INTERNATIONAL
FEDERATION OF
PENSION FUND
ADMINISTRATORS

REINFORCING THE FOUNDATIONS OF THE INDIVIDUALLY-FUNDED PENSION SYSTEM TO ENSURE ITS SUSTAINABILITY

Presentations from the International Seminar "Reinforcing the Foundations of the Individually-Funded Pension System to Ensure its Sustainability", organised by FIAP on 15th and 16th May 2014 in Peru.

2014 FIAP INTERNATIONAL SEMINAR

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As "Other collaborating members" are included Sura and Principal Financial Group, companies that collaborate and support the activities of FIAP.

© International Federation of Pension Fund Administrators (FIAP)
Av. Nueva Providencia 2155, Tower B, Floor 8,
Office 901, Providencia, Santiago, Chile
Phone: (56-2) 2381 17 23
Fax: (56-2) 2381 26 55
E-mail: fiap@fiap.cl
www.fiap.cl

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PRESENTATION: OPENING SPEECHES

During this Seminar we shall be analysing some of the main challenges facing the pension systems: the need to expand coverage and encourage pension saving; the yield and risk of the investments; the administration costs; the quality of pensions, the replacement rate; the relationship that we have to have with our members and the coexistence of different pension systems. The very mention of the issues that we are going to touch on in this Seminar is enough to suggest the magnitude of the challenge that we are facing. The reforms carried out during the eighties and nineties in Latin America and the Caribbean, as well as in Central and Eastern Europe, met part of the challenge that we had at that time, by giving the pension systems sustainability and replacing or complementing the pay-as you-go systems, the structure of which was in crisis, by Systems of Individual Funding.

However, the fact of having given those systems solidity and sustainability did not make us immune to certain phenomena that have occurred more recently and have had a strong impact, in one way or another, on the ability to provide pensions for the workers. Let us mention a few of these phenomena that have occurred during the course of these years. The first is the increase in life expectancy that has happened lately. According to a report from the Organisation of Economic Co-operation and Development (OECD)[1], men in France, at retirement, have another 24 years of life before them and women, another 28; in Poland, men are living a further 17 years and women, another 27; in Chile, men live 19 years longer and women 29. And this situation is happening in an environment in which the time for paying contributions in order to finance this longer period in our lives is getting shorter and shorter, due to the new requirements for education, training, and formalisation and specialisation of work.

A second phenomenon affecting the amount of pensions is the sustained increase in wages. According to a report from the International Labour Organisation (ILO)[2] from the year 2012, wages increased between 2.5% and 3% between 2006 and 2010. This naturally affects the amount of the pensions, because the worker hopes to receive a pension similar to the wage he/she is receiving at the point of retirement, despite having spent the whole of his/her saving period with a very different wage.

The reduction in the interest rate is another of the phenomena that are having such a hard impact on our ability to generate good pensions. According to a report from the International Monetary Fund (IMF), dated April 2014, the interest rate has fallen from 5.5% in the 1980s to approximately 2% in the 2000s. The result of this is a pension 20% to 25% lower.

Nevertheless, if the individually-funded systems are having enormous challenges to provide good pensions, the challenges for the pay-as-you-go systems are no more encouraging. On the contrary, I believe that the challenges of the pay-as-you-go systems have a considerably more discouraging outlook, precisely because of their structure for funding pensions. As a matter of fact, the fertility rate has fallen to half from the 1950s to the present day, which suggests that fewer young workers are funding the pension of older workers,

1 *OECD Pensions Outlook 2012. See statistical information of life expectations upon retirement, at normal pension ages, here: http://dx.doi.org/10.1787/888932598189*

2 *Global Wage Report 2012/2013, available here: http://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_195244.pdf*

of whom there are ever-increasing numbers, with longer lives. The above has meant a gigantic impact on public finances because, given the fact that the pay-as-you-go system has no possibility of paying good pensions, the governments of the countries where that system is in force have had to take over the funding of benefits. There is a paper by economist Sebastián Edwards, which states that in countries like Greece, the undocumented debt is almost 9 times the Gross Domestic Product (GDP).

In order to give sustainability to these pay-as-you-go systems, parametric changes have also had to be introduced and we have a FIAP report[3] which is a compendium of information published by the OECD, the World Bank and various other sources. According to that information, within a span of 18 years (between 1995 and 2013), 72 countries increased the contribution rate, 45 countries raised the retiring age and 56 countries changed the formula for calculating benefits. We must not forget that the pay-as-you-go systems like to be called "Defined Benefit", though this definition is no longer true. In this way, with these parametric changes, they managed to reduce the costs and raise the income of those systems.

However, the greatest challenge for pension systems in the different parts of the world, whatever their nature may be, has to do with coverage, which in turn is the result of the high level of informality that exists. This situation has become more evident, since there has been a change in the Bismarckian schemes for providing pensions, also adopted by the ILO. Until not so long ago, the idea of pensions was to replace the wages of the active workers and these workers paid contributions to fund their own pensions. However, we have been moving slowly towards transforming the pension system, so that it not only replaces wages, but also provides income to avoid poverty in old age. And that is how these non-contributory mechanisms have come into being, in which the State takes responsibility for people who, in one way or another, have been unable to contribute sufficiently to fund their own pension, whether for reasons of unemployment or poverty. These non-contributory benefits undoubtedly make it possible to improve the position of older workers, but it must be borne in mind that they interfere to a certain extent, and discourage workers from paying contributions into their individual accounts.

Setting up non-contributory benefits must be done with great care. In the

3 *See the FIAP Report "Parametric Reforms in the public PAYGO Pension Programs: 1995-2013".*

first place, such benefits must be integrated into the overall social security system; in other words, the idea is that the non-contributory first pillar should mesh appropriately with the second contributory pillar. In the second place, non-contributory benefits must be ex ante and not ex post. The temptation for governments is to make such benefits ex post, because in that way their impact is quicker, since they are granted to all people who reach retiring age and have not saved enough to fund their pension. We feel that the most logical course is for non-contributory benefits to collaborate towards completing the pension during active life, encouraging both the worker and employer to save. Furthermore, we believe that non-contributory benefits must have a suitable institutional framework, with the aim of avoiding the temptation that exists in the world of politics, to play with them by raising them inappropriately and so affecting our social security systems' ability to save.

The replacement rates provided by the individually-funded system are adequate for all workers who have paid regular contributions. Unfortunately, averages are not the deciding factor in these matters. All the calculations that we have made in the different countries reveal that a worker who has contributed regularly will have a good pension, funded with his/her individual account. Unfortunately, some people lump together these workers, who have contributed regularly, with folk who have paid contributions exclusively to obtain a specific benefit. This is what happens for example in the case of a replacement rate calculation that mixes workers who have paid contributions for 40 years with workers who have done so for just one month, or one year, which leads to conclusions about the real situation that are obviously biased. There is a saying by George Bernard Shaw that I like to repeat: he says that statistics and averages serve to show that if you have two cars at your house and I have none, then we have one each. In this case, it seems that the situation is rather similar: one cannot put a worker who contributes throughout his life with one who has paid contributions exclusively in one or two periods, in order to draw conclusions about the replacement rate produced by the system.

It seems to us that we are going to have non-contributory benefits to complement the pensions of the workers who for various reasons have not been able to manage by themselves, and this is a fact that has come to stay, though I insist that those non-contributory benefits must have conditions so that they do not affect workers' own ability and discourage their saving. On the other hand, in European countries there has also been a slow movement away from pay-as-you-go systems towards certain self-funding mechanisms. In Europe, for example, there are countries that have a system known as “contracting out”, by which, to the extent that the contribution to the pay-as-you-go system is reduced, that same amount goes to finance the individually-funded system.

I believe, therefore, that it is important to bear in mind that we are going to have a system within our social security scheme in which the pension will not depend on a single source; but on a non-contributory source and on a contributory source, where we need to make a drive to encourage voluntary pension saving. The important thing is to ensure that these sources are adequately integrated and do not hinder workers’ ability to formalise their work and so be able to fund their own pensions.

There are those who maintain that the fact that a non-contributory pillar has been set up is proof of the deficiencies of the individually-funded systems. I feel that nothing is further from the truth. The individually-funded systems have a real historic yield that has exceeded 8% in all the regions of Latin America since the systems began, and they will therefore be able to fund adequate pensions for those who contribute regularly. On the other hand, if it has been possible to set up a first non-contributory pillar, this is solely and exclusively thanks to the financial leeway allowed by the fact that the majority of workers are paying contributions into their individual accounts. I therefore hope that these systems will communicate with one another and integrate properly, in order to achieve better and more adequate pensions, as well as increased well-being for the workers.

Thank you very much.

Guillermo Arthur
President FIAP

PRESENTATION: OPENING SPEECHES

I want to give you all a very warm welcome to this Seminar, the title of which is "Reinforcing the Foundations of the Individually-Funded Pension System to Ensure its Sustainability". I have the satisfaction of representing an industry that has really made it possible to produce a substantial level of private savings: one that not only creates expectations of better pensions in the future, but also contributes to national development, without this being its specific purpose. Guillermo Arthur has explained both the challenges and the benefits of the system and the need to integrate the mixed systems. I would like in addition to emphasise some of the challenges that I consider most important

My father used to say: "It is not enough to be good, you must look it". To whom must we look good?: the members. I believe that a first major challenge for the private pension systems is to show that there is no better system than the one based on individual funding.

The second great challenge lies in allocating savings so that they obtain the highest yield. There are many aspects to be strengthened in the foundations, but in my opinion, yield is one of the most important elements for determining future pensions. For that reason, in this Seminar we are going to see how the schemes for regulating pension fund investments have developed.

The third great challenge is that of pension coverage:, which is probably one of the most important issues for Peru, because we have a high degree of informality.

For the moment, it is enough to say that many other important aspects of the individually-funded system will be discussed in the two days that we have set apart for this meeting. Let us therefore start our discussions with an open mind and an active participation.

Thank you very much.

Luis Valdivieso
President
Association of Private Pension Fund Administrators (AAFP)

PRESENTATION: OPENING SPEECHES

Good morning to you all. On behalf of the Peruvian Superintendence of Banking, Insurance and AFPs (SBS), I want to welcome you to the beautiful city of Cuzco and also thank you for the invitations issued by the International Federation of Pension Fund Administrators (FIAP) and the Peruvian Association of Private Pension Fund Administrators (AAFP).

We all believe that the private pension systems have made a magnificent contribution to our countries' growth and economic development. I want to draw your attention to the study carried out recently by the SURA Group[1] on the impact of the pension systems on economic growth, which shows the significant contribution of the systems to the improvement of savings-investment mechanisms and the development of capital markets in our countries, which has led to the sustained development of our economies and to increased well-being.

1 *See the study "Contribution of the private pension system to the economic development of Latin America". Available on Internet, here (only the Spanish version): http://www.sura-am.com/es/Publicaciones/pensiones-latam/pensiones-latam.aspx*

Since its inception in Peru at the end of 1992, the private pension system has faced many challenges, which have led in turn to a series of successive reforms. The one aim of these has been to strengthen the system as a means of saving for pensions, making it much more efficient and more approachable for the member, which is the most important thing. One of the first reforms to be introduced in the Peruvian case was the establishment of a multi-fund system, opening up a wider range of investment opportunities to the pension funds with the idea of obtaining better yields in the context of an efficient risk-management system.

Recently, also in Peru, the government began a couple of years ago to implement a reform to reinforce the private pension system, as a result of the challenges involved in having to deal with greater longevity, and due to the need to have greater efficiency in managing the resources and so achieve better yields to provide better pensions. Within this reform, which has been very similar to the reforms put in place by sister governments, such as Chile, five important pillars have been set up.

The first important pillar has been industrial organisation and improved competition within the system. The second pillar is one that seeks to improve efficiency in the management of resources and also in the services provided by the administrators to their members. A third very important pillar is that of coverage, in other words, enabling more Peruvians to be included in the systems and have social security protection in the future. A fourth key pillar has consisted of giving the system greater flexibility and more investment alternatives, with the aim of seeking to maximise yield at an accepted level of risk. A fifth pillar, which has more to do with the members, is transparency, enabling the member to find out where his/her funds are, what is being done with them, where they are invested, why the system works as it does and why it will offer him/her benefits in the future. This point is important, in view of the latest events, where subjects have begun to be mentioned somewhat inaccurately, due precisely to a certain degree of ignorance, and these may affect or undermine the confidence of both the State and the Peruvian people in the private pension systems.

As regards the pension reform that began a few years ago, progress has already been made on matters of industrial organisation, seeking more competition between the institutions involved in the market by using the tendering process. The result has been the entry of a new AFP to the Peruvian market.

Progress has also been made on issues of cost efficiency by centralising certain important processes carried out by the AFP Association itself. During the rest of this year, 2014, the challenge lies in perfecting the alternatives for pension fund investment, trying to reduce the presence of the State or regulators in the investment decisions taken by the administrators, i.e. giving them greater flexibility to take their own decisions, diversify their portfolios more effectively and take advantage of investment opportunities without the State's taking part or limiting these efforts. Another important challenge for this year is to achieve greater coverage. Last year (2013), the process was begun by which independent workers could start to enrol in the private or public pension system, depending on which they chose, but unfortunately, certain policy aspects have held up its implementation and we think that firm steps should be taken this year to achieve this objective.

We have many challenges ahead of us, and I believe that the subjects that I have mentioned with regard to the whole reform that is being implemented in Peru are reflected in many of the issues to be analysed by this Seminar. Finally, I believe that this Seminar is going to be very important, not only for you, but also for us, the supervisors and regulators, to enable us to learn and exchange experiences and find alternative methods and policies to improve pension systems and cause them to grow steadily, all with the idea of achieving a pension and a life of dignity in the future, when we reach retiring age.

Thank you very much.

Michel Canta
Deputy Superintendent of AFPs and Insurance Peru

INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS (FIAP)

FIAP was created in May, 1996. The legal status of this international institution was granted on 29th June 2004 in the city of Montevideo, by Supreme Decree Nº 801, issued by Uruguayan Ministery of Education and Culture. It currently has nineteen "full members" in fifteen countries and thirteen "collaborating members". The "full members" are associations, federations, chambers or other institutions that represent the interests of the pension industry in the respective country. Thus, the following countries are represented in FIAP: Bolivia, Bulgaria, Colombia, Costa Rica, Curaçao, Chile, El Salvador, Spain, Kazakhstan, Mexico, Panama, Peru, Dominican Republic, Ukraine and Uruguay.

The workers represented by the FIAP member associations and institutes number more than 122 million as of December 2013, and accumulate more than USD 725 thousand million in their respective individual accounts.

The “collaborating members” are mainly companies that provide services and products to the pension fund management industry, interested in private pension systems, and currently include Amundi Asset Management; Association of the Luxembourg Fund Industry (ALFI); BNY Mellon; Brown Brothers Harriman & Co; ICG Asset Management; Larraín Vial; M&G Investments; Oddo Asset Management; Pictet & Cie (Europe) S.A.; Santander Asset Management S.A.; S & P Dow Jones Indices; State Street Global Advisors and Vanguard.

As "Other collaborating members" are included Sura and Principal Financial Group, companies that collaborate and support the activities of FIAP.
The main objectives of FIAP are:

- To contribute to the success of the new pension systems based on individual funding and private management.

- To promote reforms to pension systems that lead to the adoption of pension programs based on individual funding and private management.

In order to achieve these objectives FIAP has undertaken intense activities that include the holding of Seminars, Conferences, Workshops and Round Tables, specialized publications, the creation of a Web site, permanent contact with international organizations and authorities of the different countries, support for its partners in the promotion of improvements to the regulations of the respective countries, participation of its Chairman and the Steering Committee in propagating activities of the new individually-funded systems, the drawing up of documents to contest criticism faced by such systems and the preparation of Guidelines to assist in the better design of individually-funded systems regulation.

INTRODUCTORY LECTURE

INDIVIDUAL SAVING AND ECONOMIC FREEDOM

HERNANDO DE SOTO[1]

1 *Hernando de Soto was born in Arequipa, Peru, in 1941 and did post-graduate studies at the University Institute of Higher International Studies in Geneva, Switzerland. He has worked as an economist on the General Agreement on Tariffs and Trade (GATT) and has been chairman of the Executive Committee of the Organisation of Copper-Exporting Countries (CIPEC), managing director of the Universal Engineering Corporation (one of the largest engineering consultancy firms in Europe), member of the Swiss Bank Corporation Consultant Group, and director of the Central Reserve Bank of Peru (BCRP). He is currently president of the Instituto Libertad y Democracia (ILD), with its headquarters in Lima, Peru, one of the most important research centres in the world. Forbes, Times and The Economist have chosen him on various occasions as one of the world's main innovators. Hernando de Soto has published various articles and papers on economic policy such as "El otro sendero. La respuesta económica al terrorismo" (1986) and his major work "El misterio del capital: ¿Por qué el capitalismo triunfa en occidente y fracasa en el resto del mundo?" (2000).*

My friend, Luis Valdivieso, asked me some time ago what I knew about the program of Pension Fund Administrators (AFPs). I replied that, to tell the truth, I knew absolutely nothing. And that may be an advantage. I come knowing nothing, to give you an opinion or view from outside the system.

I believe that there is a very interesting thing about us Latin Americans, or the developing countries that have succeeding in emerging. Peru has really made progress in the past twenty years. This does not mean that the progress has been complete. There are many people who have been left behind, there is a large informal sector (although not as informal as people believe), which is outside the Private Pension System (SPP) run by the AFPs, and which should enter the formal world.

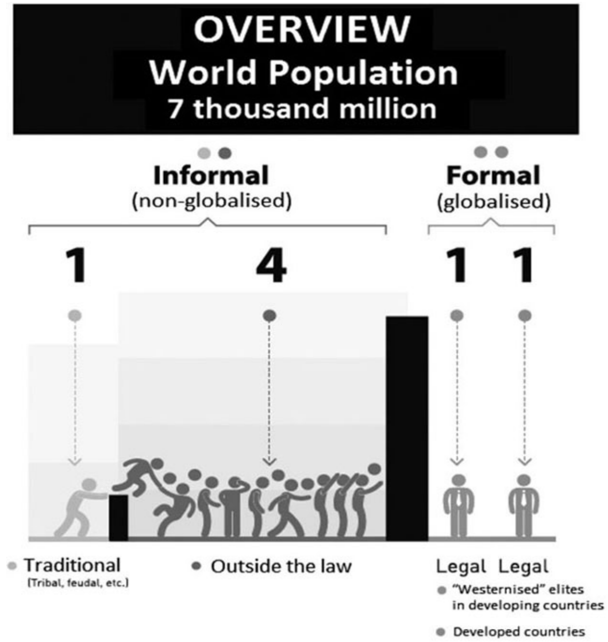
The question is whether we should imitate the models that we see abroad, or develop our own models in order to achieve greater formality. The world has been divided for us into employers and workers, but our country is not like that. There are employers and workers in the informal sector, where they fill the two roles at the same time. If they are attacked, in the sense of trying to draw them into the system as though they were employees, we are going to find that their entrepreneurial spirit will come to the fore, they will rebel and refuse to come in, as we are already seeing in the agglutination of informal money, that may represent 500,000 people who could be our allies instead of our enemies.

