdrawn.
- ✓ Improve the characteristics of products and expand investment options, which in many countries are limited to the same options as mandatory savings.
- ✓ Increase competition between the different fund managers, which helps not only to improve the different attributes of these entities, but also to improve the information provided to members.
- ✓ Learn from the experiences of other countries that have been successful in increasing voluntary pension savings: automatic enrollment and escalation, and default options applied to voluntary pension savings plans.

3. Ricardo Paredes[7] - Challenges of the system in Chile

- Some important milestones:
  - ✓ The individually funded system was created at the beginning of the 80s.
  - ✓ There was a reform in 2008 based on the recommendations of an appointed Presidential Commission, the Marcel Commission, which created a solidarity pillar for 60% of the population with the lowest income, which is financed with general taxes. There are also other measures like portfolio bidding, a bonus per child born live, and others.

  - ✓ Between 2011 and 2014 there was a growing wave of student protests, and the idea of a society of rights was strongly established. The demands were not at all contained; to the contrary, the political system reinforced them. All of this partially gave rise to the government's agenda.
  - ✓ Then the Pension Commission, led by David Bravo, was formed. The Commission worked in 2014 and 2015, to suggest reforms in line with the agenda. The Commission's report was published in September, 2015.
- The government's agenda is based on the idea of rights, and states that there is discontent with the quality of pensions. After years of effort in the labor market, pensions do not meet people's expectations. Hence, in order to be able to access a decent pension and disability and survival insurance, the government's agenda entrusted this study on the pension system to a team of national and international experts to propose alternative solutions.
- The Commission that was created was very heterogeneous in its formation and interests. It had 24 members. The excellent academic reputation in economy of some of those members was noteworthy. For example, Nicholas Barr, Olivia Mitchell, Costas Maguir and Orazio Attanasio, are full time professors in very prestigious universities in the United States and the United Kingdom. A very significant effort was made to integrate these international members in 10 sessions with them. The Commission also included 65 workshops in Spanish and 78 public hearings, and visits to regions to hear people's opinions or beliefs regarding the pension system (30 regional dialogues).

[7] Ricardo Paredes is an economists graduated from the University of Chile, Full Professor at the Catholic University of Chile and member of the Chilean Pension Reform Commission.

- The diagnosis from the discussion indicated that: (i) There was consensus regarding low pensions and the need to increase them; (ii) The non-contributory pension is self-financed and has increased over time in proportion to the available resources; (iii) The contribution rate of 10% is comparatively low; (iv) The fiscal cost of the transition reached 5% of GDP in 1984, and has been falling since then; (v) There is a conceptual and methodological mixture that makes it difficult to determine what causes the levels of pensions, and in particular, the role of the AFPs.
- Certain milestones can be highlighted in the discussion:
  - (i) Origin, legitimacy and expectations are very central issues put forward by a significant number of members of the Commission, and it is difficult to counter these arguments. However, practical considerations began to overcome philosophical considerations in the Commission, and a clear idea began to take shape in the group, in that all of us were pursuing a common purpose: to improve the situation of the elderly.
  - (ii) In the conversation it became abundantly clear that the reversal from an individually funded to a PAYGO system was very appealing: one can rapidly improve pensions with the money of workers today, without this having any consequence until many years later. Some members of the Commission began to firmly insist that any solution had to be sustainable and consider future generations. i.e., a pension system cannot be designed for the next 10 years; it has to consider the next 50 years at least.
  - (iii) There was a lack of clarity regarding replacement rates. Fallacious reasoning played an important role in this. There are many people who show their last pay slip and their pension, and one can observe replacement rates that could well be of the order of 30%. For example, an example was provided of a sibling who was in the former system and remained in the former system, while the brother switched to the new system, and their pensions are very different. When one starts to investigate and understand what happened with these two siblings, one realizes, for example, that in the case of the brother who stayed in the new system and carried on working in the public sector, the public sector did not pay in the contributions it should have paid for many years, and one can start to put together a puzzle, but that goes beyond merely comparing two pay slips.
  - (iv) The external contribution to technical issues was very important. They were many and very diverse issues where the expertise of individual members prevented all members from knowing everything, and therefore receiving feedback from people external to the Commission was very important, regardless of the fact that there was a lack of discussion on several issues and little progress.

- Regarding the discussion of the replacement rate:

✓ The Commission's diagnosis speaks of low replacement rates, with a clear criticism of the AFP system.
✓ The diagnosis in previous stages, which is not included in the Commission's report, suggested replacement rate ranges between 35% and 120%.
✓ The debate and the conversation eventually led (and this is stated in the report) to the conclusion that the answer would apparently be found in exercises and methodologies put forward by the OECD and studies entrusted to it, which is all very well, but does not make much sense for analyzing, for example, the contribution of the AFPs in the

system. This is due to the fact that the OECD uses a model where if one, for example, doubles the contribution rate (to the average level of the OECD), the replacement rate in Chile immediately doubles. I.e. there is no implicit elasticity in that model.

- ✓ There was little analysis of effective available data. If one understands the replacement rate as a way of measuring how the pension system transforms saving into pensions, this necessarily involves the profitability of the system, which requires looking at the contributions of the entire working life. If on the contrary, one says that the replacement rate should be considered a means for smoothing out consumption after retirement, one would have to compare the pension to the last salary.
- ✓ The first way of measuring the replacement rate (how the system transforms savings into pensions), requires a long-term vision, and that is what the AFPs do. Now, in a sample of retired woman, of the total number of women who appeared as having retired at the legal retirement age, virtually all of them appeared with contributions of less than one year (due to the effect of the child-born-live bonus). This is a case of casuistry; we cannot say that these results have anything to do with the individually funded system.
- ✓ If replacement rates are properly measured, with an interpretation of how the system transforms savings into future pensions, effective replacement rates ranged from 76% to 87% for men, and substantially less for women, for reasons that cannot be attributed to the management of the funds.
- ✓ The essential issue is that a system may have a very high replacement rate and deliver substandard pensions, if people save little. The more people save, the higher their pensions. This, however, is not contained in the report; instead, it gives the idea of a diagnosis of very low replacement rates based on the calculations used by the OECD.