It is therefore important to realise that our countries are different and that the private sector may have a very important role to play. Some of the traditional products that we accepted from the West no longer function as they once did and there is a need to innovate and move outside the traditional path.

A first idea is to present the advantages of social security in such a way as to attempt to convince the whole of that informal sector which is not covered and could have been covered by the AFPs some time ago. As is shown in Figure Nº 1, there are 7 thousand million inhabitants in the world. In the developed West there are a thousand million workers (Western Europe, North America, Japan, Singapore, etc.), while there are a further thousand million in the "westernised" elites in the developing countries (in other words, the westernised third-world population, who wear collar and tie, have computers and speak two or more languages. We attend conferences, understand North American jokes and wear jeans at the weekend, being the best-dressed during the week).

At the other extreme, in the non-globalised informal world, on the one hand there are the traditional groups (those tribes, in Peruvian Amazonia for example, that do not want to enter the system. They are very few and their decision is respected). On the other hand, there are four thousand million people living outside the law, who already know about traditional ways of living (small-scale production methods).

FIGURE N° 1



SOURCE: THE AUTHOR.

Some time ago, just after the Second World War, it was said that capitalism was destroying the economy because it came in with its large-scale methods to interrupt the traditional ways of life of all peoples. The truth is that it has wrecked them, but it has done so, not because it has come in and broken them, but simply because there is no other way. Large-scale production means being able to divide work in an extraordinary manner. In other words, nowadays nothing is made by a single person; everything requires several people or a combination of people and resources. The market economy system is the one that allows an enormous quantity of things to be combined, because it has a legal system that allows contracts to be signed, that clearly identifies property rights and allows collaboration with people whom we do not know. This is something of what lies behind the AFPs; everyone adds their different savings, and this produces capital accumulation which can be invested with great liquidity potential in different part of the economy. That is the root of the AFPs' massive advantage: they can move the resources of the people who save to the places where they will produce most yield.

The question has always been, are these informal workers opposed to being included, or not? Of course they are not. What happens is that they have massive obstacles preventing their entry. Our calculation shows that in Peru, if one takes just the constructions that have been built informally, then we are talking of something over USD 70,000 million in private savings, which is by no means negligible.

What we have seen is that when they enter a credible system, the value of the assets belonging to the informal workers increases 50%. So, if it were possible to formalise those USD 70,000 million in informal homes, the amount saved could rise comfortably to USD 110,000. So, when they are ready to join the AFPs, they will have much more to contribute and will immediately turn into credit. Everything that is informal in our region lives just one life, a physical, tangible life. But in North America, in Europe, and in many other regions, every home has two lives: the physical life and the one that turns into credit.

For this reason, I am going to refer to the subject of how important informal housing is in creating credit. It is generally believed that the subject of informal housing is marginal, but in fact it is so important that the present recession (which exists under cover in the West, in my opinion) is due to a large extent to having lost the notion of how things are represented and how important it is to formalise them. To make this more entertaining, I am going to explain it as a personal experience: in September 2008 the Secretary of the United States Treasury, Henry Paulson, approached the President of the North American Congress, Nancy Pelosi, and said: "*We have a problem: the whole North American financial system is about to collapse due to a problem of toxic assets.*" He also informed her: "*I need to receive a loan of USD 780 thousand million, before the system collapses*". The thing was dramatic, because nobody knew where this crisis had come from. Finally the loan was forthcoming and two weeks later, I remember, I saw him on television and didn't understand a thing. He said: "*Look, I don't believe that we are now going to need this money to get rid of the toxic assets. Instead we are going to support the Banks*". What had happened? By then it was possible to understand the nature of the phenomenon. A large proportion of the homes with mortgages had been built for social purposes; those mortgages had been securitised, in other words, they had been transformed into financial debts (*"mortgage-backed securities", MBS*). In other words, it was paper that backed the various mortgages. These covered more or less 16 generations of transactions among modest homes, from New Jersey to Wall Street, the paper changing gradually from one generation to another and being packaged in different ways to convert it into money. That is why the economists of the 19^{th} century said that it was a mistake to call money "money"; it ought to be called "moneytude" because a physical object can be converted into something very liquid if it is being exchanged in a "paperised" form. What happened is that those who were buying their houses decided not to pay for them, and therefore returned the keys to their owners, who had all these mortgages in liquid form in an instrument called a "derivative". If in fact it was known that a bank's deposits consisted of a large quantity of mortgages that were not being traded, or derivatives that were not being traded, people could go, withdraw their savings and the system would collapse. Homes in the United States were actually funding a large part of all this worldwide liquidity.

So, why did the Secretary at the United States Treasury, Henry Paulson, change his mind at a suggestion from Gordon Brown, who was then Prime Minister of England? Gordon Brown had said that it would be better not to perform a surgical operation, in the sense of getting rid of all the toxic assets (the cancer in the system), but rather to support the banks. I did not understand that, because the former suggestion seemed sensible to me, and I have the advantage of knowing the right people. Two weeks after the appearance of this "*Quantitative Easing Program*" from the FED, I went to visit a friend, Dick Cheney, deputy and vice-president of the United States under the George W. Bush administration, to carry out a trading operation. I said to him: "*All the information so far has been in the same direction. Tell me, why did they not simply eliminate the toxic assets – the bad papers - from the system*? Dick Cheney replied: "*Well, the fact is that we can't find those toxic assets," so then I said to him "Wait a minute, so this is the informal sector?" and he said: "Well now, yes. What's your definition of informality?*" I told him that, in my view, informality does not mean "small" but rather "undocumented", in other words, it does not figure in the system's memories; it is the systems that lose value. Cheney nodded, and told me that was exactly what it was all about.

So far, according to what is being said by the Security Exchange Commission, SEC, there are some USD 700 thousand million whose whereabouts are not exactly known.

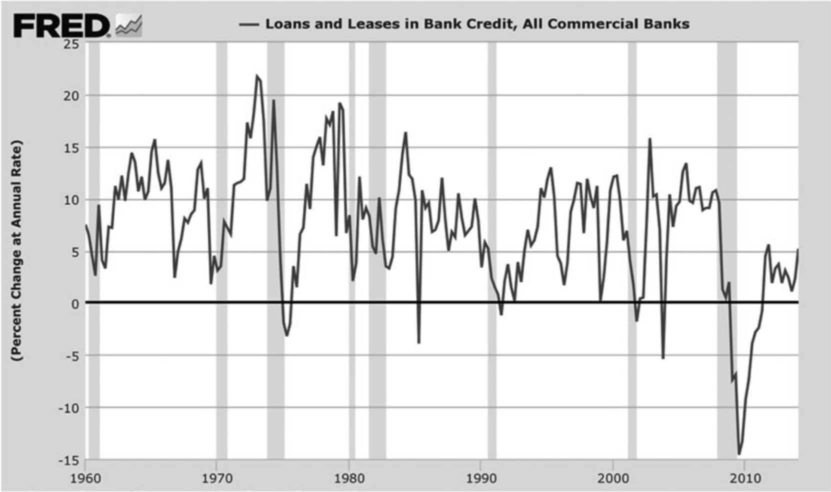
Of those USD 700 thousand million, many will say that not everything is toxic, but there is no way of being sure. Calculating the figures has been prohibited in almost all the various parliaments in the United States and Europe. When one tries to insist on it, they say: "*Of course, you were friends with Professor Milton Friedman. You like the quantitative theory of money*". They think that I am of a separate school of philosophy, because I count money.

The interesting thing about the above, in our case, is that all those informal Peruvian workers want to enter the system; they want to be counted. What is the first thing said by those 40 million informal Latin American workers who migrate to the United States? They say: "*We want to enter the system. We want to be North Americans and we want to keep the law*". But here in Peru and in many other countries in the region, everyone's ambition is not to keep the law.

What I show in Figure Nº 2 is a representation of the loan market in the United States from 1960 to the present day. As you can see, the loan market rises and falls constantly over the decades. That is how the capitalist system works: there are bubbles, people see something that is important and take it to its peak. Then it no longer works and the price falls. In comes the capitalist who knows how to organise it, the AFP, who packages it in an interesting way and up it goes again. That is the system. It is not a stable system because it does not aim to be stable. The Soviet systems were stable. For 70 years they talked about never having had slumps, but when one looks at them now, they are at rock-bottom. In order to rise, it is necessary to have good experiences and learn from mistakes. Essentially, that is what a market economy system is: a place for learning from mistakes. So then we arrive at the year 2008, when private credit falls like a stone. What have governments done to help themselves emerge from this recession? They have done a thing called "Quantitative Easing", QE. In other words, The United States Central Reserve Bank has come in, not by giving private credit, but by investing money through the housing sector.

FIGURE N° 2

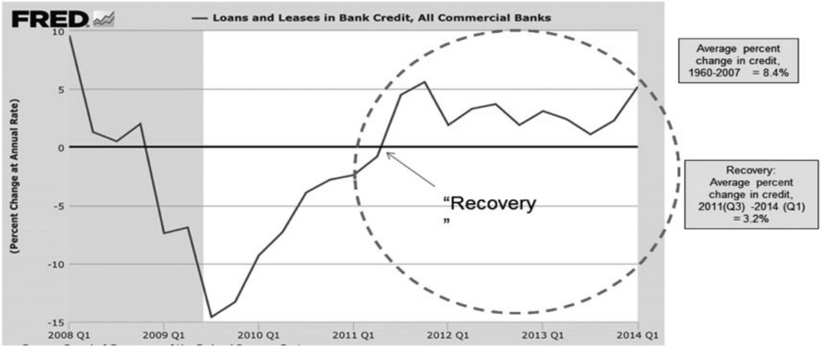
GOING BACK TO 1960, THERE IS NO EQUIVALENT CRASH IN CONFIDENCE LIKE THE PERIOD 2008-2014



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (FED): HTTP://RESEARCH.STLOUISFED.ORG/
NOTE: THE SHADED AREAS INDICATE RECESSION IN THE UNITED STATES.

FIGURE N° 3

ZOOMING IN FOR A CLOSER LOOK:
LOANS AND LEASES IN BANK CREDIT, ALL COMMERCIAL BANKS: 2008-2014



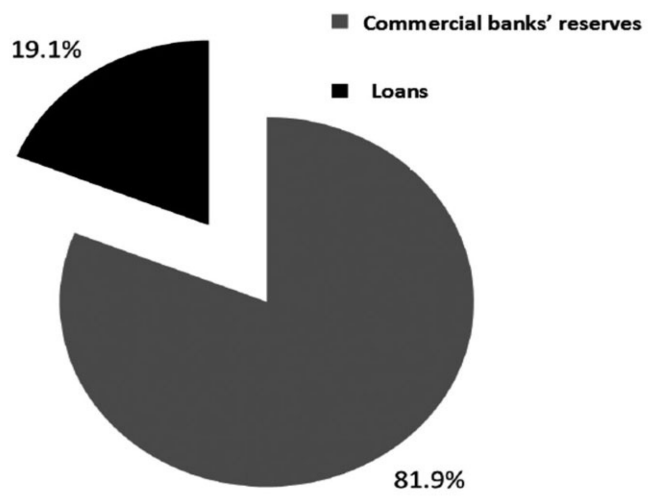
SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (FED): HTTP://RESEARCH.STLOUISFED.ORG/

As may be seen in Figure Nº 3, in the 6 years since the QE Programs began, there has already been a recovery in credit from 2008 onwards, though with state intervention until 2009. Private credit is growing today in the West at a quarter of what it was growing in the previous half-century. That is all because its style of ownership is not correct. It has not been realised that the need to distinguish money from credit is not the most important thing. All possible money has been poured in, but what has not yet been created is confidence.

Credit comes from credibility, and that is precisely what the AFPs have to work on. Becoming formal and being part of the AFPs is to the advantage of the informal sector, because even with all the assets it has, it is always in a state of on-going crisis. The Americans say that when there is no credit, there is a "credit crunch", which means "creaking credit". "Creaking" is the disappearance of credit: that is the informal sector.

With the method that the western countries have used to produce credit growth, with this monetary easing and all the money that has been passed to the banks, these have still only been able to lend 19.1% because confidence is no higher than that (see Figure N 4). What have the banks done with the rest of the money? As the money is given to them with bonds at 0.25%, the banks have been accumulating via reserves: the banks are rich, and obviously the population does not feel it. And so Mr Thomas Piketty comes out with a neo-Marxist remark which seems to fit the case perfectly. He says: "*I told you that once you let the private sector in, what will happen, is that they will get richer and you will get poorer".* That is precisely the image that is being talked about in the AFP environment. Quite apart from whether or not the AFPs do things well, they are living in a country where the informal sector is important.

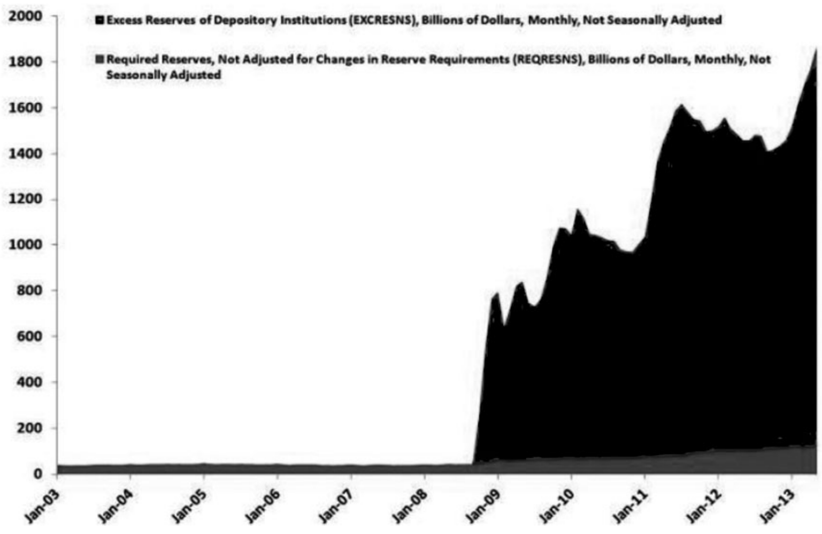
FIGURE N° 4



SOURCE: HTTP://WWW.HUFFINGTONPOST.COM/ROBERT-AUERBACH/MASSIVE-MISCONCEPTIONS-AB_B_3490373.HTML

So, loans have hardly moved, despite the rapid increase in the excess reserves caused by the quantitative monetary expansion (see Figure Nº 5).

FIGURE N° 5



SOURCE: HTTP://MOFIPO.BLOGSPOT.COM/2013/07/ON-RESERVES-EXCESS-RESERVES-AND-YES.HTML

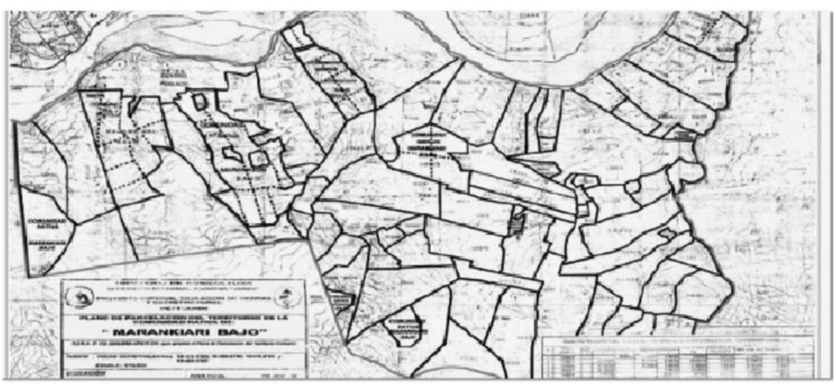
We have been to all the regions of Peru. What is the first thing one sees in the Central Peruvian jungle, among the Asháninkas, for example? One sees different communities, all with boundaries drawn up by the State (see Figure Nº 6). We have not seen any community in Peru that is not divided up in some way. In other words, they already have "private property", but it is informal. So the AFPs have a public there that is prepared to participate. In Figure Nº 7, for example, we see various title deeds accrediting the private property of the Shipibo-Konibo tribes[2] , which they grant to themselves, since the State does not do so. In all places in the Andes and the Peruvian jungle, the inhabitants try to imitate formal Peruvian law, which is why we refer to "imperfect deeds" (see Figure Nº 8).

2 *An ethnic group in Peruvian Amazonia spread out along the banks of the River Ucayali, which joins the Amazon in northern Peru. The Shipibos live in at least 150 small communities along that river.*

When the associations of indigenous Peruvians met in San Lorenzo, in Daten del Marañón, they said “The economic program must take on the responsibility for drawing up policies and strategies to facilitate the normal development of local initiatives, of indigenous groups, families and individuals. (..) Economic development must be promoted and encouraged at the level of families, associations and individual initiatives (communal companies do not work)”. When the events at Bagua[3] were over, the Apus from the jungle met and said something similar.

FIGURE N° 6

MAP OF MARIANKIARI BAJO IN THE CENTRAL JUNGLE



SOURCE: THE AUTHOR.

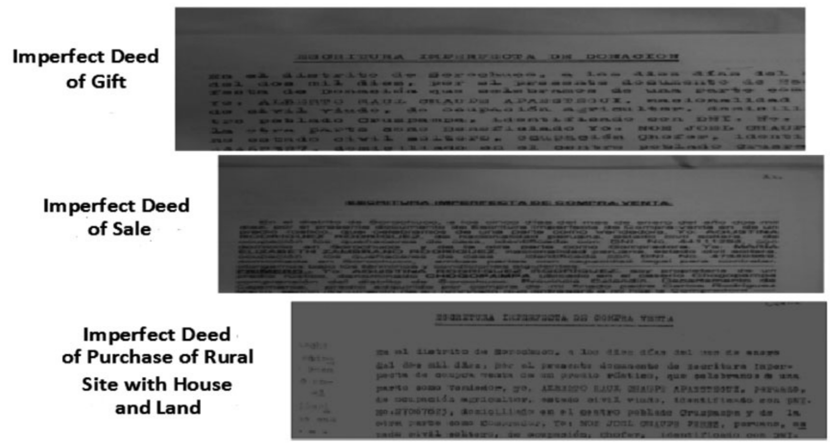
3 *On 5th June 2009 the Bagua massacre took place near “El Reposo”, an agricultural town in the north-west of the Amazonas Region in Peru. These events took place in the context of the eviction of about 5,000 Amazonian natives, together with many inhabitants of the neighbouring towns, who had been blocking the Fernando Belaúnde Terry highway for 55 days and had left the provinces of the Amazonas Regions Cajamarca, San Martín and Loreto without fuel, gas and food. The population of this zone was protesting against a decree that allowed large transnational companies and mining concerns to use jungle territory in order to exploit large deposits of oil and other minerals.*

FIGURE N° 7

PRIVATE RIGHTS IN NATIVE COMMUNITIES

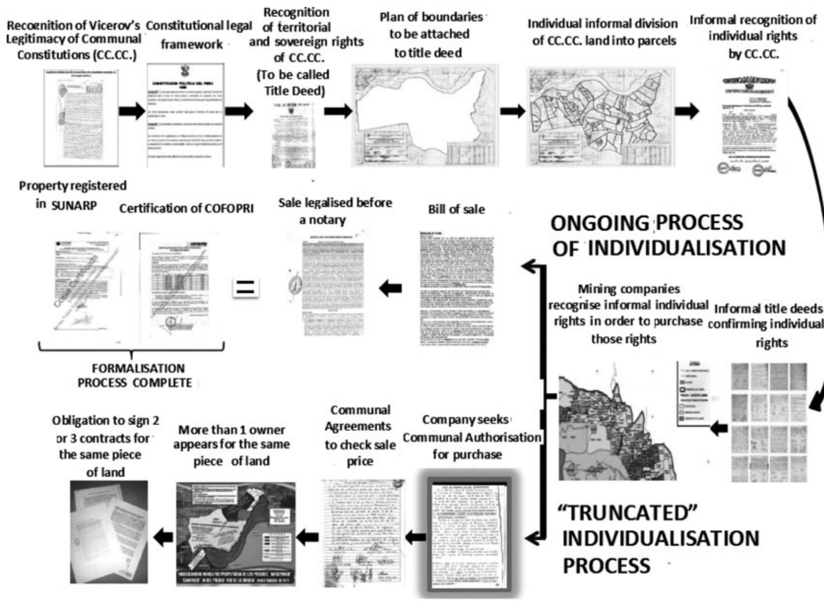
SOURCE: THE AUTHOR.

FIGURE N° 8



SOURCE: THE AUTHOR.

FIGURE N°9



SOURCE: THE AUTHOR.

In Figure Nº 9 it is possible to see a description of the processes of property individualisation. It first began in Peru with the discovery of gold, poly-metals, oil, gas, etc. As always, of course, God manages to put these resources in difficult and relatively inaccessible places, where there is always a tribe or community. So what man tries to do is make that location fit in with the needs of society. In our case, the communities have recognition of legitimacy that dates from the period of the Viceroys. The first republican constitutions granted those communities territories; then Velasco came, granting them lands collectively. Then, later on, the people of the community divided the land into lots. Then along comes the mining company and says: *"Listen, I already have a title to the subsoil, but not the surface; you have the surface, and I want to buy it off you for several times the price you would be able to sell it for"*. They, of course, are delighted. What is the basis of the mining company's claim? Those informal deeds, of course, because there is considerable informality, we already know that. The problem is that informality differs from place to place.

What the mining companies do then, is recognise informal individual rights in order to buy the rights on the lands, and they themselves make a map. In other words, the privatisation of the informal sector in Peru has been drawn up by the Peruvians themselves. However, given that this is a proof that is not formal, in order to report this to a foreign company, the law provides a loophole, which is to return it to the community. So, these communities, which in fact no longer correspond to the name because they have been divided into lots and privatised, are being integrated into the world. It is like a marginal organisation, a kind of "boy scout" organisation which exists over there, and all of a sudden it becomes important because the mining company says: "*Sign my contract*".

Peru has started to return, one title deed at a time. The community, which was gradually disappearing, has started to come back, so that all Peruvians can become part of one family and not the 7,500 families representing the communities (with an average of 220 people per community). In other words, the government is giving back the notion of community to the population, in such a way that if, for example, a mining company bought land at 10,000 soles per hectare, and with the increase in the value of the land, that same company says that now it has to be bought at 40,000 soles per hectare, then the people disagree and say so. Today prices have to be raised for everybody and ownership is running out, because the issue has already become politicised. That means that it is time for the values represented by the AFPs to include the idea that we are a big family, a market economy family, where there is no need to know each other in order to divide up work and create prosperity. It is an extremely important task.

What would happen if new securities were added to the traditional products offered by the AFPs? It is important to tell the informal worker something crucial: "*You are not simply a worker*". That is one of the reasons why the so-called "formalisation of the miners" has not worked, because the talk was about how to formalise them as manual workers, whereas they are potential entrepreneurs who are not being treated as such. Obviously, then, they feel offended. Informal workers are being installed in a little house, a little shack, or on a little piece of land that produces no dividends or interest, and produces no future flow of income. The AFPs should come in there and do what the private sector has already done partially in various other developed countries. The West does not understand the nature of informality, and forgets that insurance systems and others are simply systems that help. There is a level of dialogue missing with the informal workers that I believe could be supplied by the AFPs, because I cannot see who else could do it.

PART I

EXPANDING COVERAGE AND PROMOTING PENSION SAVINGS

RETIREMENT PENSIONS IN LATIN AMERICA: WHERE ARE WE GOING?

SANTIAGO LEVY[1]

1 *Santiago Levy has a degree in Economics from the University of Boston, USA, and a doctorate in Economics and master's in Political Economics from the same university, plus a post-doctorate from the University of Cambridge, United Kingdom. He is currently Vice-President of Sectors and Knowledge at the Inter-American Development Bank (IDB). Before entering the IDB, between December 2000 and October 2005, he was General Director of the Mexican Institute of Social Security (IMSS) and Undersecretary at the Department of Finance and Public Credit from December 1994 to December 2000. He has acted as advisor to various governments and international organisations, in addition to occupying a number of positions on the teaching staff of the ITAM and the University of Boston, where he was associate lecturer and director of the Institute for Economic Development. He is the author of at least 80 articles, monographs and chapters in books on subjects as wide-ranging as poverty reduction, competitiveness, exchange policies, export imbalances, prices, microeconomics and energy.*

This short article deals with the issue of pension system coverage in Latin America. First of all it gives a brief diagnosis of the problems involved in coverage, and then moves on to recent pension reforms and considers the prospects for the future of pensions in the region.

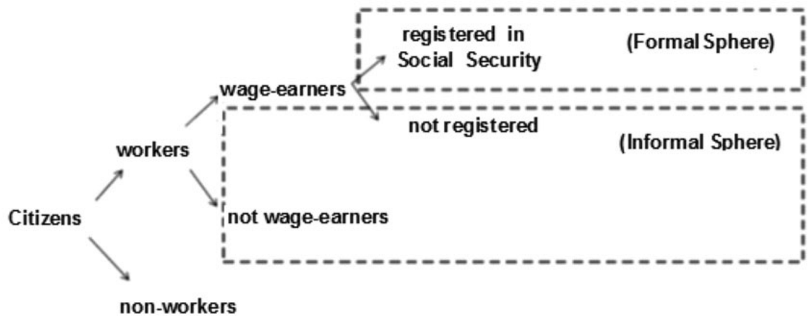
1. A brief diagnosis

What is it that gives the State cause to intervene, obliging people to save for their pensions?

The fact that we are all exposed to risks of illness, disability, old age and death must be taken into account. In a world of perfect information and complete markets, these risks could be covered by a combination of private savings, loans and insurance policies, with no need for State intervention. Social Security exists because neither of those scenarios is actually found in practice, so the reason for States to make saving obligatory and socialise the aforementioned risks is quite understandable.

However, there is a basic design fault in the so-called "contributory" systems, which is at the root of the pension coverage problem. That fault lies in the fact that the "contributory" systems are tied in with the world of formality at the design level. However, all workers are exposed to a series of common risks, including those in the informal sphere (see Figure N°1). If we are all exposed to the risks of illness, disability, old age and death, why does the State impose the obligation to pay pension contributions only on a sub-group of those people? As a result of that situation, the "contributory" systems reveal very low coverage. If that basic design fault is not rectified, it is very unlikely that a solution will really be found for the coverage problem within a reasonable length of time.

FIGURE N° 1

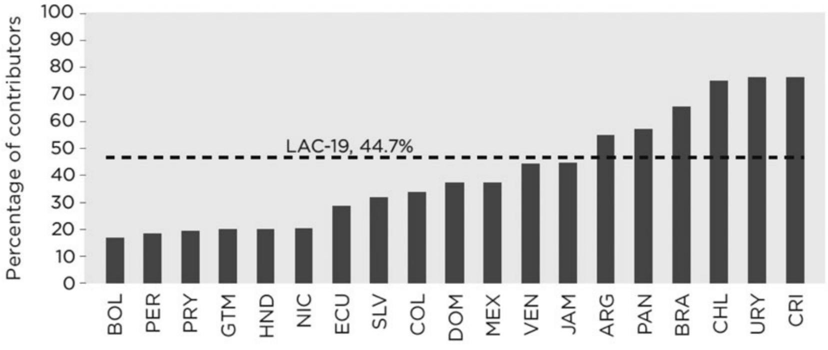


SOURCE: PRODUCED BY THE AUTHOR.

For the Latin American region, the figures show that less than 5 of every 10 workers contribute in a contributory system (see Graph Nº 1). It is worth mentioning that the contributory systems first saw the light of day in the south of Latin America, approximately in the 1930s, and in the rest of the countries of America in the 1940s. In other words, the contributory systems have been operating for over seven decades, but have not managed to reach even half the working population of the region.

GRAPH N° 1

PERCENTAGE OF CONTRIBUTORS OUT OF TOTAL EMPLOYED, 2010

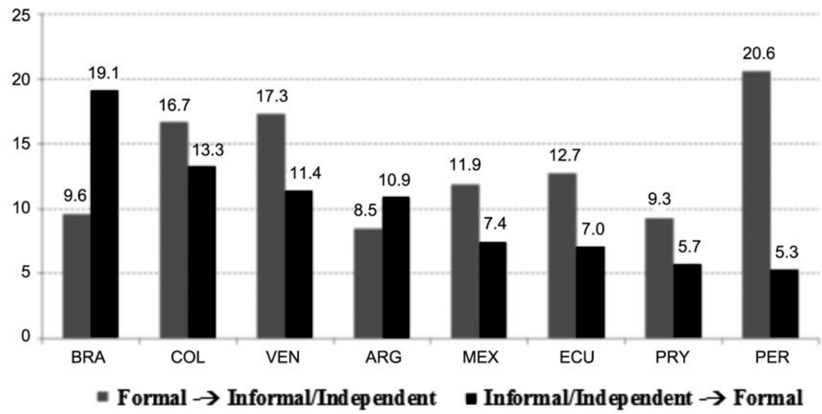


SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

The language used also betrays us. We very frequently use the expression "formal worker" or "informal worker", when in actual fact workers move constantly between the formal and informal spheres. Graph Nº 2 shows the percentage of workers who pass from a formal state to an informal one, and vice versa, in the course of a year. For example, in Brazil, in a single year, 9.6% of workers in the formal sector moved to the informal and 19.1% did so from the informal to the formal. On average, 13% of formal workers will become informal within a year, and 10% of those who are informal today will be formal within a year. It would be much better to use the expression "when the workers are formal" or "when the workers are informal". If the above facts are taken into account, it is clear that the system of insurance is very badly designed. The movements between formality and informality reduce the effectiveness of the insurance system (it is akin to insuring a car for only certain months of the year, which is unthinkable). Basically, what we are doing with the current contributory systems is insuring the "work status" of the person and not the person him/herself.

GRAPH N°2

PROBABILITY OF MOVEMENTS BETWEEN FORMAL AND INFORMAL EMPLOYMENTS IN 1 YEAR

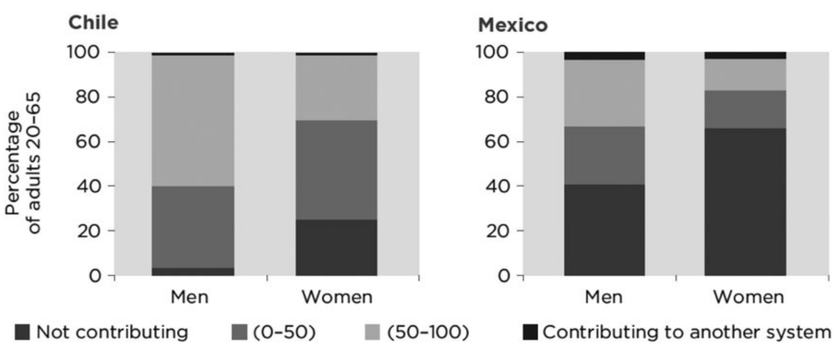


SOURCE: INTER-AMERICAN DEVELOPMENT BANK (IDB).

Therefore, given that people are moving constantly between formality and informality and a large group of workers are excluded from pension coverage by the structural design, the contribution densities of the pension systems are very low. Figure 2 shows the examples of Chile and Mexico. In the case of men in Mexico, almost 40% of the population is not even enrolled, approximately 25% of workers contribute between 0% and 50% of the time that they could potentially have contributed, and less than 20% of workers contribute between 50% and 100% of the time. As can be seen, Chile has contribution densities somewhat higher than Mexico's.

FIGURE N° 2

PERCENTAGE OF MEN AND WOMEN BY ENROLMENT STATUS, ACCORDING TO CONTRIBUTION DENSITY: CHILE AND MEXICO



SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

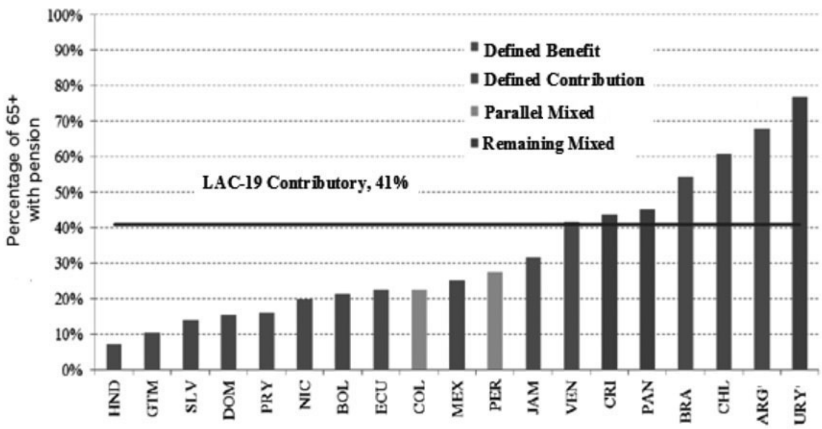
So, if a person worked from age 20 to age 65 but was only employed formally for 20 of those 45 years (and only contributed for less than half of his/her working life), it is obvious that very little will be accumulated in his/her pension fund and his/her replacement rate is going to be very low. For example, a contribution density of 25% in Chile produces a replacement rate of 9% (versus a replacement rate of 39% for 100% contribution density). In general, replacement rates in the contributory systems of Latin America are far lower than those of the countries in the Organisation for Economic Co-operation and Development (OECD).

Replacement rates, therefore, are going to hit low levels, even for workers who achieve formal status. For this reason, even for workers who are covered, the aim of smoothing consumption will only be achieved in a very imperfect manner. What is more, the data tell us that the lower the wage, the higher the frequency of moving in and out of formal status. So the only workers to have continuance and stability in the formal state, obtaining relatively high replacement rates, are those with high wages. The contributory system therefore fails where it is most needed, in workers with lower wages.

This problem occurs regardless of the type of contributory system to which we are referring (see Graph Nº 3), i.e. whether it is pay-as-you-go or has defined contributions.

GRAPH N° 3

PERCENTAGE OF PEOPLE AGED 65 OR MORE WHO ARE RECEIVING A PENSION

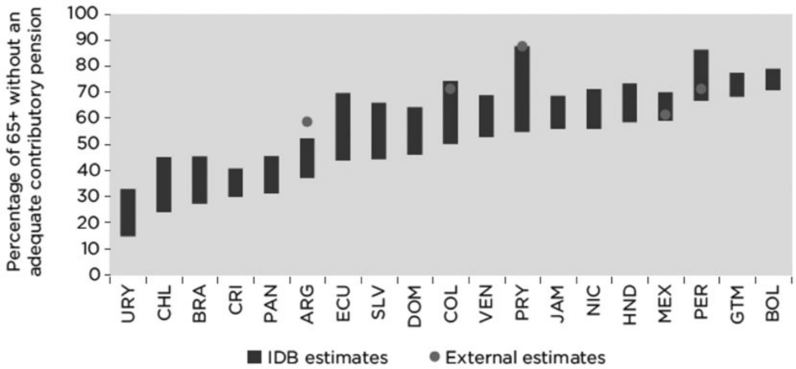


SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

If one makes a medium-term forecast, by about 2050 between 47% and 60% of elderly people in the region will be without an adequate contributory pension (see Graph Nº 4).

GRAPH N° 4

RANGES OF THE PERCENTAGE OF ELDERLY ADULTS AGED 65 AND OVER WITHOUT AN ADEQUATE CONTRIBUTORY PENSION IN 2050



SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

The problem goes beyond the "contributory" retirement pensions. "Contributory" social security systems combine retirement pensions with health insurance, death and disability pensions and other types of social benefits. For example, in Argentina there is child support; in Colombia, in-service training; and in Mexico, housing and crèches. In this way, wage-earning workers and the companies that hire them are obliged to contribute for a series of benefits that are undervalued by the workers (problems of quality, distrust, liquidity, rigidity, ignorance). As a result, the contributions to "contributory" social security become a tacit tax on the hiring of formal workers (to which are added the explicit taxes on work). As a result, companies and workers react to the tax on formality by elusion, evasion, changing the duration and type of contracts, the size of the company, and many other aspects of conduct that reduce productivity and affect savings.

The faults in the "contributory" systems will have important consequences. First, in social terms, families are going to have to set aside more resources to care for their elderly. Secondly, there will be political consequences, since elderly people are going to constitute between 20% and 30% of the electorate. Thirdly, in fiscal terms, the lack of coverage will create a latent cost for the State, through the so-called "non-contributory" pension programs. And fourthly, there will be important economic consequences, because the gaps in coverage have an impact on productivity (generated by the tax on formality) and, in turn, on the savings that are channelled through the financial system.

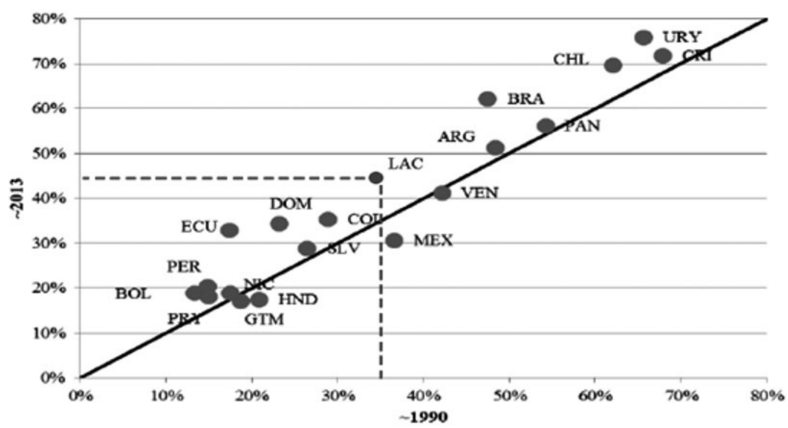
II. Reforms – past and recent

The pension reforms that were carried out in the 1990s in a large part of Latin America helped to improve the countries' fiscal positions. They were reforms that came from the pay-as-you-go systems and moved into defined-contribution systems with individual accounts. Chile was the pioneer in 1981, and many countries followed suit. These countries realised that the pay-as-you-go systems had average premiums that were actuarially insufficient and they also had many problems of disconnection between benefits and contributions, which made them fiscally unsustainable. Thus the transition toward defined-contribution systems made a great improvement in countries' fiscal positions.