- The Commission also conducted surveys, studies and interviews with people, from which it is evident that there is an overall negative perception of the system: 70% of people have a negative opinion of the AFPs. At the same time, most people have no idea how the AFPs operate (widespread ignorance of the system). Moreover, a surprisingly high number of people said that pensions should be related to the number of contributions one has made in one's working life. The overall reasoning based on casuistry was that only a change of system would resolved the problem of low pensions.
- Structural measures that were raised in the Commission:
  - ✓ Return to the PAYGO system: only one of the 24 Commissioners backed it. This result is interesting because many "academic" studies suggested an easy way out, in which replacement rates in today's pensions could be sharply increased with a rapid return to the PAYGO system. The truth is that a careful internal analysis of the studies showed that the change would be unsustainable and extremely expensive.
  - ✓ Two proposals:
    - (i) Proposal A: Strengthen the solidarity pillar, which received 12 votes.
    - (ii) Proposal B: System with an individually funded and PAYGO component, by means of a theoretical notional account, which received 11 votes.
- The "intermediate" B proposal proposed higher pensions, but with a 10% contribution by the state and employers, and contributions to the PAYGO fund for the first CLP 350 thousand, and thereafter to the individually funded fund. It is a very attractive alternative due to the absence of a tax reform. Pensions in this group increase with the money of today's contributors, but workers are told: "You contribute this money and it

will be recorded on an Excel spreadsheet. And that will be continually adjusted." And at some time in the future that Excel spreadsheet will have a final amount, where the individual will say: "Give me that money." For this to be sustainable, a tax reform will be required in 2035, but that is not stipulated here. It is really wrong to show this in this way, without the effect. The right thing to do would be to present it as indebtedness or a tax reform today, because that is how it should be. And it also has obvious effects on national saving. Money is being taken from contributors today, which is going to national savings to finance investments for financing pensions. That removal of resources would certainly have some effect.

- Among the specific measures of the Commission, are:
  - ✓ The equalization of the retirement age at 65, and future adjustments on the basis of life expectancy tables. Implementation would be gradual.
  - ✓ Increase in contributions to finance the solidarity pillar. Here there was no debate on the effects on employment, but increasing the tax on work by 4 points, particularly if it is going towards financing a PAYGO system, is very expensive, and this has effects on employment.
  - ✓ A State AFP. There was widespread support for this, but for a significant percentage of us having a State AFP does not make much sense. The fundamental justification is that legitimization of the system was missing, and this helps. In the previous discussion the justification was that competition was what was lacking. The truth is that there are other mechanisms for generating competition.
  - ✓ The bidding for part of the asset portfolio, and another series of technical measures that required in-depth analysis and that were not adequately addressed in the Commission.
- In short:
  - (i) The PAYGO system was discarded by the Commission.
  - (ii) It is important to have a top-level critical mass of experts, with good reputations, who make proposals and defend them.
- The value attributed to voting should be low, because if we had a "second round", it would not be surprising if we ended up in a tie between the two proposals, (A) and (B), and this makes no sense. What makes sense here is the weight of the arguments.

Block 2: Improvements in pensions and reduction of risks

1. Solange Berstein[8] - The main pension risks faced by members of the individually funded system and mechanisms for their mitigation

- There are major challenges for pension systems worldwide, in general, and not only in the region. Among them are the increase in longevity (life expectancy at retirement) and low interest rates (with high volatility in the financial markets), an issue that will be around for a long time. In this regard, the sustainability and adequacy of pensions are certainly affected.
- In Latin America in particular, we have, in addition to this reality, low coverage, equity issues in systems and low pension levels, growing fiscal spending and significant institutional weakness, in some cases. Hence, the problems of Latin America are to a certain extent greater than the problems for facing the challenge of financing adequate and sustainable pensions seen in other regions.
- On the subject of coverage, publications of the IDB state that less than half of employees contribute towards their pensions. On average, only 45.2% of employed Latin American workers are contributing at any given time. The situation varies in the region: there are countries like Chile, Uruguay and Costa Rica where coverage is higher, but the issue is undoubtedly transversal to the entire region.
- When we add this low coverage to the increased longevity of the population, this becomes a critical and extremely important issue:
  - ✓ Europe is currently in the most advanced demographic transition stage, with more elderly populations, whereas in Latin America, we are a little bit behind in the demographic transition, with differences between countries.
  - ✓ The "longevity tsunami” and how pension systems will be able to cope, is already being discussed in Europe. In Latin America, as we are a couple of steps behind in the demographic transition, which is evident to the Europeans, we have an opportunity for dealing with this "tsunami" in time.
  - ✓ In Latin America we have an additional problem, namely low coverage. These two aspects constitute a problem, but also an opportunity, since demographic transition is already evident in the region, especially in some countries.
  - ✓ For every 100 actively employed individuals between 15 and 64, 50 years ago, there were 7 over 65, whereas today there are 11 over 65, and in another 50 years there will be over 30 over 65. This is alarming, especially when we consider the low coverage.
  - ✓ How can an old-age pensions be financed in Latin America with these low levels of coverage? Since we are running behind in the demographic transition in Latin America, pensions can still be financed. But what will happen in the future, when we have a higher percentage of the population at retirement age and more very elderly people (with high levels of dependency and health expenditure)?

[8] Solange Berstein is the Senior Pensions Specialist of the Labor Markets and Social Protection Unit of the Inter-American Development Bank (IDB) and the former Chilean Superintendent of Pensions.

- With regard to risks, we do not only have the issues of coverage or longevity, but multiple risks that need to be addressed in the pension systems, regardless of the type of system in question.

- The costs of mitigating these risks are high. We are already seeing it in Europe. What happened in European countries where these risks were partly borne by the State or by the sponsors of the pension plans? The current trend is to transfer many of those risks to individuals, because they are very expensive. Will the Latin America countries be able to finance these risks? Who has the financial capacity to assume the risks, so they do not fall on the shoulders of workers? In an ideal scenario, we would prefer workers to assume the least amount of risk, but how much does that cost?
- In this regard, for example, in countries like Holland, they are shifting from a defined benefits (DB) system to what they call "Defined Ambition," and this precisely illustrates how risks are transferred to individuals. The big question in Europe is how do get individuals to acquire the capacity to face, assume and manage those risks properly. That is the question that should have been asked in Latin America some years ago when the defined contribution (DC) systems were introduced. The DC systems put the burden of risk on individuals, but they eventually do not have the tools to assume it.
- In Latin America, one can see, in general, that the replacement rates are higher in the DB systems than in the DC systems, for those who actually contribute regularly, obtaining the right to a benefit. It is also evident that coverage is low in many cases, and therefore this "defined benefit" is received by the few workers who manage to contribute enough to access that right.
- The risk mitigation mechanisms in Chile are:
  - (i) The Solidarity Pillar: Due to the existence of this pillar, the level of pensions for men and women rises and the dispersion of replacement rates is reduced.
  - (ii) The Multifunds: This is a life cycle investment strategy, whereby individuals tend to switch to a lower-risk fund as they get older.
  - (iii) Retirement products and mechanisms for mitigating the risk of longevity:

    - ✓ Low pensions in general, compared to the population's requirements and people’s expectations, is a common reality in the region.
    - ✓ Available pension modes include life annuity (LA), programmed withdrawal (PW) or the reimbursement of balances (RB). When resources are insufficient for financing a pension, RB takes the form of a lump sum payment.

- ✓ PW or RB are consistent with an individual savings system. If personal life expectancy is short, depending on the State of health of the individual, then it is valid and consistent that alternatives should exist for the population that do not require a collective insurance in which they share the longevity risk with the rest of the population. However, the PW and RB have the drawback that they do not allow sharing the risk of longevity in the population in general, limiting the transfers of those who live less to those who live longer (contrary to what happens in the case of an LA).
- ✓ In the solidarity pillar, or the minimum pension, a longevity insurance is provided, at least to the most vulnerable. However, the minimum pension is often for a limited number of the population, since it is also subject to requirements.

  The increase in life expectancy means that a high percentage of people reach retirement. Once retired, life expectancy is much higher than it was a few years ago, and it is expected to continue to increase. The most efficient way of financing a high

probability event is by means of savings. This is different in a low probability event in which there is a potential gain in creating a "pool" of individual risks through an insurance. At age 65 this risk pool is less powerful, but by 80 years of age, the risk pool becomes something much more powerful.

- ✓ At 65 half of the source of financing of a LA is basically what one contributes, while the other half comes from the returns generated by those contributions. At age 75, the so-called "mortality credits" start to play a role: there is a percentage of people who did not reach that age, and their savings contribute to financing those who do reach that age. Thus, mortality credits become a more important source of funding as people age. The risk pool therefore contributes to the financing of pension that are than if one had to finance one's own pension on living longer (since in such cases the contribution to the financing of the pension comes from the contributions, and returns are marginal).

- ✓ Based on this logic, it is suggested that the first stage of old age (e.g.: between 65 and 85 years of age), should be covered with the totality of accumulated savings, whereas survival (i.e., beyond 85 years of age) should be covered with insurance. Characteristics of the insurance:

  a. This insurance would be financed with a premium paid during the active working life of the beneficiary (as a % of the wage) and would be triggered at age 80-85, should he still be alive. If he is no longer alive, it would benefit the rest of the cohort. This mechanism would enable improving the pensions of the elderly, since there would be no need to make reserves to finance extreme old age, which would be funded by insurance.
  b. Insurance would be mandatory for financing individuals in extreme old age. The specific age at which this insurance would kick in would be defined at 65 years of age, depending on the life expectancy of the "cohort" that is retiring at that time. For example, an age of 80-85 is established for the beginning of the insurance, but that age will be adjusted progressively depending on the evolution of the life expectancy of the population, in order to reduce the cost of the insurance.
  c. The return is the same as the return of the fund that the individual accumulates, so that this deferred life annuity, which would be the longevity insurance, would finance a percentage of the person's initial pension.
  d. The insurance starts paying this life annuity in a deferred manner from this advanced age (for example, 80 or 85), and maintains its real value over time as of that date. This insurance coverage is fixed as a percentage of the simple, immediate life annuity that the person is able to finance with his savings. For example, if he finances a life annuity of $100, the longevity insurance would finance a life annuity of $50 after he turns 85, which constitutes a minimum level of longevity coverage. In other words, it is not intended that the entire population would require an insurance of 100% of their pension for life, because depending on the different characteristics of the population, it may not be necessary to force everyone to have insurance with the total amount of their savings that finances a life expectancy of the population in general.
  e. The insurance would be the same for men, women, single or married individuals, regardless of their family group, thus generating crossed subsidies in favor of women and individuals who usually live longer.
  f. This insurance enables optimizing the financing from contributions in the active stage, for funding life annuities at an advanced old age:

- ✓ Avoids selection and generates an ample pool, especially at the final stage, where there is a greater possibility of gain from idiosyncratic risk diversification.
- ✓ Resources are not destined to survival or inheritance benefits. Today, an increase in the contribution rate would entail more inheritance and more survival benefits, and it is evident that this is not the problem; the problem today is with the pensions of the originators.
- ✓ Programmed withdrawal does not provide longevity risk coverage, and that could be a problem in future. So much so, that Chile is thinking of eliminating it.
- ✓ Enables using savings to reduce costs of minimum and solidarity pensions.
- ✓ It could be compatible with the payment of lump sums on retirement.