However, there was little gained by all these reforms in terms of increased pension coverage. In Graph Nº 5 it is possible to see the pension coverage of the systems in 1990 on the horizontal axis, while the vertical axis shows the coverage of the systems 20 years later (in 2013). The 45-degree line shows that there was no very considerable change in the coverage of the countries before and after these reforms. For the region as a whole (see the dotted line), there was a slight increase in coverage, but not a spectacular one. In this sense, after 20 years of reforms of this type, the impact in coverage terms has been insufficient.

GRAPH N° 5

CONTRIBUTORS/ POPULATION IN ACTIVE WORK
(POPULATION FROM 15 TO 64 YEARS OF AGE)

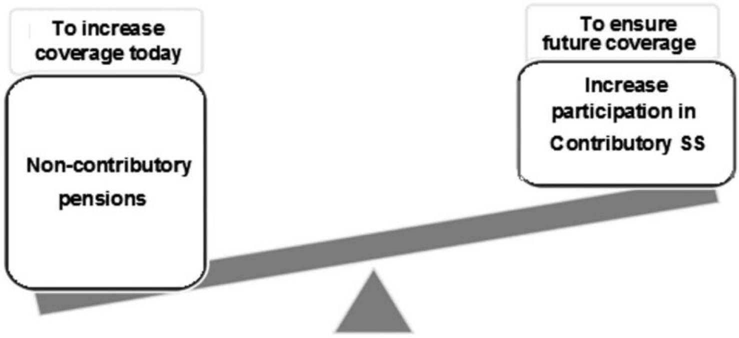


SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

In the more recent reforms that have been carried out in the region, there is competition between two types of objective: first, that of increasing coverage today by means of the so-called "non-contributory pensions", and second, that of ensuring future coverage by reforms that seek to increase participation in contributory Social Security (for example, in some countries, by obliging independent workers to contribute; or, in Colombia, attempting to reduce taxes on formality). The efforts that have been made are not to be despised, but on balance this route is producing very few results and the rate at which people join the formal workforce is really very poor. In fact, most of the efforts that have been made in the countries by way of reforms have been via the "non-contributory" pension programs, (which is why the balance is tipped to the left in Figure Nº 3).

FIGURE N° 3

THERE ARE TWO COMPETING OBJECTIVES IN THE RECENT REFORMS



SOURCE: THE AUTHOR.

Almost all the countries of the region already have a "non-contributory" pension system (see Table Nº 1). On average, approximately 0.44% of the regional GDP is being dedicated to "non-contributory" pensions: a by no means negligible figure.

TABLE N° 1
RAPID SPREAD OF NON-CONTRIBUTORY PENSIONS (2011)

Country	Name	Year	Age	Coverage		Transference	
				x 1000	% of elderly people	$EU (month)	% GDP
Argentina	Non-contributory Pension Program	2011	70+	41	1.4	248	0.03
Bolivia	Universal Old-Age Income "Renta Dignidad"	2011	60+	899	100.0	28	1.25
Brazil	"Prestação Continuada" Benefit	2011	65+	1,688	12.5	328	0.27
Brazil	Rural Provision	2011	60+	5,652	28.5	328	0.89
Chile	Basic Solidarity Pension	2011	65+	842	53.5	136	0.55
Colombia	Social Protection for the Elderly Program	2011	57+	768	15.6	33	0.09
Costa Rica	Non-contributory Scheme of Basic Amount Pensions	2011	65+	93	30.6	146	0.40
Ecuador	65+ Human Development Bonus	2011	65+	536	58.2	335	0.34
El Salvador	Our Major Rights	2011	60+	20	3.4	50	0.05
Mexico	70 + Program	2011	70+	2,149	44.9	40	0.09
Panama	Economic Assistance for the Over-70s	2011	70+	85	56.5	100	0.34
Paraguay	Food Pension for Elderly People in poverty	2011	65+	25	7.4	92	0.11
Peru	National Solidarity Assistance Program "Pension 65"	2011	65+	26	1.5	46	0.01

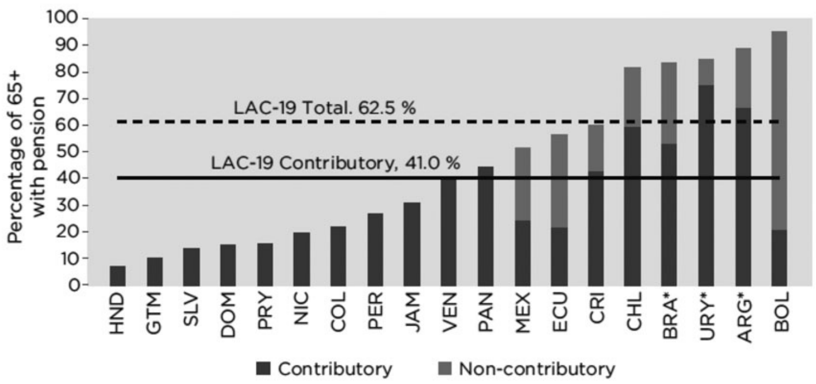
SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

However, in fact there is no such thing as a "non-contributory" pension. It is much more accurate to speak of "contributory pensions based on a payroll tax" or "contributory pensions based on general taxes". In the case of "contributory" pensions, the tax is being applied on the wage, whereas in the "non-contributory" pensions it is on a mixture of general taxes (income taxes, taxes on consumption, taxes on copper, etc.), but they come from some source of taxation. In some ways, the "non-contributory" pensions are similar to a pay-as-you-go system, except that there is no connection of any kind between benefit and contributions.

As a matter of interest, Latin America is a region that saves far less than Asia (in fact, the country that saves most in Latin America saves less than the country that saves least in Eastern Asia). In that context, it is important to understand the extent to which these "non-contributory" pensions may be affecting saving in the future. In general, a study should be made of the potential long-term effects on savings, formality incentives and the supply of work that result from the introduction of pensions of this type. However, given the inheritance of informality, these pensions have been the only tool for increasing coverage in the short term, and have been highly effective in reducing poverty among the elderly.

GRAPH N° 6

PERCENTAGE OF ELDERLY ADULTS (65+) RECEIVING PENSIONS (CONTRIBUTORY AND NON-CONTRIBUTORY), 2010

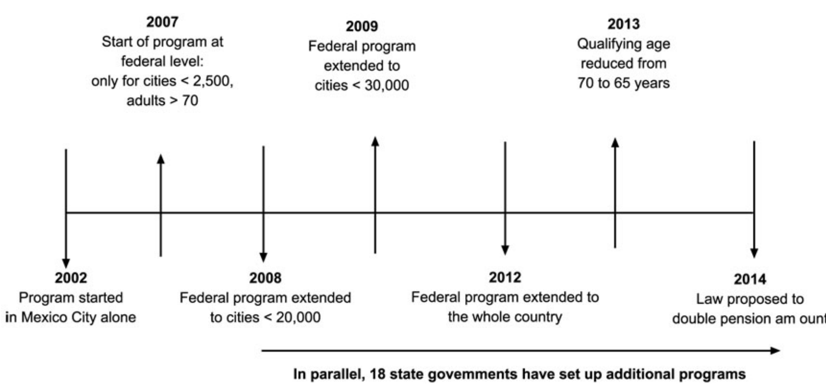


SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", IDB, 2013.

Graph Nº 6 shows the coverage of "contributory" and "non-contributory" pensions in different countries in the region. As can be seen, in seven decades the "contributory" systems have only managed to cover a little over 40% of elderly people, while in less than two decades, the "non-contributory" systems have covered 20% of the elderly. Even so, the total coverage reached is just over 62%, meaning that four out of every ten elderly people still have no pension at all.

It is worth adding that the institutions governing these "non-contributory" pensions are not yet well-established. In the case of Mexico, for example, the "non-contributory" pensions have passed through a process of institutional evolution over time (see Figure Nº 4). In 2002, a program of "non-contributory" pensions was started for Mexico City alone; in 2007 a program was started, at country-wide level this time, with the stipulation that it would only cover elderly people over 70 years of age in towns with less than 2,500 inhabitants; then in 2008, that program was extended to populations of under 20,000 and then, in 2009, to populations of less than 30,000. In 2012 the program was extended to the whole country and in 2013 the eligible age was reduced from 70 to 65 years. And now in 2014 a law has been introduced to the Congress which proposes doubling the amount of the non-contributory pension. Furthermore, since 2008, 18 state governments have created additional "non-contributory" pension programs to run in parallel.

FIGURE N° 4
MEXICO: DEVELOPMENT OF "NON-CONTRIBUTORY" PENSIONS



SOURCE: THE AUTHOR.

III. Looking to the future

In some countries in the region there are still some "contributory" pay-as-you-go systems with unresolved fiscal problems that are going to emerge in the short and medium term. Seen strictly from the fiscal point of view, the pension reform agenda in Latin America is still incomplete.

There are countries where "contributory" pay-as-you-go systems coexist alongside those of defined contribution, sometimes in competition (with the workers arbitrating). The workers move from one contributory system to another, depending on whether or not the premium is balanced, and on the basis of what other parameters are like.

All the contributory systems (pay-as-you-go or defined contribution) present problems in extending coverage, due to informality. As a result of this, there has been a rapid expansion of “non-contributory” systems, producing what is in fact another pay-as-you-go system throughout the region, but without contributions and with an institutional framework that is different from the “contributory” systems. *Mutatis mutandis*, this is a problem area similar to that of health care and other components of social insurance.

When all is said and done, what the region is creating are parallel systems of social insurance, “contributory” and “non-contributory”, with an increasing tendency to bundle health and pensions in the “non-contributory” systems. This obviously has very high productivity costs because there is a growing subsidy on informality. Since the funding for this has to come from somewhere, taxes on formality are increasing, and that has important negative effects on the region’s productivity and long-term savings.

With the current structure, it seems extremely unlikely that the problems of coverage and low contribution density in the “contributory” systems will be solved without including the whole social insurance system (“contributory” and “non-contributory”), and considering labour regulations as part of social insurance.

It also seems unlikely that the *status quo* will continue. The political economics of pensions are very perverse: as the demographics of our countries changes and the electorate gets older, the pressures to increase the amounts of “non-contributory” pensions are going to be very strong, and in fact this is already happening in the region (clear examples are Brazil, Colombia, Mexico, etc.).

In the end, the formal-informal dichotomy of the labour market, resulting from the “Bismarckian” origin of the region’s social insurance, has Latin America trapped in highly undesirable trade-offs between fairness-coverage-productivity-savings-fiscal sustainability. On the one hand there are the legitimate pressures that a Government sees when the population demands more fairness, more access to health care and more income in old age. Democratic governments naturally respond to these legitimate social demands and, since they are trapped in the box constructed by Bismarck and do not know how to escape from it, their response is a thing called “non-contribution”, because that is the quick and easy way to increase coverage (whether health or pensions), and costs are obviously paid (in terms of medium-term savings, not to mention productivity and the tax base), that could eventually affect the region itself.

It is therefore worth reflecting on the advisability of introducing any more targeted reforms without having an overall vision. If the whole process of social insurance is not seen as a unit, it will be very difficult to resolve the dichotomies described.

One fundamental question: Why, if all workers are exposed to common risks, are only those who have formal employment status obliged to pay contributions? In the end, this is a fiscal issue. What is the State doing when it applies a tax to wages? The impact of that tax, in most cases, will fall to a large extent on the worker him/herself, to whom the State says: "*I oblige you to spend less on other goods and more on health care or to spend less today and more in the future*". That is what the State does via a payroll tax. However, if what the State wants to do is change the composition of the worker's spending between today and tomorrow, or between health and other goods, why do we use a payroll tax to change spending and not a tax on spending? In the origin of these systems, the contribution for social insurance was set up via a tax on paid employment and not via a tax on spending for reasons of administrative convenience and because it was thought that, in that way, income would be redistributed from "capital" to "work". All the above has trapped us in a system with no way out and with no possibility of escaping from these unfavourable trade-offs that affect us, between fairness, productivity, savings and coverage. The problem arose as a result of badly-designed systems and it is highly unlikely that it can be solved without tackling the original design problems. I finish by quoting Einstein: "*we cannot solve problems with the same way of thinking that we used when we created them*".

EXPANDING COVERAGE AND PROMOTING PENSION SAVINGS

PANEL OF COMMENTARY AND ANALYSIS.

SYLVIA CÁCERES. Expanding coverage and promoting pension saving.

NORMAN LOAYZA. Risk and opportunity: risk management as an instrument of development.

RENÉ NOVELLINO. Pension coverage – the case of El Salvador.

CLAUDIA COOPER. Business dynamism and informality.

EXPANDING COVERAGE AND PROMOTING PENSION SAVING

SYLVIA CÁCERES[1]

1 *Sylvia Cáceres qualified in Law at the Pontificia Universidad Católica del Perú, with a Master's in management and analysis of public policies and she is a PhD candidate at the Universidad de Salamanca, Spain. She is a specialist in labour affairs, social dialogue, labour administration and Social Security policies. She currently occupies the position of Deputy-Minister of Labour in Peru.*

It is a privilege to be able to take part in FIAP's twelfth International Seminar and the first International Congress of the Peruvian Association of Private Pension Fund Administrators (AAFP), and to form part of a panel preceded by the extremely valuable contribution from Santiago Levy: as always, an enjoyable lecture. He is greatly appreciated by all those of us who have become involved in any way with this central concern of expanding pension coverage in the region, particularly in Peru.

It is very interesting indeed to see how the Inter-American Development Bank (IDB) has come up with the reflection on the breakdown of the traditional paradigm, associating the pension systems with wage-earning work in a context of high indices of informality. It is an equation that ends up concluding that our population has few possibilities of achieving any form of protection when facing unemployment. From a more institutional point of view, steps have been taken by the Peruvian Government, little by little, in the direction of gradually finding ways to close this gap caused by lack of coverage in the pension system.

One proof of this is the recent reform that was brought in our country and has made it possible, for example, for independent workers to qualify for this type of pension protection. Even though the aforementioned measure has been suspended for the moment, from the work sector there is clear evidence of the dispersion of the group of institutions responsible for managing information, processing data, both from the promotion of work formalisation in terms of control by inspection, and in terms of mentoring, support and assistance. The idea is that it should be made possible for workers to reap the benefits of a framework of protection when facing old age, and obtain the pension that they ought to deserve.

From that point of view, an element that I think should be considered in analysing the Peruvian situation has to do with the setting up of the National Superintendence of Labour Supervision. In the main, I am referring to the complementary supervisory approach that has traditionally been assigned to the Labour Department. The proposal is that this Superintendence should work alongside the informal Micro-

Businesses, to acquaint them with the advantages of formalisation, with the incentives that the differentiated labour regimes themselves represent for those in charge of micro or small businesses, and above all, to design a plan of compliance and mentoring to enable them to comply with labour legislation. The hope is to guarantee that these workers, who are in total informality, may be able now to move steadily towards participation in the advantages of a protection model.

Another element that it would be important to "socialise", in line with institutional reinforcement, is the restructuring of the labour sector with the creation of the Social Security Department, within the institutional structure of the Ministry of Labour, convergent with the increased promotion, organisation and coordination of the various bodies involved in the development and funding of the social security systems (and particularly the Private Pension System).

The Labour Department and the Superintendence of Labour Supervision will jointly become the operational arm of this kind of "Social Security Department". Priority will be given not only to mentoring for compliance or improving knowledge of the comparative advantages of formalisation, but also to what is going to be directed. We hope, in conjunction with the education sector, to develop a pension culture, something so absent and so evident in the past few weeks in Peru, where there have been signs of confusion about the pension: which people will receive it, how much will it be, why choose one model and not the other, and why the Private Pension System represents so many advantages compared with the public one. In the end, the idea is to improve pension culture in order to reduce the uncertainty that often accompanies citizens in the various countries.

One final subject I should like to highlight has to do with the inter-sectorial and inter-institutional efforts that are being driven by the government of President Ollanta Humala. An example relevant to the case is the strategy for preventing child labour. You may ask yourselves what that has to do with the funding of the Private Pension System. It is simply to contrast the fact that, from sectorial efforts that work in a coordinated manner to reach a common goal, we can gradually advance towards closing the gaps in the case of child labour. The Ministry of Education is committing itself in that area: it reveals, for example, which children have successfully passed the school year and which families - the poorest or those living in destitution – will be able to qualify for a bonus that provides an explicit incentive to achieve the desired result.

In the same way and from a more institutional point of view, we would like, for example, to advance towards proposing a budget program based on results. This, directed towards social security, could set the pace, evaluating achievement of goals in terms of expanding coverage and producing this culture of social security or pension issues. From that point of view, we hope to bring in the Ministry of Economics and Finance, the Ministry of Education, the Superintendence of Banking, Insurance and AFPs (SBS) and the Office of Pension Standardisation (ONP). We are all uniting our efforts with one goal and purpose, which is a political, but also a human one, namely social inclusion in Peru. I believe that this forum will serve to spotlight the efforts of the Peruvian State to join this alliance for the expansion of pension coverage.

RISK AND OPPORTUNITY: RISK MANAGEMENT AS AN INSTRUMENT OF DEVELOPMENT

NORMAN LOAYZA[1]

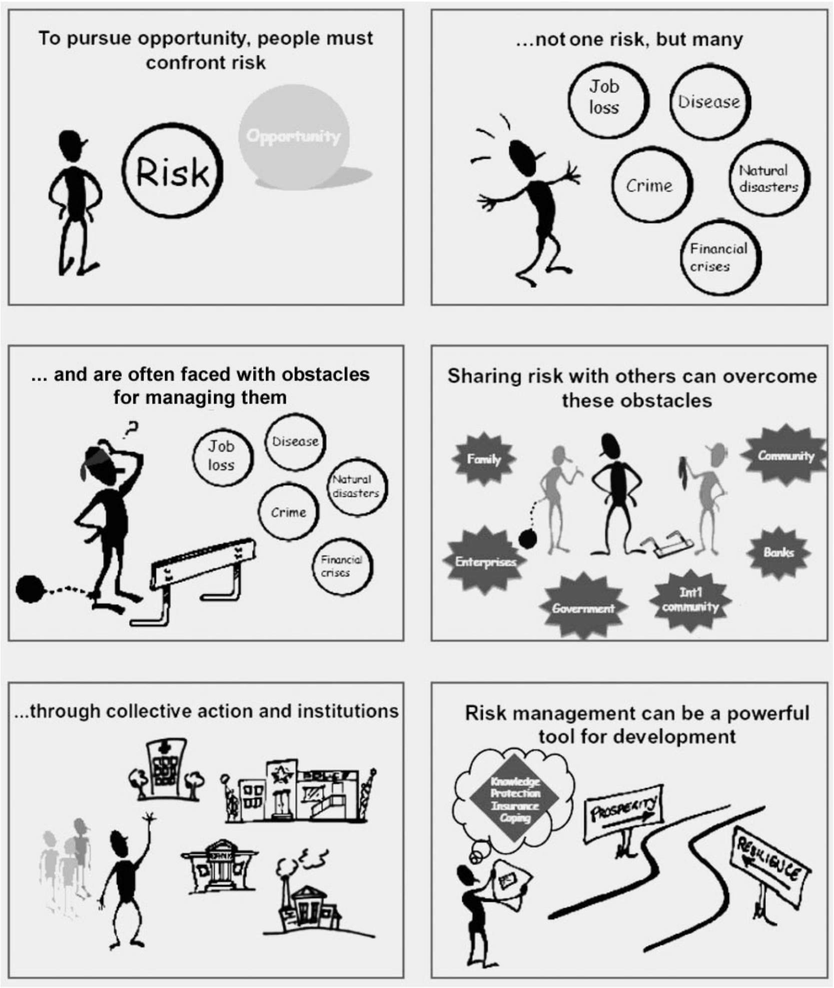
1 *Norman Loayza graduated in Economics from the University of Harvard, U.S.A. (1994). He currently works as Principal Economist of the Development Economics Research Group at the World Bank. He recently directed the "World Development Report 2014: Risk and Opportunity – Risk Management as an Instrument of Development". His research has dealt with various different areas of economic and social development, including macroeconomic management, economic growth, microeconomic flexibility, private and public saving, financial depth and stability, natural disasters, delinquency and violence. His advisory experience at the World Bank has also range over different issues in different regions and countries. Some examples include the business environment and economic performance in Latin America; informal and labour markets in the Middle East and North Africa; the gaps in public infrastructure in Pakistan and Egypt; saving for macroeconomic stability and growth in Sri Lanka, Georgia and Egypt; and pro-poverty growth in Indonesia and Peru. In the external service of the World Bank, he was Principal Economist at the Central Bank of Chile (1999-2000), where he advised on financial and monetary policy. Norman has edited 9 books and published nearly 40 articles in professional magazines and edited volumes.*

Last year I had the pleasure and privilege of directing the "**World Development Report 2014: Risk and Opportunity – Managing Risk for Development"**[2]. What we were seeking to do in this report was to explain why and how risk management can be used as an instrument of development. We wanted to answer the question as to whether we will be ready when the crisis hits us or the opportunity arrives.