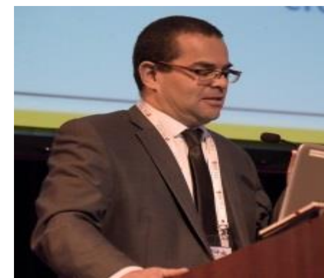
g. Insurance cost: If 70% of the initial pension were to be financed at age 85, the insurance cost would fluctuate between 1.1% and 1.7% of the wage, depending on the country. The insurance cost depends on the life expectancy tables of each one of the countries. It calls one's attention that there are differences related to contribution rates in the case of Mexico and Colombia; the contribution rate in Mexico is lower than in Colombia, and as the pension that covers the insurance depends on the pension originating from the savings of the individual, and as savings are greater in Colombia than in Mexico, then the cost of the insurance for financing pensions is also proportionately higher in Colombia than in Mexico.

h. Insurance benefit: Pensions at the normal retirement age increase when the greater longevity section is financed by the insurance, and this increase is greater than the increase that would permit an increase in the contribution equivalent to the cost of the insurance. The impacts that the longevity insurance would have on the pension, range from increases of 15% to 20% in pensions, depending on the country and the pension mode. Depending on the pension mode, longevity insurance profits are higher in PR, since this mode is precisely where this risk pool is not being used, whereas the pool is already being used in life annuities.

2. Edgar Robles[9] - Improvements in pensions and risk reduction: the regulator's outlook

- **Main risks in the pension systems**

✓ **Longevity Risk**



- ➢ In Individual funding: The risk that the person will survive the balance of a programmed withdrawal.
- ➢ In Collective Funding: Increases in life expectancy and declining fertility rates invert the pyramids. The problem is that the benefits that are paid do not match the contributions.
- ➢ The discussion between individual or collective systems must be overcome: both are facing longevity risks and the objective should be a target replacement rate.
- ➢ Longevity risk is intrinsic to the design of a pension system, and will be increasingly relevant due to the aging process. However, it is not part of supervision systems. Supervision systems generally focus on manageable risks

[9] Edgar Robles is and Associate Consultant at Novaster, the former Superintendent of Pensions of Costa Rica and Vice President of the International Organization of Pension Supervisors (IOPS).

(corporate governance risk, investment risk, operational or operating risk, solvency risk, which is linked to defined benefit systems, and political risk).
- A thickening of the demographic pyramid can be seen in Costa Rica.

✓ **Corporate governance risk**

- Generally referred to as the establishment of fiduciary duties, a more balanced representation of members in government agencies by the different fund managers, higher levels of expertise or experience in committees (whether risk, investment or administrative committees, investment risk committees specifically, or generally, risks for the entire system); and in boards of Directors. This entails the establishment of aptitude requirements, ongoing training of the different individuals comprising these committees, the use of independent external members and the implementation of codes of conduct to avoid conflicts of interest.

✓ **Investment risk**

- This is one of the most extensively studied risks, and for which one would expect that the majority of countries would incorporate minimal elements in the regulations, but that is not the case.
- In an initial stage, the regulatory solutions to investment risks are related to the establishment of quantitative restrictions which include the boundaries of the issuer, issue, currency, market, fixed income, equities, etc.; it is an early stage where there is no institutional capacity within the system for establishing "prudent person standards." In Latin America, quantitative restrictions can usually be found in the regulations;
- In European countries it is more common to find prudent person standards, which are like a second stage, while local markets are given time to develop.
- With the exception of large countries, financial markets are usually shallow in Latin America, the secondary market is almost non-existent, and there is no extensive market capitalization of the instruments in which the pension funds are invested. While the financial system develops (linked to the development of the pension market) and the process of creation of exchange coverage and the development of the stock market takes place, quantitative restrictions are used to subsequently begin to identify opportunities for: (i) Incorporating prudent person standards; (ii) Establishing minimum international standards (the OECD has published guidelines of the minimum standards that pension systems should contain, and here it is essential to set a target replacement rate, establishing investment committees, investment policies, market valuation, etc.); and (iii) Require risk budgets through the establishment of benchmark portfolios (like the ones that exist in Colombia or the Dominican Republic, for example), stress tests and investment procedures for avoiding exposure to unnecessary risks.

✓ **Operating risk**

- This is the newest risk area and also the most difficult to measure, because it depends on the structure of the fund manager. There is manual that provides instructions for measuring and managing operating risk; it depends on individual cases, is almost at a casuistic level, since general guidelines can be established for defining working procedures that stipulate responsibilities, for establishing who is responsible for which process within the institution, the definition of strategic plans, the recruiting, training

and personnel assessment policies, and compliance with minimum technological and international accounting standards. Some of the regulatory solutions are the valuation of market prices, the development of centralized collection systems (which in many countries have proven to be a source of cost reduction), and the disclosure of information (transparent disclosure of administrative costs).

- ✓ **Political risk**

- ➢ This risk has traditionally been associated with DB systems, but can also be extensive to some individually funded systems. In DB systems, the regulatory solutions for minimizing the impact of this risk should include: (i) Requiring independent actuarial studies; (ii) That the regulation of the public system is carried out by the Superintendency or a regulating agency that sets out the rules (since this political risk in public systems can cause a contagious effect on private systems, as well as reversals of reforms, as for example in Argentina or Bolivia); (iii) That the supervising agency is independent, in terms of budget and functions; (iv) That politics is excluded in the appointment of the head of the supervising agency and the operation of the regulating agency; (v) That there are suitability requirements for members of the Boards of Directors and committees of the pension fund managers, and also for the appointment of heads of the pension regulating bodies; and (vi) That the appointment of the supervisor does not coincide with the political cycle, and that it is based on independent technical criteria or that it is approved by bodies such as Congress.

- **Mechanism for mitigating risk: Risk-based Supervision (RBS)**

- ➢ The mechanism being designed within the International Organization of Pension Supervisors (IOPS) and other multilateral agencies for mitigating the risks of pension systems, is RBS.
- ➢ The SBR consists in the pension system focusing on the bigger risks, and finding the solutions that are most effective, based on the best evidence, to provide decent pensions to the eligible workers. I.e. it basically concerns the management and mitigation of risks by the supervising agencies, for the purpose of generating greater confidence, while the supervising agency listens, explains, convinces, encourages, helps and enforces the law.
- ➢ Hence, regulation must add value to risk management in the pension system. This is very important because in the individually funded systems, especially in smaller countries, the cost of regulation may be even greater than the profits generated by the pension fund managers. Thus, regulation must add sufficient value to its cost (correspondence between profit and cost).

3. Carlos Noriega[10] - Pension Risk: A Liability Driven Investment approach

- One of the current objectives of pension fund investments consists in maximizing the expected yields of workers, minimizing the risk of each type of fund (in countries that have Multifunds). The performance of the investments of the funds is usually evaluated considering very short periods of time, when in fact, what should be considered is the sum of all the effects occurring in the long term (the sum of write-offs and value gains generated over the working and contribution life of individuals). Volatility is an issue that depends exclusively on the behavior of financial markets, so there is no certainty regarding the behavior of yields derived from investments of the pension funds (hence, yields that are generated over a specific amount of time do not necessarily guarantee yields in any other period).
- Since one of the fundamental objectives of pension systems is that workers should receive a decent pension for financing their retirement, and the main indicator for measuring this situation is the replacement rate (TRR), it has been proposed that investments should be linked to the goal of increasing the RR of workers. I.e., the ultimate objective of the investment strategy to be followed should be the pensions of workers, from the point of view of the RR.
- A defined contributions (DC) system without a clear objective has incentives for deviating the maximization strategies to other aspects, such as the result of the annual financial statements, or less efficient risk management that maximizes shorter term goals (which may be positive in specific situations or for media purposes). Due to the dynamic nature of the pension systems, the process of maximizing an RR objective for workers must involve active short term management, but always focused on ensuring compliance with long-term goals.
- Having an RR goal also determines the way in which the system will invest the resources of workers, determining the risk levels of investment positions.
- A paradigm shift in the management decisions of the pension system must be considered, aiming to maximizing the RR of members. This approach seeks to align the actions of decision makers for increasing the final pension amounts of workers, and not subordinate them to maximizing the yield of the assets managed in the sector.
- A method for maximizing RR has been proposed, by means of a strategy of Liability Driven Investment (LDI), which enables differentiating a pension fund from common investment funds. This approach enables:
  - (i) Setting long-term investment management goals (explicit objective: maximize the pension).
  - (ii) Aligning investment strategies (link portfolios with the characteristics of members; increase exposure to risk, in particular for young people, for increasing the yield potential; expand the array of opportunities by internalizing portfolios);
  - (iii) Provide fund managers with an identity as **PENSION FUND MANAGERS** (the fund managers are not mutual or hedge fund managers, they are pension fund managers).

[10] Carlos Noriega is the Chairman of AMAFORE, Mexico.

(iv) Choosing asset management strategies that take into account the process and period of asset decumulation, which necessarily leads to the adoption of a strategy (LDI);

(v) Choosing investment strategies that are consistent with the life cycle of the worker, in which the savings of young workers have a great long-term potential.

- Young workers have a future contribution potential, whereas their participation in the system, considering their accumulated savings, is low. Their long-term profile enables them to have investments with a greater exposure to risk in exchange for high long-term yield. Middle-aged workers in the system must balance their risk/return ratio (this is the group that is most sensitive to asset and liability price changes). Coverage systems are created for workers who are close to retirement, in which they sacrifice market opportunities but are guaranteed a stable condition that enables liquidation and the withdrawal of resources for the formation of a pension.

- The Achilles' heel of this kind of resource management is the creation of an efficient path of the risk/yield ratio that does not generate abrupt changes in exposure, which can increase the likelihood of taking risk positions at inappropriate times. Thus, the proposal is to develop an investment strategy that uses a smooth risk exposure path, which is consistent with structures of funds such as Target Date Funds (TDF), which enable progressively and smoothly adjusting portfolio exposure. The adoption of TDF systems is recognized worldwide as a best practice for mitigating the volatility of replacement rates. TDFs are less likely to reduce the risk of the member at an inappropriate time, and therefore reduce the likelihood of abrupt changes in the value of the funds in the years close to retirement (replacement rate volatility).
- The impact of implementing a risk curve smoothing strategy for the Retirement Savings System (SAR) in Mexico, is exemplified in an exercise carried out with Towers Watson. The results show that the potential for improving the RR are positive, but rely heavily on the flexibility of the portfolio managers to be able to allocate higher investment percentages in equity instruments. The flexibilization of the system for investing in Equity and Foreign Securities will undoubtedly enable strengthening this investment structure, while achieving greater diversification, which is desirable for managing risk.

Block 3: Promoting the Voluntary Pension Savings Pillars

1. **Renee Schaaf[11] - Voluntary Pension Saving: Helping the middle class to obtain an adequate retirement income (USA experience).**

- The USA has a Multipillar system:
  - 1st. Pillar: PAYGO (Social Security)
  - 2nd Pillar: Voluntary occupational plans (401 k) and some Defined Benefit (BD) plans.
  - 3rd. Pillar: Voluntary savings plans. The most common is the IRA (Individual Retirement Account).