The road to development is full of risks and opportunities. In fact, in order to take advantage of the opportunities that arise, individuals and societies must face up to risk. Risk and opportunity are like the two sides of the same coin and in fact, in their daily lives, individuals face not just one risk but any number of them, some being idiosyncratic and specific to people and families (such as job-loss, illness and old age), while others are systemic and affect many people at the same time (such as crimes, natural disasters and financial crises). Very often people and societies find themselves weighed down by obstacles that hinder their managing these risks appropriately; they are obstacles related with lack of information, with barriers preventing access to markets and public services and with the existence of financial restrictions.

2 *Further details of this publication can be found on Internet: http://www.worldbank.org/wdr2014*

FIGURE N° 1
RISK MANAGEMENT FOR EVERYONE: A VISUAL REPRESENTATION OF KEY CONCEPTS



SOURCE: WORLD DEVELOPMENT REPORT 2014, WORLD BANK.

Figure Nº 1 gives a pictorial representation of the key concepts in risk management. In the report we point to the way to overcome those obstacles and manage them effectively. The idea is that we share out the risks, and how to manage them, among the groups that occur naturally in society to benefit the individual, such as the family, the community, companies, the financial system (where the AFPs are to be found, of course), the government and the international community. All these can contribute in different but complementary ways to ensure that the management of risk produces better results. They achieve this through collective action and through all the institutions that are set up and developed by means of collective action to help the individual. In fact, the AFPs are an example of such institutions.

Risk management can be a powerful instrument for development, entailing two main goals. The first of those goals is the ability to recover when confronting adverse events such as financial crises, natural disasters or the loss of a job. The second is that of achieving prosperity by increasing the benefits that are obtained by taking and making the most of the opportunities that crop up along the way. The method for achieving these goals consists of four components: (i) acquiring knowledge about the situation; (ii) acquiring protection to reduce the probability of an adverse event; (iii) acquiring insurance to transfer resources from good times to bad times; and (iv) having the ability to recover and take advantage, once these risks and these opportunities have materialised.

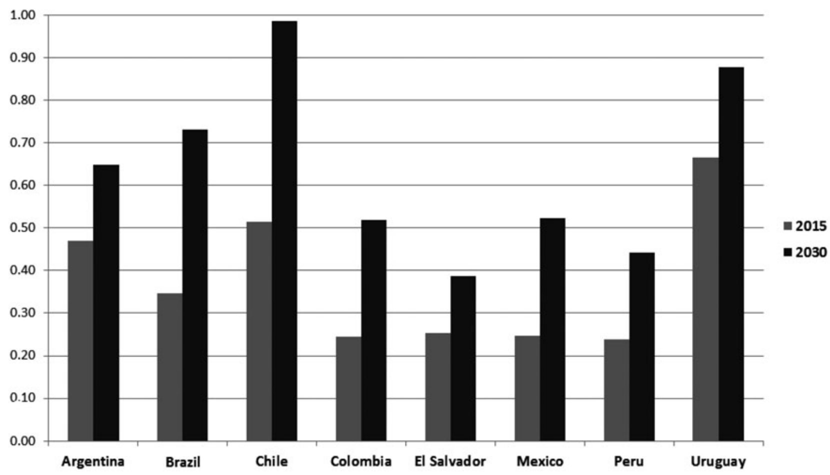
That, in a nutshell, is the main message of the World Development Report 2014. We look at the risks as a whole and present a comprehensive strategy for managing them.

The Risk of Old Age... without Income or Insurance

One of those risks that we studied is that of reaching old age without income or insurance. In fact, this risk is going to become even more pronounced and is an issue that was referred to very well by Santiago Levy and the other members of the panel. The number of pensioners is going to increase, particularly in the countries that are relatively young in demographic transition terms. Graph Nº 1 shows the ratio of the population over 65 years of age to the economically active population between 15 and 64 years of age, in various countries in the region, at two points in time (2015 and 2030), using demographic figures from the United Nations. In most countries, what we see is a striking increase in this ratio, and in some cases an enormous one. For example, in Chile's case, it will rise from 50% to almost 100%: in other words, in 15 years' time, the number of elderly people aged 65 or more will be almost equal to the economically active population.

GRAPH N° 1

INCREASING NUMBERS OF RETIRED PEOPLE
(RATIO OF THE OVER-65 POPULATION TO THE POPULATION AGED 15-64)

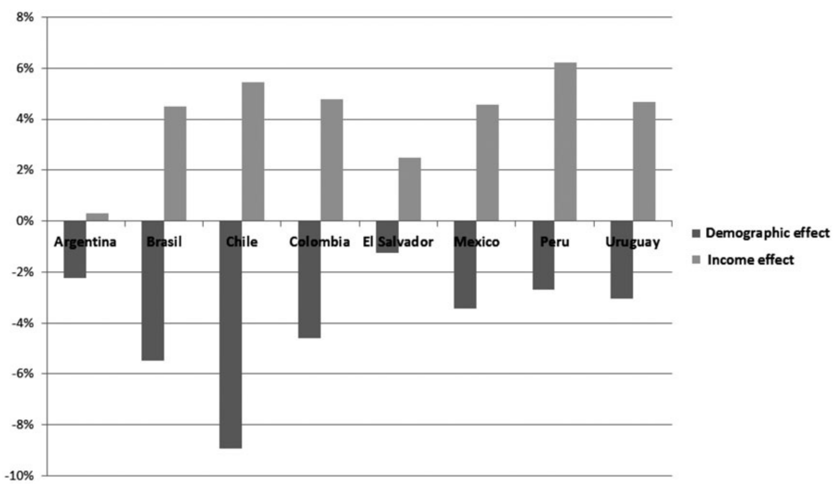


SOURCE: WORLD BANK.

This demographic change is going to have an impact on people's ability to save (see Graph Nº 2). In fact, according to some of the calculations we have made, most countries are going to have less ability to save between 2015 and 2030, simply because they have fewer people working actively. As we were pointing out, Chile is one of the countries where the ratio of elderly people is going to be highest, and in this case the effect of the fall in savings will consequently be higher than in the rest of the countries. There are two strong reasons for saving: the first is the demographic change and the second is the increase in income. In some countries, the effect of increased income is going to offset the demographic effect to some extent, but in most cases the demographic effect is going to predominate. So, what we have is a situation in which, when the demographic transition is complete, in a few years' time, and when pension savings are most needed, the countries will have least ability to save. The conclusion therefore, is that NOW is the time to increase pension savings.

GRAPH N° 2

DEMOGRAPHIC CHANGE WILL CAUSE A FALL IN PRIVATE SAVINGS
(CHANGE BETWEEN 2015 AND 2030 AS % OF GDP)



SOURCE: WORLD BANK.

Many people still do not contribute towards a formal pension (see Graph Nº 3). The percentage of contributors compared with the total number of workers is still very low, something that has been highlighted in this panel. In some countries it is very low indeed, as in Colombia, El Salvador, Mexico and Peru, where between 20% and 30% of all workers pay contributions for a formal pension. Only Uruguay has reached a contribution level that is comparable with that of the high-income countries.

As a matter of fact, this does not mean that people do not save. They do save, but they do it informally (see Graph Nº 4). In the year 2011 a survey was carried out on people from many countries around the world, and they were asked whether they saved, and how. In Graph Nº 4, one of the bars shows the percentage of the adult population that saved by some means while the other bar shows the percentage of people who save in a financial institution. As may be seen, in most countries in the region the percentage of people who save by some means or other is very much higher than the percentage saving in a financial institution. The quantity of people who are able to save in the financial system can be increased considerably, therefore people save because they know they should do so and need to do so, but they do not necessarily do it in a financial institution.

What can be done?

As regards pension savings, Hernando de Soto points out that people save by building houses, investing in infrastructure, educating their children, among other things. The question therefore is: How can people's savings in the AFPs be channelled more efficiently, to improve the ability to achieve an income in old age? What can be done about it?

There are three main actors involved: the future pensioner, the State and the AFPs, and each actor has a different responsibility.

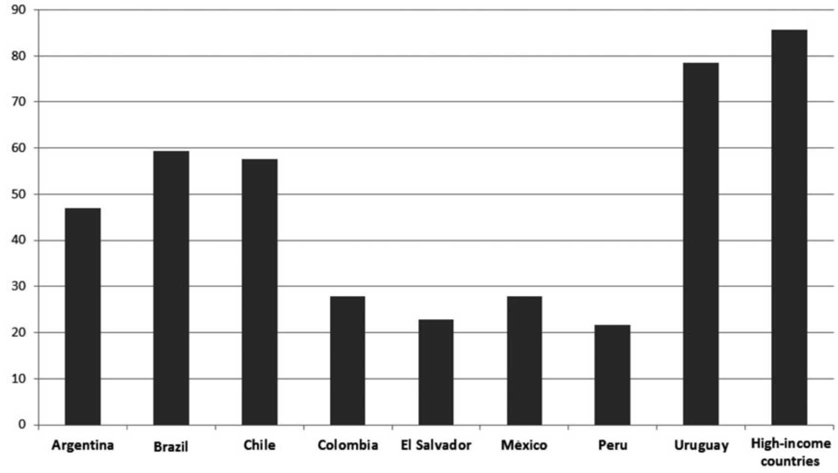
In the first place, financial education for the future pensioner is indispensable.

In the second place, the State needs basically: (i) to set clear, stable rules, eliminating uncertainty about the rules of the game and particularly eliminating the spectre of confiscation or expropriation (something which unfortunately happened in Argentina, with very negative consequences for that country and for the region too); and (ii) to expand general participation, making it separate from employment status, just as Santiago Levy is saying (the plan shown by Santiago Levy is not the World Bank's position, but it is the position that we have advocated strongly in the World Development Report 2014, essentially separating the contributions from employment status, so that all those who can contribute or wish to contribute can do so, regardless of whether they are formally employed, informally employed or unemployed).

And in the third place, for the AFPs, which are the third important actor in this group, some introspection is called for, to see how their efficiency and the quality of the service that they offer can be increased.

GRAPH N° 3

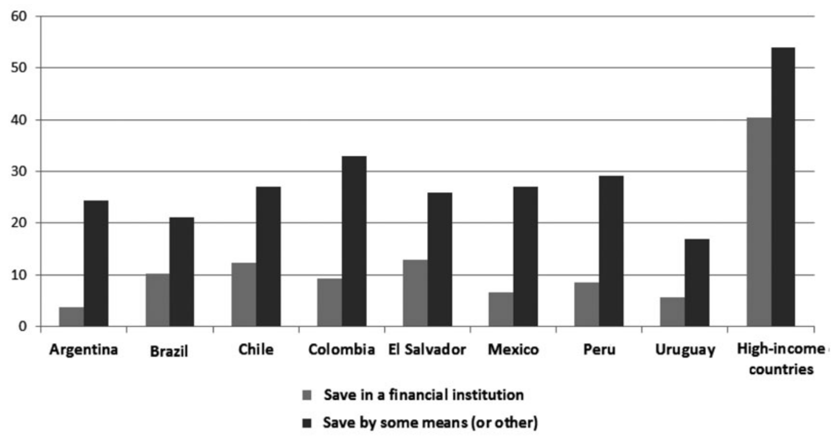
MANY DO NOT CONTRIBUTE TOWARDS A PENSION
(% OF CONTRIBUTORS COMPARED WITH TOTAL WORKERS)



SOURCE: WORLD BANK.

GRAPH N° 4

PEOPLE DO SAVE...BUT INFORMALLY
(% OF THE ADULT POPULATION)



SOURCE: WORLD BANK.

PENSION COVERAGE – THE CASE OF EL SALVADOR

RENÉ NOVELLINO[1]

1 *René Novellino graduated in Industrial Engineering from the Centro-American University José Simeón Cañas de San Salvador, and has a Master's in Business Administration with specialisation in Finance from the Higher Institute of Economics and Business Administration (ISEADE). He has worked in managerial posts in the administrative and financial area of companies in both the public and private sectors in El Salvador, and also as part-time lecturer in Master's in Business Administration and Financial Administration courses at several Universities and Higher Institutes in that country. He has performed a number of Consultancy jobs for local companies and international bodies, including the United Nations Development Program (UNDP). Between 1997 and 1999 he was a member of the very first team at the Superintendence of Pensions of El Salvador, which drew up the framework of secondary regulations required to launch the operations of the individually-funded system. Since 2005, he has been Executive Director of the Salvadorian Association of Pension Fund Administrators (ASAFONDOS), and is currently president of that body.*

The idea of the following comments is to present the case of a particular country, El Salvador, and attempt from that point of view to explain things that are probably true of the whole Latin American region.

El Salvador is a relatively small country, less than 21,000 square kilometres, with a population of approximately 6.2 million. Of those 6.2 million people we have an Economically Active Population (EAP) estimated at around 2.7 million. According to the official statistics, of those 2.7 million of EAP, our level of people in work is almost 94% with 6% unemployment. If we take that figure into account, it would seem that we do not have much of an unemployment problem in the Salvadorian case. However, if we look at the figures in greater detail, we see that the 94% of people in work includes almost 31% who are underemployed.

It therefore becomes evident yet again that, in our particular case, the problem is one of employment quality rather than one of unemployment. To a very considerable extent, this is explained by the economic conditions which make it difficult for people to find "formal" employment that will provide them with social security coverage. In many cases, we are talking about informal workers who are self-employed or work for small-scale businesses.

As regards the coverage of the social security systems, it must be said that almost 100% of the EAP is enrolled in the pension and social security systems. This reveals something that has already been said, namely that people, contrary to what is said or thought, definitely do not remain in the informal or formal sector throughout their lives, but migrate to and fro between those sectors throughout the worker's life-cycle. This is demonstrated in the case of El Salvador, because practically all the EAP is enrolled and yet, when an analysis is made of how many of those members pay contributions regularly, the situation changes dramatically. Even though 2.6 million people are enrolled in the pension system, only 769,000 people (28% of the EAP) contribute regularly to the health scheme. El Salvador presents an unusual situation, in that not everyone who contributes to the health scheme pays contributions into the pension scheme. This clearly shows that there is a certain degree of informality, even within the formal sphere. Of the total membership universe, only 671 thousand people (25% of the EAP) are contributing regularly to the pension system.

What are the reasons behind these results?

El Salvador is an economy in which it is estimated that almost 50% of the EAP works in the informal sector at any given point in time. That is the reality and has explained the on-going difficulty of achieving a greater level of coverage ever since the contributory systems were formed.

El Salvador also has other very specific situations that are probably not shared by the whole region, but are worth emphasising. First, there is the matter of contribution evasion that exists in the formal sector. This occurs due to the mistaken impression that the payroll tax does not have an associated benefit that is sufficiently attractive to encourage people to make the corresponding sacrifice.

A second element is the emigration issue. During the years of armed conflict, there was massive emigration, especially towards the United States. That emigration, which was motivated basically by the war at that point, is motivated today by family reunification and economic factors. It is estimated that up to 50,000 people continue to emigrate year after year to the United States, and obviously these are people who are enrolled in the pension system but who cease paying contributions.

How to tackle the problems?

What actions can be taken to tackle the problems? Our view is that there are actions that can be taken, even though the margin for action is very narrow. Regardless of the pension model that exists in a country, whether defined contribution, pay-as-you-go or mixed, as long as the problems of the labour market remain unsolved (these being the main causes of low coverage), the coverage problem will not be solved. There are some small actions which might, in El Salvador's case, aim to raise us at least to the Latin American average. Since we share some problems, what we could hope for is to raise pension coverage from 25% to 40% of the EAP, at least. We believe that there are things that can be done, inside and outside the system, to achieve that goal.

Inside the system we have a problem of low contribution density and that once again has to do with the mobility of the formal and informal sectors. In the case of El Salvador, people who are inside the system contribute, on average, for less than half the time that they remain in the working sector. The overall average in El Salvador is of 11 years' contribution, considering a person who enters the labour market at 22 years of age and leaves it at age 60. This is obviously too low, and there are actions that can be taken in that direction. Outside the system, of course, there are also actions to be implemented.

What should be done inside the system? From our point of view, a fundamental factor is to take steps to reduce or eliminate social security evasion and elusion. These are things that occur in the formal sector. Of course, it is necessary to have an institutional framework that endorses and accompanies any actions that may be taken by the Pension Fund Administrators, in order to ensure fulfilment of the payment obligation of those workers who are in the category of employees and have labour rights according to the legislation. There needs to be support on the part of the institutional framework, reinforcement of the Ministry of Labour, in the Legal Department, in fact, support from the State as a whole, to ensure that obligations of that type are met. Obviously, an effort must also be made for smaller companies, to make it easier to fulfil the conditions and not create paperwork that is too complicated. And finally, we need to look at the three cases in Latin America which have higher-than-average levels of coverage and see what is being well done in Chile, Costa Rica and Uruguay, for example, adapt it and see which courses of action can be copied.

The funded system in El Salvador is inclusive, but for the workers in vulnerable sectors we feel that it is necessary: (i) to evaluate the appropriateness of setting up schemes that include state subsidy for contributions (workers with incomes lower than the minimum wage currently in force); (ii) to encourage small businesses to become formal by means of incentives and less complicated paperwork; and (iii) to extend the coverage of Pillar Zero (non-contributory pensions) in coordination with the contributory program so as not to discourage workers from saving when they do have the ability to pay contributions.