- **401 k/IRA:**
  - Contribution ceiling up to 50 years of age
    - IRA: US$ 5,500
    - 401k: $18,500
  - Accumulated amounts:
    - Pillar 2 + 3: 25 trillion (2014), of which only 7 trillion originates in the IRA.
    - A second review shows that only 10% of the resources accumulated in the IRA correspond to new contributions. The rest are transfers from the 401k.

> This is the key to designing APV plans

- In 2010 the percentage of participation in 401k plans was 72%, in contrast to the IRA where participation was less than 5%. Participation in the 401k is currently about 80%, and 43% of workers involved in these plans have salaries below US $55,000.

- **Why do employers offer these plans?**
  - They are an important mechanism for attracting talent.
  - They are simple and easy to manage
  - They have important incentives for the employer and the employees

- **Why do workers participate in these plans?**
  - They have financial incentives. 88% of employers offer a 'match'.
  - Tax incentives. The Government offers $2,000 credits for contributions to the Defined Contributions (CD) plan. Unfortunately only 12% are aware of this benefit.
  - Easy participation.
  - Payroll deduction.
  - Automatic enrollment.
- **How does it help workers make good decisions?**
  - Tax incentives.
  - Automatic enrollment with at least 6% contribution by default: when these conditions exist, 89% of workers remain in the Plan.

[11] Renee Schaaf is the Vice President of Strategic Planning and Business Development at Principal International, USA.

- Employer matching with automatic scaling (scaling of at least an additional 1% per year, up to a 10% contribution rate): when these conditions exist, 86% of workers remain in the Plan and maintain the automatic increases.
- Reinstatement when the worker retires, and explanation of his benefits.
- Target Date Funds (TDF): These funds, in which the individual changes to more conservative alternatives as he gets older, are offered to workers. A survey of 700,000 participants between 2006 and 2012 gave a better result for the TDF regarding individual decisions, of 3.3%.

2. Joseph Ramos[12] - Reverse Mortgage: A 4th pillar of the pension system?

- Countries such as the UK, the USA and Spain, among many others, which as a general rule have adequate pensions (replacement rates of 33%, 38% and 74% respectively, as a result of an aging population and a delicate economic situation, and view with increasing concern the prospects of sustaining their PAYGO pension systems based on a low pensioner/worker ratio. Among the problems facing the PAYGO systems are the drop in the ratio of assets to liabilities, for demographic reasons, and the tendency to under-declare income during most of the working life, since pensions depend primarily on contributions towards the end of the working life. These problems result in a tendency to reduce benefits and/or raise fiscal deficits.
- The individually funded pension system, the mandatory savings pillar, was created to solve these kinds of problems. This system: (i) Closely links pensions to paid-in contributions, and thereby puts the brakes on under-declaring; (ii) It releases the pension from demographic factors; (iii) By investing in equity and fixed-income instruments, it enables the pension to benefit from income from these investments. Thanks to these factors, when they were introduced, it was estimated (in Chile) that they could generate high pensions (with replacement rates of 70%) if workers contributed during most of their working lives.
- Although men do achieve these replacement rates if they contribute during most of their working lives, the replacement rate for women is considerably less (of the order of 45%, in Chile) due to their earlier retirement age and greater life expectancy. However, if one calculates the replacement rates of all pensioners, regardless of their contribution periods, replacement rates are considerably lower. As an example, replacement rates in Chile and Mexico are 52% and 32%, respectively (OECD, 2013). Despite the benefits of the individually funded systems, such pensions are very unsatisfactory due to lengthy contribution gaps, the growth of life expectancy and extremely low contribution rates.
- Due to the above, two additional pillars have been added to the mandatory pillar to improve pensions: the "solidarity" pillar, based on significant government contributions to ensure a certain minimum pension level, and the "voluntary" savings pillar, in which individuals make additional voluntary savings for their retirement (often with certain tax incentives). This is a particularly important instrument in the

[12] Joseph Ramos is an Economist graduated from Columbia University, USA, and is currently a Full Professor in the Faculty of Economics of the University of Chile (he was also Dean of the Faculty between 2002 and 2006).

higher income levels. Although this has resulted in significant improvements in pensions, pension amounts are still insufficient.

- If one looks ahead, one can see that it is highly likely that three of the four critical factors in determining the pension will deteriorate (lower returns, greater life expectancy at retirement, reducing current replacement rates even more, lower real interest rates for converting accumulated funds into pension life annuities), which could reduce the existing low replacement rates by up to 13 percentage points, with which today’s modest pensions would be considerably more meager (at least compared to the wages of retirees). The long-term solution for the aforementioned trends will undoubtedly involve raising contribution rates, postponing the retirement age, making the industry more competitive and issuing acceptable investment instruments. Although such measures can substantially improve the pensions of young people currently entering the system, they can hardly improve the pensions of the next retirement cohort.
- The question, then, is what can be done to raise the incomes of those who are close to retirement? One solution is to raise the fiscal contribution to pensioners, especially to those with lower income and pensions. Together with the above, there is another possibility for supplementing pensions with income derived from transforming a high value asset (their homes) into a monthly income complementary to their pensions (which is denominated "reverse mortgage").
- The majority of retirees own their own homes. For example, in the UK, the USA and Spain, the percentage of people over 55 who own their own homes is 74%, 77% and 87% respectively, whereas in countries such as Chile, Mexico and Peru these figures are 82%, 82% and 88% respectively. Thus, despite the fact that they are relatively poor in income flow (their pensions), they are relatively rich in illiquid assets (their homes). From these assets they can enjoy housing services, but they usually cannot obtain monetary income to ease the burden on the PAYGO system, or to complement an inadequate pension granted by their individually funded accounts. Given this scenario, reverse mortgage (RM) positions itself as an important mechanism for funding retirement.
- RM is a financial instrument which, although it has been assigned different names and specific characteristics in each country in which it has been adopted, has an invariable logic and operation. It is aimed at senior citizens, and enables converting a dwelling into a source of income, with the particularity that the owner maintains the right of use and enjoyment of the dwelling. Thus, this instrument transforms an illiquid asset into a liquid asset, allowing the owner to continue living in his home until his death (and the death of his spouse).
- The RM puts the owner of a property in touch with an investor, providing the former with liquidity, and the latter with the right to dispose of the asset in the future to make a profit. The RM begins with the agreement between the owner and the investor regarding the present value of the future sale of the dwelling, called "net principal limit", and continues by determining which of 3 means will be used for providing this value: 1) A specific monetary amount delivered immediately, equivalent to the net principal limit, 2) A line of credit, or else 3) A life annuity, whose present value is equivalent to the net principal limit. A combination of these alternatives can also be agreed.

- In order to determine the expected present sales value of the real estate, the key variables that affect it must be identified. These are:

- The Age of the Owner: The older the owner, the lower the expected duration of the contract, due to which the present expected sales value of the real estate increases.
- Longevity of the Owner. The greater the longevity, the longer the duration of the loan, so a greater amount of interest accumulates and the life annuity payment term is longer, and therefore the expected present value of the real estate and the life annuity are lower.
- Current value of the dwelling. The greater the current value of the dwelling, the higher the expected sales value of the real estate (although it must be pointed out that in general, the value of the dwelling and the pension amount are closely correlated).
- Annual valuation of the dwelling. The higher the annual valuation, the higher the expected sale value of the property at the end of the loan, and therefore the greater the expected present sale value of the real estate.
- Interest rate on the loan. The higher the interest rate, the higher the discount rate of future values, which reduces the expected present sale value of the real estate. However, as the interest rate is expected to drop in future, this will entail - if everything else stays the same – an increase in the life annuity.
- Payments associated with the operation (insurance premiums, operating costs, among others). The higher the payments associated with the operation, the lower the present expected sale value of the real estate.

– The impact of the RM on pensions is greater in the lower income groups. Indeed, while the median households (50%) see their pensions increase by 39%, 25% of the population (the most needy quartile) see their pensions rise by 49%, while 75% (the most well-off quartile of the population) see their pensions increase by 36%. This is because the less well-off population tends to be relatively wealthier in terms of housing than the higher income population (which has many other destination for its savings). RM also becomes more attractive the lower the real interest rate, the faster the dwellings acquire value and the greater their value, and the lower the life expectancy.

Block 4: Alternative investments as a mechanism for increasing returns

Joaquin Cortez[13] - Opportunities and risks of alternative investments

- There is no consensus among academics regarding the contribution of Alternative Assets (AA) to the risk/return ratio of investments.
- Empirical evidence shows that the main Pension Funds and Institutional Investors are very interested in alternative investments:
  - ➢ Asset Allocation 92 Pension Fund USA (2013): 25% is invested in AA (they prefer Real Estate (RE) and Private Equity (PE)).
  - ➢ Yale Endowement - 24% is invested in traditional assets.

- Reasons why Yale invests in AA

  - ➢ They are less supervised markets with opportunities for exploiting inefficiencies.
  - ➢ Illiquid markets, in which long-term investors can win cash prizes.

- What happens in the Latin American AFPs?

  - ➢ Not all of them understand AA to be the same thing.
  - ➢ Chile: 3.14% (PE international: 30,11%; Local RE: 12.4%; Small Caps: 39.8%).
  - ➢ Peru: 6.04% (4.47% local; 1.57% foreign)
  - ➢ Colombia 5.61% (1,84% local, 3.77% foreign)

- 10-year returns of the Hedge Funds (HF) to Sept. 2014, compared with stocks and bonds: the HFs have slightly lower returns than shares, but with a volatility similar to that of bonds.

	Global Stock	HF	Bonds Barclays
Retorno	7,3	6,3	4,6
Riesgo	16,6	5,9	3,2

- Returns of the PE compared to traditional shares

	5 años	10 años	15 años	20 años
Top quartile	9	18	31	30
All P.E.	3	8	9	11
Bottom quartile	-4	-3	-4	-4
S&P	0	5	5	8

[13] Joaquin Cortez is the Chairman of Compañia de Seguros CorpVida S.A.

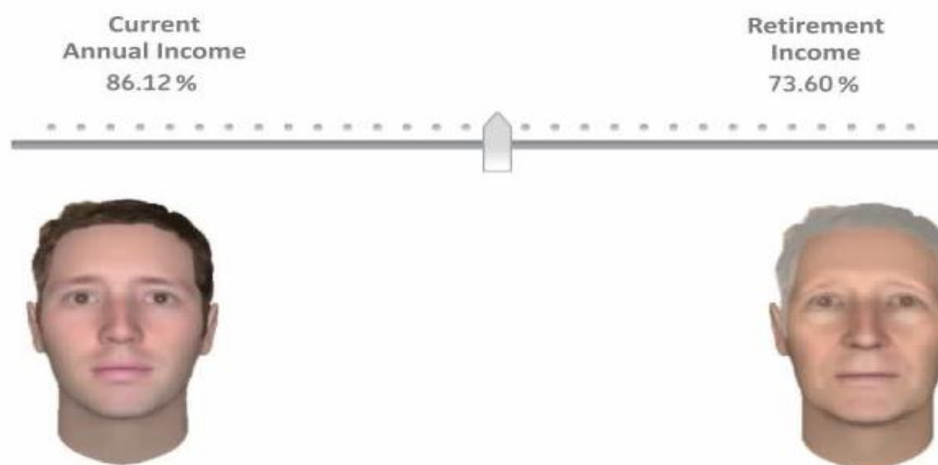
- Returns are in direct relation to the cycle. PE returns are cyclical and better returns are obtained in bad cycles. High returns were obtained in bad cycles and returns were low in good cycles.