From the outside of the system, several of the measures designed to increase coverage (subsidy in the active stage or payment of welfare pensions in the passive stage) imply having adequate government resources. These needs obviously compete for such resources with others, such as health and education, so it is necessary to commit to the growth of the economy, with the generation of formal jobs with social security coverage, in order to reduce the need for the State to set aside money for this purpose, and allow it to have greater tax income available to make the efforts to increase coverage sustainable.

This issue is of national importance. Unfortunately, in El Salvador, the subject of pensions is associated solely with the public funding problem inherited from the operations of the pay-as-you-go system, and a fundamental matter such as coverage is pushed to one side. We hope to be able to look at things in a comprehensive fashion and find better solutions to these problems.

BUSINESS DYNAMISM AND INFORMALITY

CLAUDIA COOPER[1]

1 *Claudia Cooper has an M.A. in Economics from New York University, U.S.A. She is currently Manager of Institutional Clients at Compass Group. She has been a research associate at the Research Centre of the Universidad del Pacífico (CIUP) and has also been part of the Ministry of Economics and Finance (MEF), first as a member of the Consultancy Team and then as Director of Economic and Social Affairs. She has also held several important positions at the Banco de Crédito del Perú, where she worked as Head of the Analysis and Development Service and later as Head of Cash Management. She has also contributed as a columnist in Diario Gestión and Perú 21.*

I would like to thank FIAP for allowing me to comment on such an important issue as financial inclusion, and in my case I am going to take Peru as a concrete example.

When one begins to look at the information in Peru, one sees that we have been quite successful in enrolling people in the system. What happens is that this system is not entirely formal, but rather semi-formal. On looking at the information, it is possible to see that the number of people registered in the Peruvian institutions has increased considerably, in both labour and tax schemes. The problem lies in the structure of those registrations. There is a preference for the one-person structure: 84% of people who are on the RUC[2] in Peru – in other words, who have a tax registration – are natural persons who are involved in business activities; only 16% are registered as companies. Furthermore, within the universe of legal entities, one third corresponds to one-person companies (see Table Nº 1).

Another phenomenon to be highlighted is the fact that companies are highly fragmented. 75% of companies in the manufacturing sector are one-person enterprises and 94% correspond to companies with fewer than 10 workers. Considering only those contributors registered as companies, 25% correspond to one-person companies, while 70% are companies with fewer than 10 workers (see Graph Nº 1).

2 *RUC = Single Contributors' Register.*

TABLE N° 1

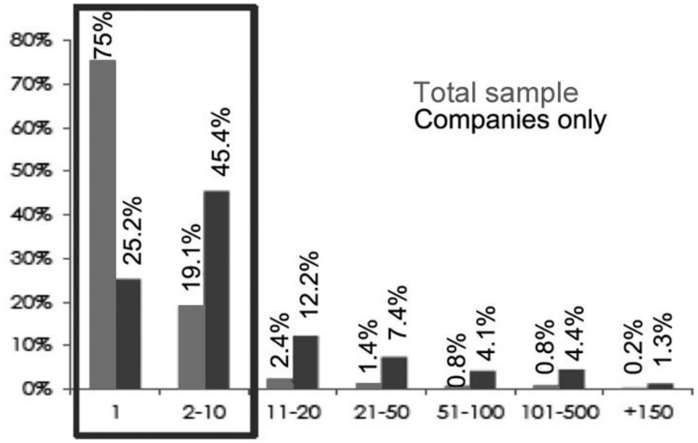
BUSINESS STRUCTURE BY ECONOMIC SECTOR

	Total Coverage (RUC)	Total Registration (RUC)		Companies Only	
		Individuals	Companies	1 worker	2+ workers
Commerce	56%	88%	12%	38%	62%
Services	66%	83%	17%	34%	66%
Industry	68%	76%	24%	27%	73%
Transport	54%	66%	34%	24%	76%
Construction	90%	30%	70%	23%	77%
Total	60%	84%	16%	34%	66%

SOURCE: CENEC, 2008, BUSINESS DYNAMISM IN PERU (IDB MIMEO).

GRAPH N° 1

BUSINESS STRUCTURE – INDUSTRIAL SECTOR
(PERCENTAGE OF THE N° OF COMPANIES BY SIZE)



SOURCE: CENEC, 2008, BUSINESS DYNAMISM IN PERU (IDB MIMEO).

What are the reasons for the above results? In Peru, in an attempt to attract those people who were outside the system – something at which we have been tremendously successful - we have begun to produce schemes that are much simpler and less costly than in companies of larger size. In that way the burden of taxation and labour increases (in both cost and complexity) with the size of the company (see Table Nº 2).

TABLE N° 2

	Taxation Scheme	Labour Scheme	Pensions and Social Security	Accounting
Uni-personal (1 worker)	Independent Special scheme (RUS[3])			
Micro-businesses (1-10 workers)	Special Scheme (RER[4])	Law for PYMES[5] (= 1/2 of cost *)	AFP or ONP[6]/ EsSalud[7] (= 1/2 of cost *)	Simplified
Small Business (11-20 workers)	General Scheme	Law for PYMES (= 2/3 of cost*)	AFP or ONP/ EsSalud	Complete
Medium-sized Business (21-100 workers)	General Scheme and Distribution of Profits	Law of PYMES (= 2/3 of cost *)	AFP or ONP/ EsSalud	Complete
Large Business (over 100 workers)	General Scheme and Distribution of Profits	General Scheme	AFP or ONP/ EsSalud	Complete

SOURCE: THE AUTHOR.
*AWARDS, HOLIDAY ALLOWANCES, SEVERANCE COSTS, ETC.

3 *The Single Simplified Scheme (RUS from initials in Spanish) includes those business owners whose gross income (total income) and acquisitions do not exceed PEN 30,000 per month (approx. USD 10,714 per month), in each case.*

4 *The Special Income Tax Scheme (RER from initials in Spanish) is designed for individuals, conjugal partnerships, undivided estates and legal entities with domicile, whose net income or acquisitions do not exceed PEN 525,000 per year (approx. USD 187,500 per year); whose value in fixed assets allocated to the activity, with the exception of lands and vehicles, does not exceed PEN 126,000 per year (approx. USD 45,000 per year); and which do not have more than 10 people working per shift.*

5 *PYMES = Small and Medium-sized Businesses (from initials in Spanish).*

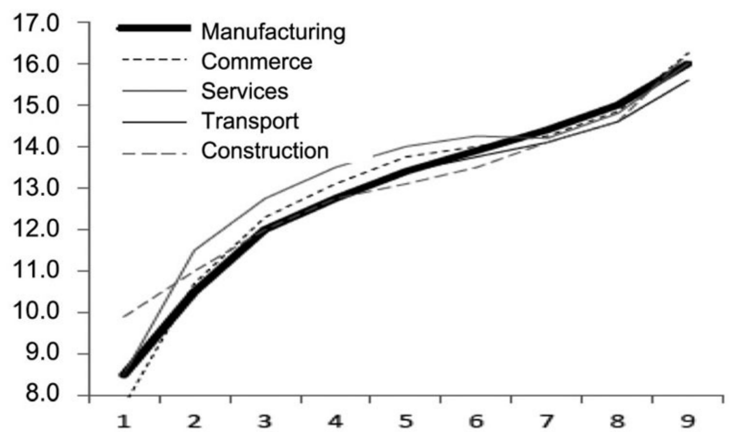
6 *The ONP (Pension Standardisation Office) is the body that administers the pay-as-you-go system in Peru.*

7 *The Social Health Insurance (EsSalud) is a decentralised public body, the aim of which is to provide coverage for the insured and their dependents, by means of prevention, promotion, recovery and rehabilitation benefits, economic benefits and social benefits that correspond to the contributory scheme of the Social Health Insurance, in addition to other kinds of human risk insurance.*

In Peru, therefore, the fact of growing implies facing up to a much more complicated situation. This is absolutely consistent with the pattern of business that exists in our country. Is that what we ought to have? Not really. If one looks at business productivity all over the world, the larger the size of the company, the higher the salary and productivity (see Graphs Nº 2 and Nº 3). This implies that regulations should foster business growth.

GRAPH N° 2

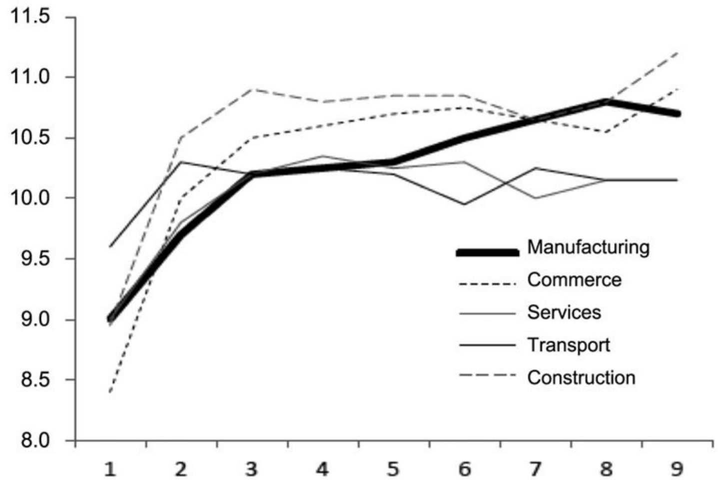
WAGES PER SIZE OF COMPANY – 2008



SOURCE: CENEC, 2008.

GRAPH N° 3

LABOUR PRODUCTIVITY PER SIZE OF COMPANY – 2008



SOURCE: CENEC, 2008.

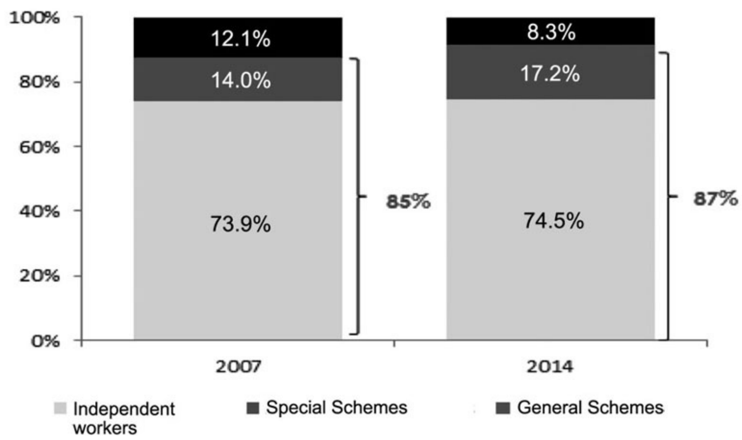
Why does this phenomenon occur? It occurs because, on the one hand, larger companies have a greater economy of scale and therefore greater possibility of reinvesting in themselves and investing in more technology and productivity, and on the other hand, they have the ability to hire people who are more specialised for each line of business, and that makes them more productive. The size of the company is directly proportional to its labour productivity and consequently, to its ability to pay higher wages.

So this is where we need to be creative and see how to move on from a model that is successful in attracting people to a model that is successful in producing an on-going business development that will enable us to become more productive as a country. In fact this has not happened. If one simply looks at what has occurred, one sees that the companies/independent individuals who carry out business activities (one-person companies and special schemes also designed for one-person companies or companies with very few workers), they have increased their presence in Peru's business structure. They were formerly 85% and have now grown by 2 percentage points. If we look carefully at the economic entities that are registered as companies, the increase has also been obvious in the case of the small ones.

The special schemes (the RER and RUS) grew to double figures during the period 2007-2014 and increased their share (they have increased from constituting 54% of contributors to being 67% of them), while the general scheme (applying to almost all companies that have over 50 workers) lost share participation in the contributor portfolio (see Graphs Nº 4 and Nº 5). In this way, the special tax schemes have limited the growth of business in Peru.

GRAPH N° 4

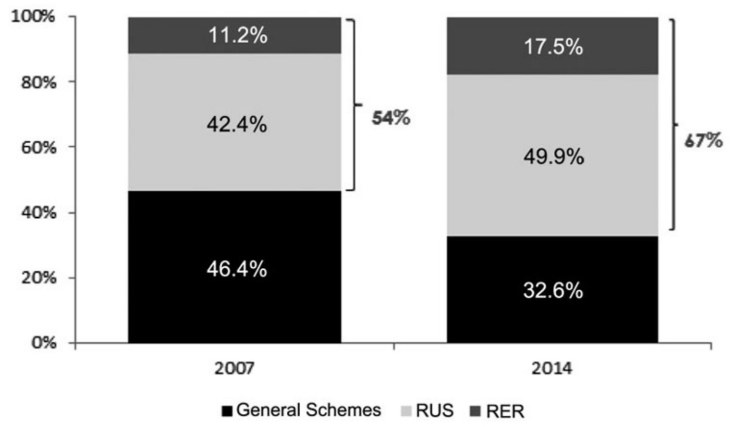
CONTRIBUTORS PER TYPE OF TAXATION SCHEME (% OF TOTAL)



NOTE: APPLICABLE TO COMPANIES WITH ONLY ONE WORKER AND CONSISTS OF A FIXED AMOUNT THAT COVERS IVA AND INCOME TAX PAYMENTS.
SOURCE: SUNAT.

GRAPH N° 5

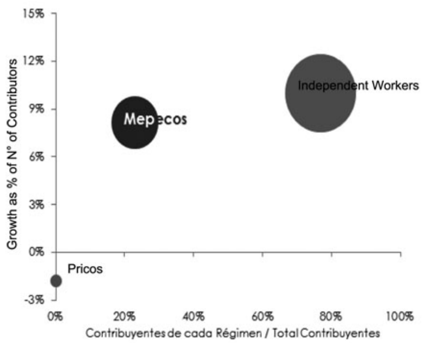
BUSINESS CONTRIBUTORS PER TYPE OF TAXATION SCHEME (% OF TOTAL)



NOTE: APPLICABLE TO COMPANIES WITH ONLY ONE WORKER AND CONSISTS OF A FIXED AMOUNT THAT COVERS IVA AND INCOME TAX PAYMENTS.
SOURCE: SUNAT.

This can also be looked at in another way: if one enters the web page of the National Superintendence of Customs and Tax Administration (SUNAT), what one sees is that independent workers (4th category) constitute 3/4 of the total and show the highest annual growth (10% per year), a rate significantly higher than the business categories (3rd category). Furthermore, within the group registered as companies, the small and medium-sized companies make up 25% of contributors (their participation rose 8.2%), whereas the main contributors account for less than 1% of the total and decreased by 1.8% (see Figure Nº 1). It is much easier for an independent worker to register as such and pay less in tax, rather than registering as a company, because in the latter case his/her contribution increases (he/she not only has to start complying with labour law, but also has to pay income tax: meaning that the system is much more complicated). For that reason, what the taxation systems are doing is slant the business structure more towards the smaller companies, encouraging the participation of the informal sector.

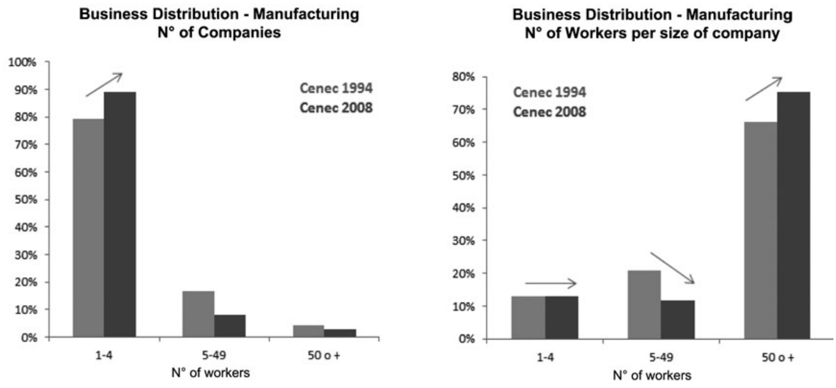
FIGURE N° 1
PARTICIPATION AND GROWTH PER TYPE OF TAXATION SYSTEM



	2007	2014	Average Annual Growth
Principal Contributors (Pricos)	0.4%	0.2%	-1.8%
Medium and small Contributors (Mepecos)	24.9%	23.0%	8.2%
Individuals involved in business activities (Independent workers)	74.7%	76.8%	10.0%

During the period 1994-2008, large companies had grown, whereas the small ones had been condemned to remain the same size or disappear. If the Census data from 1994 and 2008 are compared, one sees a larger share of small companies, but these would not have had the ability to grow because they would have been unable to increase their hiring capacity. The opposite occurred with the large companies: even though there was no increase in the number of these between the two years, they were indeed able to increase their ability to create employment, contributing more to their growth (see Figure Nº 2). So, for example, companies with more than 5 workers have lost out in terms of their share. However, if we look at what has happened with their ability to hire, the companies with over 5 workers have been able to take on more people in relative terms. Why does that happen? Because, if the company is larger and more productive, then it has the ability to absorb labour and tax costs; by contrast, if the company is small and does not have that ability, it is condemned to remain at exactly the same size. So, what one sees is that very small companies move in and out of the market, but they do not take on more people and they do not grow. That is the reality confronting Peru today.

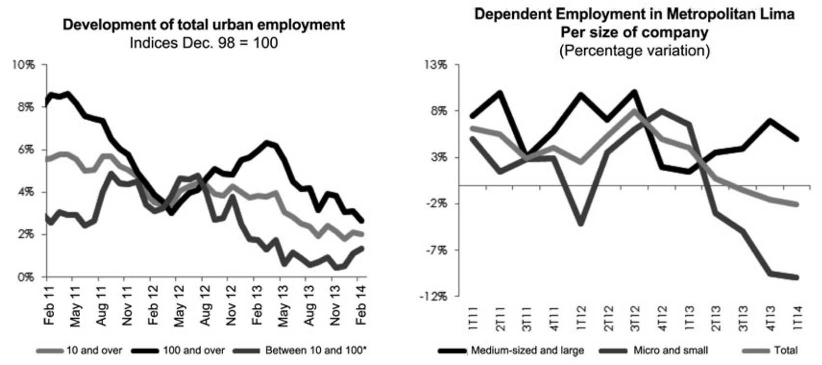
FIGURE N° 2



SOURCE: CENEC 1994 AND 2008. BUSINESS DYNAMISM IN PERU. MIMEO IDB.

Figure Nº 3 shows the data put forward by the Banco de Reserva del Perú (BCRP) and the National Institute of Statistics and Information Technology (INEI). The information reinforces the results of the census shown above. What we see is that the companies with 100 workers or more have shown higher growth rates than the companies with 10 workers or more. What the data is saying is that it is the big companies that have the ability to grow faster, showing this asymmetry between the hiring capacity of the large company (which is able to absorb those costs) and the small company (which cannot do so). The recent slow-down in employment is significantly lower in the larger companies than in the smaller ones. Given the difficulty of the PYMES to adjust to the economic cycle, expansive cycles tend to encourage the creation of new PYMES, while slow-downs mean that they leave the market.