- Persistence How to choose? Studies show that the fund manager of a fund that ends up in the top quartile, has a 40% chance of repeating and a 60% chance of staying in the top 50%. The study is prior to the year 2000, with fewer funds.
- Previously, people thought up many reasons to explain the exceptional returns of the PEs compared to public shares. Today, from studying the due diligences performed by companies: it is due to operational strength and quality of management.
- Although there is interest, these are complex investments
  - Main AA: Real Estate; PE: Infrastructure; Hedge Funds; Structured debt; commodities.
  - What an investor expects of AA (HF and PE): Positive returns and low correlation to traditional assets.

Block 5: Communication with Members and Financial Education

Daniel Goldstein[14] -Psychology of effective communications

- People are not interested in participating in the pension system (in DB and DC).
- You cannot educate people in a subject matter they have no interest in learning.
- The solution lies in visualizing the future in an entertaining and intuitive way.
- Two beings coexist in each person:
  - One focusing on the present, who wants to consume now.
  - And the other one focusing on the future, who wants to postpone his consumption to consume in retirement.
- We have to help the first being to visualize the second one, so that his income goes directly to this second being (his pension contribution).
- We ignore the future for lack of imagination or belief: we do not imagine ourselves as being old.
- We must use technology to help people understand this with a vivid image.



- How to promote savings?
  - Different studies showed that the people consulted preferred a lump sum instead of monthly installments.
  - When asked about their monthly needs, they were shown that the lump sum they had chosen was completely inadequate.
  - From this it is inferred that all consulting and advertising must focus on the amount the employee can acquire monthly.

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Block 6: Financial Integration in the Pacific Alliance: the case of the Pension Funds

Augusto Iglesias[15] - Investment of the Pension Funds and the Mobility of Pension Savings Accounts in the Pacific Alliance.

- The Pacific Alliance (AP) is an agreement between Mexico, Peru, Colombia and Chile for advancing towards the free movement of goods, services, capital and people among member countries.
  - It has been in effect since 2011.
  - These 4 countries have a total of 212 million inhabitants; jointly they are the sixth world economy, with 3.5% of global GDP.
  - The accumulated pension funds in these 4 countries to date, amount to US$ 435 billion and there are nearly 29 million workers contributing to individually funded programs.
  - Of these US$ 435 billion, approximately 28% is invested abroad, and less than 1% within the PA. There is no information available that enables directly observing the investment of each one of the countries in the other three, but a reasonably accurate estimate is 0.8% of the total funds in the region.

- At the end of 2014, FIAP launched an initiative to:
  - Jointly promote regulatory changes with the Latin American Integrated Market (LAIM), to eliminate the restrictions that currently prevent greater investment of the pension funds in the PA countries in the same region.
  - Promote agreements between the PA countries enabling portability of balances of individual pension savings accounts for workers who migrate from one PA country to another.

- The objectives of this FIAP-LAIM initiative are absolutely consistent with the objectives of the PA.
- Significant progress has been made in the last twelve months:
  - A preliminary diagnosis on the situation of the regional investments of the pension funds was conducted.
  - Both issues were included in the work agenda of the Corporate Council of the PA.
  - Specialized public opinion is more sensitized to these issues, and calls for legal changes to enable increasing the investment of the pension funds in this geographical area, and the portability of individual accounts between its member countries, are being heard more frequent and more intensely in all the PA member countries.

- Why increase the investment of the pension funds in the Pacific Alliance?: 3 reasons:
  (i) Better international diversification. The PA is under-represented in the portfolios of the pension funds in the region. The intra-regional investment of the pension funds is approximately 0.8% of their total investment. However, the market capitalization in these 4 countries is 3% of the

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market capitalization worldwide, so that if the objective of the pension funds were to diversify their international portfolios exactly in accordance with the economic structure of the world, their investment in this area should be approximately 3%.

(ii) The AFPs in these 4 countries are more capable of selecting regional assets versus assets elsewhere in the world. The AFPs in each one of these four countries have higher levels of knowledge regarding occurrences in the region, its economy and companies. In fact, there are some AFPs that are involved in the 4 markets and are well acquainted with the political and institutional framework. Thus, the AFPs are in a position to find investment opportunities within the region with greater ease and with lower risks than they could in the rest of the world.

(iii) Institutional advantages: (i) The increased participation of institutional investors in the capital markets contributes to their development; (ii) For the pension supervisors, the costs of overseeing intra-regional investments are less than the costs of overseeing investments in other regions of the country; (iii) The greater the proportion of common regulations, the greater the stability of pension fund regulations in each country.

- What can be done to move toward greater investment of the pension funds in the region? There are things that can be done: (i) Increase foreign investment limits, for example in Mexico and Peru; (ii) Change the rules and regulations of the authorized market in Chile; (iii) Allow the use of agents in Mexico.

- Why does the public policy of allowing workers to move from one country to another with their savings makes sense? :

  - Migration contributes to the welfare of migrant workers.
  - Migration will most likely contribute to the well-being of the countries of origin and destination of migratory flows.
  - The portability of pension rights helps migration decisions.
  - The portability of fund balances is therefore justified for reasons of equity. If an individual has contributed, it is logical that he should be able to retire with everything he has contributed.
  - The portability of account balances also helps to coordinate social security policies among the countries of the Pacific Alliance. This is an issue that should not be underestimated: the migrant population of the world is estimated to be about 3%. If we were to apply this proportion to the 4 countries in the region, an estimated 850 migrants would possibly migrate from one country to another.

- In order to advance in the pension savings portability agreement, there is an existing agreement between Chile and Peru which could serve as a reference for other countries.