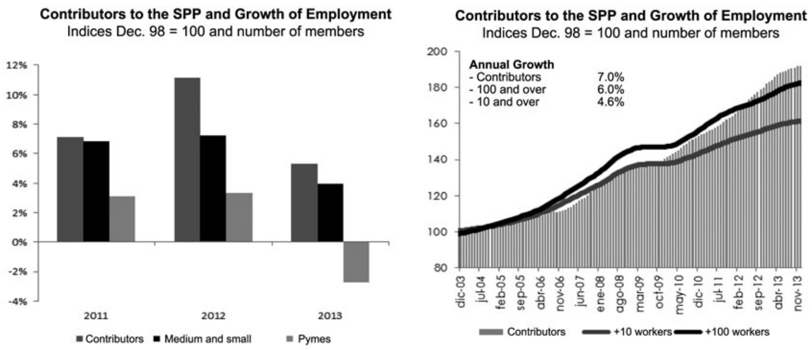
FIGURE N° 3



NOTE: ESTIMATES BASED ON PERU'S COMPANY STRUCTURE.
SOURCE: APOYO, INEI, BCRP.

The coverage of the pension system is more closely related with the growth of the larger companies than with that of the small ones. A look at the contributors in the Private Pension System (see Figure Nº 4) shows that in actual fact they are drawn from companies with over 100 workers, because they are much more stable and are in a position to generate more work. And that is basically what could be observed in the studies that we made at the Universidad del Pacífico some years ago.

FIGURE N° 4



SOURCE: APOYO, INEI, BCRP.

Conclusions

The business landscape in Peru can be divided into two groups. On one side are the small, informal companies with few abilities to perform in competitive markets. On the other side are the large, competitive companies, which are capable of absorbing technology and are highly interconnected.

Business development shows the ability to grow in the large companies but not in the small ones. It is possible to observe a greater entry of small companies that would not have been generators of more employment (due to their inability to grow). The large companies, even though they had apparently not increased in number, would have increased in size (due to more hiring).

Informality in large companies is unlikely, due in part to the greater difficulty of keeping out of the regulator's line of sight, and also due to the fact that their greater economies of scale make it possible to absorb labour and tax costs.

What we have had in Peru is a design of policies that have really been extremely effective in attracting very small companies into the system, but made on the basis of a vision that is too static. I believe that the challenge lies in how we can make these policies take a more dynamic view of each company and really allow them to adapt a little more to the vicissitudes of the economic cycle.

Business legislation has undoubtedly been successful in incorporating the informal sector. The issue is that its design is based on the current business structure, lacking so far a more dynamic view that will allow companies more flexibility to the economic cycle. The coverage of the pension system will be much more successful if we can manage to include far more companies in the environment of the larger companies.

PART II

YIELD AND RISK MANAGEMENT

PENSION FUNDS: INVESTMENT RETURNS AND RISK MANAGEMENT

GRAHAM GOODHEW[1]

1 *Graham Goodhew is Executive Director of JPMorgan Chase and Director of JPMorgan Asset Management (Europe) S.à r.l. With a background in Internal Audit and Risk Management, he was instrumental in the setting up of Chase's Institutional Asset Management business in London in 1994 and after the merger with Flemings in 2000 he relocated to Luxembourg in 2001 to head up Risk Management for the European Retail business of JPMorgan Asset Management. With the implementation of Undertakings for Collective Investment in Transferable Securities (UCITS) III, he moved in 2005 into the new role of head of Corporate Governance for JPMorgan Asset Management (Europe) S.à r.l. He has been active in various industry working groups, organised by the European Fund and Asset Management Association (EFAMA) or the Association of the Luxembourg Fund Industry (ALFI), related to UCITS, Corporate Governance, the Markets in Financial Instruments Directive (MiFID) and Risk Management, among others.*

This brief article is aimed to share some views from my personal experience in the fund industry and are not attributable to my employer, JPMorgan. Some of them may be controversial and others very obvious, derived from the basic concepts that are commonly known.

My views are organized in four topics. First, the interaction between the investment regulatory regime of pension funds, the fiduciary responsibility of fund managers and the expertise requirements of them. Second, the measurement of fund performance and consistency of simultaneous use of investment benchmarks and asset class exposures limits. Third, the use of derivatives and alternative investments. And finally, the infrastructure investment modalities used by pension funds across countries with Individual Capitalization Systems.

I. The interaction between the investment regulatory regime of the pension funds, the fiduciary responsibility of fund managers and the expertise requirements of them.

Around the world, we have seen the move from State funded pension schemes (*"pay as you go*, PAYGO) and from Defined Benefits (DB) schemes (where often the employer took the investment risk) to Defined Contribution (DC) schemes. This means that the investment risk is moving to the investor, and the problem is that most investors do not have the expertise to actually manage that risk or, perhaps, to understand the investments that they are being advised to buy.

Europe is a good example of a mature market where, until recently, as people have joined the workforce they would normally they have expected to be covered by PAYGO systems, thinking that will be perfectly adequate to fulfill their requirements when they retire. It is still a slow and a hard job to get a lot of people in the European market to realize that this is not going to continue in the future.

Germany is an example: typical professionals probably start to work at the age of 25 or 26, by the time they have been through university and done their Master's degree, and they probably, until quite recently, have considered that they ought to retire at 55, which gives them less than 30 years to buy a house, raise a family, save for a pension and then live for another 30 years after that. This is basically the model that has been the norm in many European countries. It is a model that is unsustainable. Statistically, a child born today in Western Europe has a very good chance of living to be 100, which means that even with the pressure to raise retirement ages, the pension scheme still has to last for probably 30 to 40 years after retirement.

Politically, we see that in Europe there can be tremendous pressure against rising pension ages. In some countries as soon as there is pressure to raise the pension age, immediately there is a political action in the streets objecting to that, and interestingly some of the biggest objectors are university students and people who have not yet started their careers.

It is a time of change. Each jurisdiction is really going to come up with its own regulatory regime as to what is appropriate to its own citizens. There probably is no one size that is going to fit every country. Clearly there are specific challenges, for example in South America. We see, for example, a mixture between mandatory and voluntary schemes. We also see a mixture between remaining PAYGO schemes and various forms of private pension schemes. We often see that contribution for the pension is coming now either from the member (the investor), the employer or from the government, and in many cases a combination of these three sources.

The ideal world is that all employees start a private pension scheme on which they take the investment risk, preferably as young as possible. We have examples across the world of these private investment schemes: the Individual Retirement Account (IRA) and 401(k)s in United States, the Self-Invested Personal Pension (SIPP) in the UK, etc.

One of the things that we perhaps do not push enough to investors is that what they put in in the first 10 years of work (between 25 and 35 years) is worth significantly more than what members are putting in when they have more money (at 55 and coming up to retirement).

The average investors do not have the financial knowledge to invest their own pension savings. They therefore look to pension fund managers or other investment advisors for help in making the right decisions.

The regulatory regime, whatever it may be, must support an appropriate level of risk being taken by the investor. Otherwise, pension plans are never going to achieve the returns needed to meet the investment objectives.

I think we have to bear in mind that investments can never be risk-free; there is always an element of risk. What we are talking about is the appropriate level of risk management and a proper identification of those risks.

Also I think that there has to be a lot of focus on the advisors. We see in a lot of legislation that there is a very big concern about conflicts of interest, about how investment advisors are paid, and as to whether the objectives of the investment advisors are adequately aligned to the objectives of the investors.

Are those investment advisors themselves adequately trained and suitably qualified to make sure that they can properly advise their investors? The level of knowledge has got to cover all markets, all instruments. It is probably true to say that many domestic markets probably are not going to be big enough to support the investment requirements of pension plans. Investors are typically going to look geographically overseas, internationally, and indeed they probably should if they are going to get the right diversity in their pension plans.

II. The measurement of fund performance and consistency of simultaneous use of investment benchmarks and asset class exposures limits

One important thing we have to always remember is that we need to know the risk appetite of the investor . We need to know what the risk profiles of the investments are and we have to understand that risk appetite is not static; it changes throughout the life cycle of the investor.

The ability of investors to take risk exposure varies according to age, how close they are to retirement and relative to other financial commitments. Members investing in their 20s into a pension plan would be badly advised if they are suggested to simply seek capital preservation and they are not looking at riskier investments. Investors perhaps are not looking at the returns that they would need in order to build a big enough pension pot to be able to retire in a comfortable way.

This clearly means that the exposure to different asset classes must be considered over what will be typically a 30 to 40 years investment horizon with different limits being applied during the life cycle to ensure the right risk profile of investments.

This typical 30-40 years of investment horizon and the changing risk appetite means, on one hand, that youth equals higher risk and growth strategies (Equities, International Investments, Currency, etc.), and on the other hand, that maturity equals lower risk and capital preservation (Fixed Income, Government Bonds, Domestic Investments, Inflation Linked Instruments, etc.). Certainly this last type of profile should be considered by investors in the 5 to 10 years before their retirement.

When investors get closer to retirement, their ability to recover from a downturn in the market becomes harder (they do not have enough time to recover).

Many countries and fund managers have adopted some sort of lifecycle-type approach, where the rules define different groupings into pre-defined risk profiles for different age groups. Examples include: (i) "A to E rating", where A may be the most conservative and therefore aimed at those closer to retirement, and E is riskier and designed for younger investors who can accept more risk as they are further from drawing on their pension; (ii) Groupings based on age, with risk profiles of the funds offered to each group decreasing as the investor moves into an older group (for example: <26; 27-45; 46-59; >60).

A key question is whether this kind of approach is something that needs to be regulatory-driven, or is something which can be market-driven. Personally, I do not think there is too much difference between them: if investors are properly advised, they will be following this type of investment process anyway.

Pension funds must consider a long investment horizon and take a structured view and not respond to short term market movements.

Simply safeguarding capital is not adequate, while speculation and inappropriate levels of investment risk are also unacceptable. An over-focus on capital preservation and capital protection can be very detrimental to the objectives of a pension plan.

This also suggests that diversity of investments is very important to ensure negative effects in some investments are offset by other positive returns, and capital preservation can be balanced against income growth. There has to be a diversity of investments as well as an ongoing reassessment of the risk appetite and risk profiles. That is, in my opinion, the role of the fund advisor, because the investor probably does not have the expertise to do that.

Volatility concerns all investors and a sharp drop in a market will tend to drive a "flight to safety" e.g. Equities to Government Bonds. However, this is not necessarily the right response when considering the long term. If we just look at the crash of 2008 and take the US market as an example, the Dow Jones Index saw 4 of its 5 worst days ever, but it also had 4 of its 5 best days:

- The first big drop was on September 29, 2008, with a 6.98% fall. At October 1, 2008, the Index was at 10,831; it fell eventually to 6,547 on March 9, 2009.
- The first big rise was on October 13, 2008, with a 11.08% rise.
- On the May 7, 2014, the Index stood at 16,519.
- An investor selling after the first big drop and investing in Fixed Income at 2%

would have earned 12.61% over the period. If they had been able to invest at 5%, they would have earned 34%. If they had stayed invested in Equities (Dow Jones), they would have seen a growth of 52.5%.

The important point is that the right asset class exposures must be considered and appropriate risk exposure must be taken relative to the investors risk appetite. Financial advisors are getting more and more concerned about being sued for bad advice.

There can be a lot of pressure on financial advisors to recommend a "*flight to quality*" or a "*flight to safety*" when the *markets* get very volatile, to suggest, for example: *"Now's the time to get out of equities. Let's get into Fixed Income*. Let's preserve your capital." Even with the crash of 2008, when the market continued to drop in the US down to March of 2009, at 2%, they would only have actually increased their investment by about 13% up until today; if they had managed to find an investment with a return of 5%, they would have gone up 34%. If, however, they had taken the long-term view and said: "*I need equities. I need to stay in equities because I've got another 25 years to go before I retire"*, their investment would have gone over 50%, by staying with the Dow Jones Index. It is a very simplistic example, but I think that it is an important one because it shows that moving to what looks to be safest option is not going always to help to achieve the end investments.

If "riskier" assets are allowed to be held as part of pension funds, how do we ensure that the investors are adequately protected? Clearly there is no room for speculation and there is no room for gambling in the pension fund world. It has got to be a properly-constructed diverse investment plan. I have made the point that we cannot completely protect against market risk. We should allow that, but we should also accept that appropriate investment and diversification can actually give the required return, but it will not be a smooth ride. If we do not take a longer term view and we only look at the performance quarter on quarter, there will be times when people will want to get out.

One of the things that I think we have to look at closely is the advice being given to investors. There has been a big move to regulate investment products, perhaps far more than investment advisers. Are the investment advisors adequately educated in order to give advice? In addition I do not think that any country so far is adequately addressing the investor education issue. Investors are woefully unaware of financial matters and, if they get all their financial education from some of the press when there are problems in the market, that is not going to help them. It is going to make them more nervous of actually investing. We must build confidence back in the market.

III. The use of derivatives and alternative investments

What about the actual use of derivatives and alternatives? I take a quote there from a recent paper of the European Commission (EC)[2] , which was looking at the long-term financing of the European economy, and one particularly interesting quote was the following: "*The Commission welcomes that pension funds are increasingly turning to alternative investments such as private equity and infrastructure to diversify portfolios and provide higher returns".*

However, that EC paper goes on to quote a recent OECD survey[3] of 86 large pension funds and public pension reserve funds that found only 1% of their assets were invested in unlisted infrastructure investments and 12%-15% were invested in other alternative investments (the rest of the assets were invested in Fixed Income, Cash and listed Equity).

Alternative instruments in general and derivatives in particular, always seem to get people very concerned. Alternative instruments cover a very wide range of instruments; if they are appropriately used, I would argue that they do have a place in pension plans. The use of alternatives is growing within pension plans as long term returns are sought to meet the long term liabilities of the funds.

Many Regulators currently see derivatives as only being suitable for pension funds if their use is limited to "hedging" or "efficient portfolio management". This is perhaps missing out on the investment opportunities that may be afforded by the use of these types of assets.

The use of derivatives requires, though, the use of suitable Risk Modelling on the portfolio of the pension fund, typically Value at Risk (VaR), Stress Testing and Back Testing.

IV. Infrastructure investment modalities used by pension funds across countries with Individual Capitalization Systems

There is a growing recognition of an opportunity to match the long term investment requirements of personal pension plans with the need to finance infrastructure projects with private funding rather than tax revenue. The EC in that same paper

2 *In March 2014 the European Commission issued a Communication from the Commission to the Council and the European Parliament on "Long - Term Financing of the European Economy".*

3 *Annual OECD Survey of Large Pension Funds and Public Pension Reserve Funds, published in October 18, 2013.*

indicated previously, has stated two objectives: *"creating a single market for personal pensions and potentially mobilizing more personal pension savings for long term financing"* and *"ensuring that Institutions for Occupational Retirement Provision (IORP) will not be prevented from investing in long-term assets"*.

Also, in November 2012, the EC invited the European Insurance and Occupational Pension Authority (EIOPA) to prepare technical advice on the development of a EU-wide framework for the activities and supervision of personal pension products: *"This would represent an opportunity to mobilize more savings for financing long-term investment, thereby fostering both retirement income adequacy and economic growth"*.

It is important to note that all governments have a slight conflict of interest in this context. If they can get private pension plans and other private investors to invest in infrastructure projects, it means that they do not have to pay for these from tax revenues, so there is a bit of a double-edge sword. But, obviously, long-term projects such as these have a great benefit as an investment for pension plans, which have a similar 30 to 40-year life cycle.

Participation in infrastructure by pension funds often takes one of the following forms:

- Purchase of debt issued by infrastructure operators.
- Unlisted investment institutions.
- Equities of listed infrastructure companies or through infrastructure funds.
- Associations with other companies to be co-owners and jointly operate the investment (Project finance).

I would come back to the individual investor, who is not going to have the expertise to invest directly in these types of projects. They will typically go through some sort of structure project, which will give them exposure into the pension plan.

YIELD AND RISK MANAGEMENT

YIELD AND RISK-MANAGEMENT IN PENSION FUNDS

JOAQUÍN CORTEZ[1]

1 *Joaquín Cortez has a degree in Business Administration and a Licentiate in Economic Sciences from the Pontificia Universidad Católica de Chile, with a Master's in Economics from the University of Chicago, United States. From June 1996 to August 2006, and later from August 2008 to October 2011, he was Investment Manager at AFP Provida. In the interval from August 2006 to August 2008 he occupied a post at regional level in the Pensions and Insurance Unit of BBVA. From October 2011 to October 2013 he was Chairman of AFP Provida BBVA. He currently serves on several boards of directors of companies such as Compañías de Seguros Corpvida and Corpseguros, the Compañía Pesquera Camanchaca and AFP Habitat in Peru. He is also Dean of the School of Business Administration of the Universidad Gabriela Mistral in Chile.*

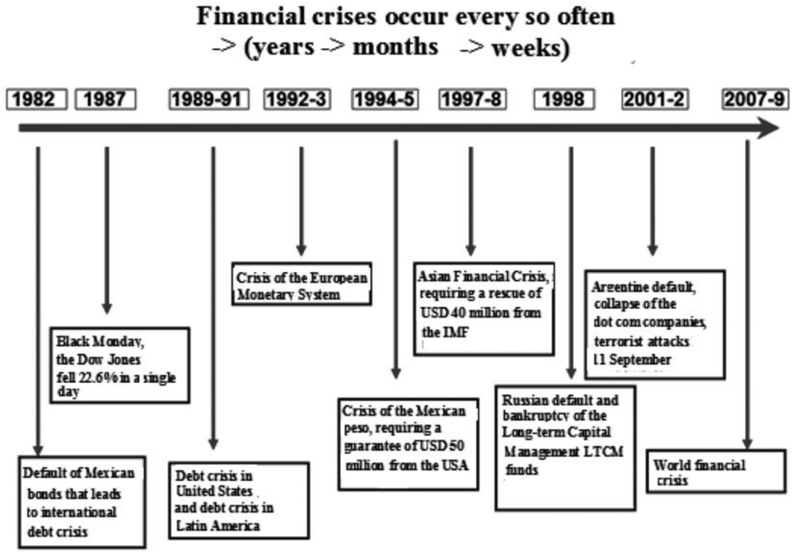
I want to start by stating that the opinions expressed below do not represent any of the institutions in which I worked in the past, nor those with which I work nowadays, so I take full responsibility for them. Furthermore, I should warn you that I left active fund management two years ago, so I may be somewhat out-of-date.

After 15 years in fund management, I learned that the correct answer to the question about which risks have to be faced by investment areas, was ALL of them. We are talking about risks involving liquidity, matching, credit, trusteeship, inflation, pre-payment, tail, agency, operations, etc. And there may be a few more that we have not yet discovered.

Now obviously the risks that are best-known and most discussed are financial. Financial crises occur more frequently than one thinks (see Figure Nº 1). In Chile we received a heavy impact during the 2008 crisis. Our most aggressive fund (Fund A) fell 40%, the second most aggressive fund (Fund B) fell 20% (see Figure Nº 2) and, as an industry, we were obviously severely criticised. We were asked how it was that we had not foreseen the collapse of the markets. Fortunately, in the following years the funds under management recovered the losses of 2008 and the first quarter of 2009 with flying colours.

After that crisis of 2008, and as a result of it, a series of proposals or initiatives sprang up. For example, interest arose in studying life-cycle funds as an alternative to multi-funds; there were suggestions aimed at reducing the percentage invested in shares by the more aggressive Multi-funds; proposals to modify the default rules or to impose more restrictions to enable people to choose the riskier funds; and also supporters of the idea of imposing value-at-risk limits (VaR) on the pension funds, among other measures.

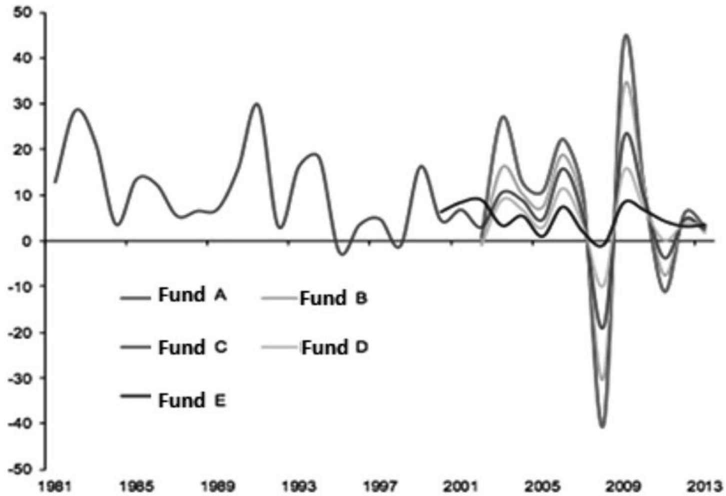
FIGURA N° 1



SOURCE: THE AUTHOR.

FIGURE N° 2

CHILE – REAL RETURN ON PENSION FUNDS (1981-2013)



NOTE: DATA AS OF 31ST JULY 2013
SOURCE: THE AUTHOR

When I was preparing these comments and going through some earlier presentations, I thought about what I could say that might add value to all that has already been written and discussed. And I decided, with considerable arrogance, to draw up and share a kind of "supermarket list" of the things that, according to my experience, I believe to be important in the management of pension funds.

1. First, the real risk is not short-term volatility but the failure to reach the desired pension. In Chile, if one talks to investment managers, all recognise that this is the real risk, but it has not yet been internalised and neither are the necessary steps being taken.

2. Second, the most important thing for reaching an optimum replacement rate is saving (contribution density).

3. Third, when one looks at the life-cycle funds, it can be seen that these have a greater proportion of shares at both the beginning and end of the working life, so they must have been much more affected by the 2008 crisis.

4. Fourth, in order for the multi-funds to function, it is obviously necessary to have good pension advice. With multi-funds, it is necessary for there to be people who can advise, in order to maximise the expected pension (for example, the final fund for Programmed Withdrawal may be different from that for Life Annuity).

5. Pension advice does not mean applying timing to the markets, using the multi-funds. In Chile, there are advisors who devote themselves to moving members from the riskier fund to the one with lower risk and vice versa. That is not what pension advice means.

6. Sixth, age is not the only important aspect involved in choosing a type of multi-fund; there are many others, and that is in the literature. One of the important variables is the level of net worth. It makes sense that, when a level of savings is reached that is sufficient to buy the desired pension, it is reasonable to "close the position", as we traders say, and not continue running a risk. This was a proposal put forward by Professor Robert Merton some time ago.

7. Seventh, concentration in local assets is very dangerous. In Chile, in the 1990s, five shares represented 20% of the funds. It was very difficult to get out of that situation. Furthermore, seeking to increase fund diversification by authorising investment in local illiquid assets makes little sense, because the natural thing is to diversify internationally. In Chile at the beginning of the 1990s an attempt was made to diversify Pension Fund investment by authorising investment in local illiquid asset classes (real estate investment, low capitalisation shares and company development). The experience was not a good one.

8. Eighth, the authorities must be very diligent in expanding the pension funds' investment limits abroad, to avoid the risk of creating bubbles in local shares. That was something that we experienced in Chile in 2007.

9. Ninth, Risk-Based Supervision, though it has the great merit of having begun to create a culture of risk in Chile, is still very difficult when there are also quantitative restrictions in existence, as well as benchmarks.

10. Tenth, it has been suggested that exogenous benchmarks should be introduced. However, in the case of those exogenous benchmarks, the question is, who should fix them. Fixing benchmarks of this type simply means transferring responsibility to the regulator.

11. Eleventh. There has also been criticism of the use of the “peer group” as benchmark. However, this has advantages and disadvantages. On the plus side, it must be recognised that there is a collaborative process. Good ideas are copied and bad ideas are avoided. On the minus side, the use of the “peer group” as a benchmark may result in a concentration in an asset that is reckoned to be more profitable, and no position at all in others. It also produces slower portfolio adjustments. This was a view put to us by Finance Professor Kenneth French, who saw with much trepidation the pension funds’ tendency to concentrate themselves in the assets with highest expected yield.

12. Before investing in new asset classes or instruments, managers must demonstrate that they are aware of the risks and have the processes, equipment and systems available. There should be no investment in new asset classes and/or instruments that are not fully mastered. The participation of the board in this process is highly recommendable.

13. Thirteenth. The regulator’s approvals must be generic and not one-by-one. For example: it is the regulator’s responsibility to approve investment in new asset classes such as *private equity,* and not dedicate himself to approving funds one at a time. It is also the regulator’s job to check that the necessary “due diligence” processes are carried out in his process of Risk-Based Supervision.

14. Fourteenth. It is important that assets be classified by the type of risks that they generate. In Chile, *Real Estate* and *Private Debt* are assimilated to Equity, and obviously behave differently.

15. Fifteenth. Alternative assets make sense for the pension funds because, due to the characteristics of their funding, they are in a position to capture the premiums for liquidity offered by assets of this type. However, thought should be given as to the percentage of the Pension Funds that should be put into alternative assets.

16. Sixteenth. Investment in infrastructure on the part of the Pension Funds must be analysed on its own merit and not as an obligation. Although investment in infrastructure is very attractive for the Pension Funds because of its long-term nature, it cannot be taken as an obligation; it must compete with the rest of the investment opportunities and be undertaken by people who have already proved that they have the skills, and a track record to show.

17. Seventeenth. Credit risks, operating risks and matching risks are also very important. The only thing that mitigates these risks is *due diligence* which must be extremely exhaustive. The administrators’ boards of directors must be constantly concerned to check that the administrator has the appropriate professional teams.

18. Eighteenth. It would be advisable to check that the wages of the risk-rating agencies are chargeable to the "buy side" and not the "sell side". I have seen studies where the risk-rating firms that attend on the "buy side" and the "sell side" arrive at different ratings.

19. Nineteenth. The use of derivatives makes sense to the extent that they offer flexibility to the manager and reduce trading costs. The separation between hedging and investment derivatives is very reasonable (the limit of 3% that we have in Chile for investment derivatives may be very limiting).

20. Twentieth. The obligation that exists in Chilean legislation to hedge 50% of the international investment made in American treasury bonds may prevent advantage being taken of the appreciation of the dollar in periods of financial stress.

21. Twenty-first. Communication with members is very important, especially in a system of pension multi-funds. The risk today does not depend only on the percentage invested in equities, because pension funds invest in many other risky and volatile assets. For example, in the Chilean case it would be possible to produce a multi-fund Type B that is riskier than the multi-fund Type A, and nonetheless has a lower proportion of shares, by using a greater loading of other assets (cyclical currencies, High Yield, emerging debt, etc.).

22. Twenty-second. Every so often proposals are made to fix a risk limit on the portfolio (VaR limits) and relax the limits per asset type. However, VaR is a short-term measurement and is not related with pension risk. Nevertheless, in the short term the funds should be ordered according to their VaR. It would be very ugly if Fund B were to fall more than Fund A in a moment of volatility. The multi-funds should be arranged according to their VaR, and I believe that it is a practice that exists.

23. Twenty-third. Hedging tail risk may be desirable in riskier funds. We need to remember that the 2008 crisis was not anticipated by anyone. However, it is an expensive product unless it is very "out of the money". We have done some experiments with that.

24. Finally, conflicts of interest must be dealt with explicitly. In this sense, I believe that it is highly recommendable to keep a strict separation, the maximum separation possible, between the pension funds and other sectors of the financial industry.

YIELD AND RISK MANAGEMENT: A REGULATOR'S VIEW

CARLOS RAMÍREZ[1]

1 *Carlos Ramírez has a Master's degree in Public Policies from the London School of Economics, United Kingdom, and in Economic Policy from Columbia University of New York, United States. He is also a Political Scientist from the Universidad Nacional Autónoma de México (UNAM) and an Economist from the Instituto Tecnológico Autónomo de México (ITAM). He has worked in both public administration and the private sector. He began his professional career as Chief Economist in the brokerage firm of the Banco Mercantil del Norte (BANORTE) and later worked at Mexico's Finance and Public Credit Secretariat. As from 2003 he was in charge of communications at the National Commission of the Savings for Retirement System (CONSAR) and in 2006 at Petróleos Mexicanos (PEMEX). Prior to his present responsibility, he was Consultant of the Eurasia Group firm in Washington D.C., a leading company worldwide in political risk consultancy. He has been a professor at ITAM and is the author of several articles in local and international magazines and periodicals.*

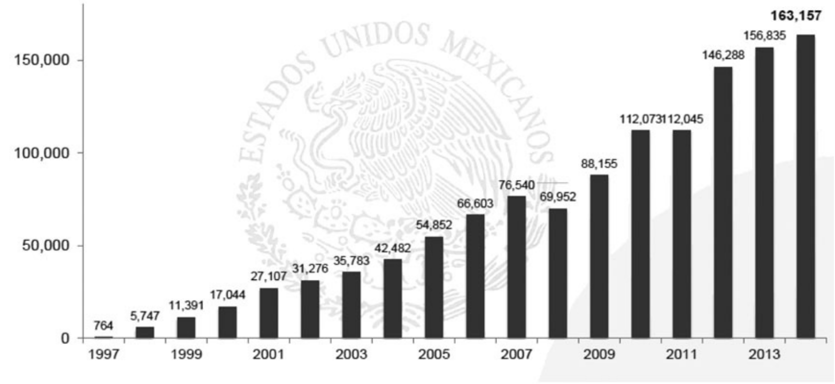
In these remarks I would like to share with you the Mexican regulator's concise view on matters of yield and risk management in the private pension funds.

How pension assets have evolved in Mexico

At this present time, the Retirement Fund Administrators (AFORE) in Mexico are investing and managing over USD 160 thousand million (figures at the close of April 2014; see Graph Nº 1), which represents approximately 13% of GDP. As can be seen, the growth rate has been very significant. Nearly 40% of the pension savings that we have accumulated in Mexico today comes from the yields that have been generated in these almost 17 years of saving in the Mexican pension system.

GRAPH Nº 1

ASSETS MANAGED BY THE AFORES
(USD MILLIONS)



SOURCE: NATIONAL COMMISSION OF THE SAVINGS FOR RETIREMENT SYSTEM (CONSAR), MEXICO.
NOTE: THE LAST FIGURES ON THE GRAPH CORRESPOND TO THE CLOSE OF APRIL 2014.

It is important to point out that, given Mexico's demographic trends, pension savings will continue to grow significantly.

Furthermore, Mexico is currently facing a very interesting moment in its economic history, with multiple new investment opportunities. As many people know, historic structural reforms were enacted in the country in the year 2013 (energy reform, reform of telecommunications, competition and finance and a new National Infrastructure Plan) which open up an unprecedented prospect for investment in new projects, especially in the coming decades. Of course the changes are not going to occur in the short term, but a very interesting opportunity is opening up, with pension savings growing on the one hand, while on the other, the country will have great needs for investment in productive projects. This obviously creates the possibility for the AFORES to play a more predominant role in the financing of infrastructure projects.

Regulatory considerations in the matter of investments

I would like to emphasise and point out the challenges facing the regulator (at macro and micro level) in setting the regulatory framework for the AFOREs' investments. Given the experience of Mexico and other countries, particularly in the wake of the financial crisis in 2008, there is clear evidence that the dilemmas facing the regulator when setting up the regulatory framework of the pension system are considerable.

With regard to the challenges at macro level, it is worth in the first place highlighting the complexity of the search for yield in the post-2008 environment and, looking to the future, a panorama that is no less complicated for achieving attractive yields for pensioners, both in Mexico and in the rest of the world. In the second place, the global financial system is still fragile, showing signs of volatility and uncertainty. Thirdly, we are looking at a relatively small market size (in both Mexico and the other Latin American countries), which imposes a series of challenges. Fourthly, there are macroeconomic conditions that are specific to each country, but these undoubtedly impose interesting dilemmas and challenges too. Fifthly, there are political risks and restrictions that are always present in activities of this type.

Among the "micro" challenges of managing the investment scheme: in the first place, there is the savers' well-known lack of interest and inertia, resulting in there being little market discipline imposed by savers to keep check on the AFOREs. In the second place, there is a trend on the part of the administrators towards a commercial strategy oriented mainly towards the short term, which results in a lack of incentives to invest in the long term. This varies of course from country to country, but it has been a constant in the Mexican case.

Other dilemmas that weigh on the regulator in "micro" matters have to do with: the scatter of yields and the lack of diversification; the lack of clarity about the relative benefits of active administration and passive; the sluggishness in professionalizing the pension asset manager; the size of the market which exacerbates potential conflicts of interest and the problem of moral risk which produces a possibility of excessive risk-taking.

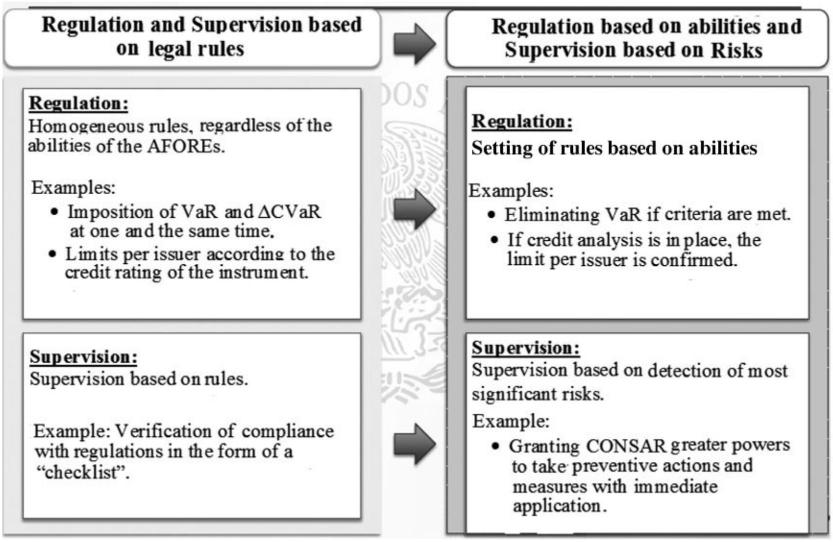
So, given these initial conditions (the very fast growth of assets, an opportunity to invest in more productive activities which is unprecedented in the country's history, and the experience of 2008 still there, like a present, on-going phantom), financial regulation must find a balance between obtaining higher yields and controlling the inherent risks. In the case of Mexico and all the pension systems in the region, this balance depends on three conditions:

(i) The skill of the pension funds in managing risks, this varying from country to country and administrator to administrator.
(ii) Financial innovation and the development of the financial market.
(iii) The supervisory ability of the regulator and governance within the AFOREs.

These three elements determine this balance, which is not always simple. Which path has Mexico taken in that sense? In the context of the evolution of regulation and financial supervision in Mexico, first of all, a model of regulation and supervision based strictly on legal rules has gradually been left behind and superseded by a model of regulation based on abilities, in other words, an asymmetrical regulation. Under that model, those AFOREs that advance further in terms of handling the resources with better risk management have the possibility of using or investing the workers' resources in a more active and aggressive manner. In the second place, there is a trend towards supervision based on risks, where the regulator focuses mainly and mostly on the most significant risks (see Figure Nº 1, to visualise some examples of this evolution).

FIGURE N° 1

EVOLUTION OF REGULATION AND FINANCIAL SUPERVISION IN MEXICO



SOURCE: THE AUTHOR.

The evolution that has occurred in the regulatory environment in Mexico is reflected in the fact that today practically all the AFOREs can invest in almost all the assets available in the local market and also in the international market, though with some exceptions. The Mexican pension system has chosen a gradual model, which in the eyes of some has been too slow and in the opinion of others, too fast. It must be made clear that the gradual progress seen is in accordance with the evolution of the administrators themselves, in such a way that the diversification to be seen today with regard to the resources of the over 51 million savers in the Mexican case has been slowly increasing (see Figure Nº 2). Even so, looking at the figures, it is obvious and evident that much still remains to be done in order to maintain this diversification. In Figure Nº 3 it is also possible to see the development over the years in the incorporation of new investment instruments. In Graph Nº 2 one sees how the composition of the pension funds' investment portfolios has varied between 1998 and April 2014.

FIGURE N° 2

MEXICO – EVOLUTION IN AUTHORISATION OF ASSET CLASSES FOR INVESTMENT OF PENSION RESOURCES

Instruments permitted under the Investment Scheme of the SIEFORES																	
Debt	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Foreign currency	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Equities	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓	✓	✓
CKDs and FIBRAS	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓
Securitized instruments	×	×	×	×	×	×	×	×	×	×	✓	✓	✓	✓	✓	✓	✓
Commodities	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	✓	✓
Swaptions	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
REITs	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013

NOTES:
- CKDS: SECURITIES ISSUED BY TRUSTS THAT CHANNEL RESOURCES TO SECTORS AND ACTIVITIES WITH OPPORTUNITY FOR LONG-TERM GROWTH, SUCH AS THAT OF INFRASTRUCTURE.
- FIBRAS: REAL ESTATE INVESTMENT INSTRUMENTS, OFFERING PERIODIC PAYMENTS FROM THE NET FISCAL RESULT FROM INCOME AND AT THE SAME TIME HAVING THE POSSIBILITY OF OBTAINING CAPITAL GAINS (APPRECIATION).
- SECURITISED INSTRUMENTS: SECURITIES REPRESENTING CREDIT RIGHTS ISSUED VIA INSTRUMENTS, IN WHICH THE UNDERLYING ASSETS ARE THOSE CREDIT RIGHTS.
- SWAPTION: THIS IS A FINANCIAL DERIVATIVE THAT CONSISTS OF AN OPTION IN WHICH THE UNDERLYING ASSET IS A SWAP. A SWAP IS A FINANCIAL INSTRUMENT CONSISTING OF A CONTRACT ON A DERIVATIVE PRODUCT THAT ALLOWS A FINANCIAL EXCHANGE (FOR EXAMPLE, IT ALLOWS DEBT IN ONE FOREIGN CURRENCY TO BE EXCHANGED FOR ANOTHER OR A FIXED INTEREST-RATE TO BE EXCHANGED FOR A FLOATING ONE, ETC.)
- (REITS) REAL ESTATE INVESTMENT TRUSTS: ARE REAL ESTATE INVESTMENT FUNDS WHICH INVEST IN PROPERTY THAT GENERATES INCOME. THESE COMPANIES OR FUNDS ISSUE SHARES THAT IN TURN ARE QUOTED ON THE STOCK MARKET. THEY MUST ALSO DISTRIBUTE AT LEAST 90% OF THEIR PROFITS TO THEIR SHAREHOLDERS. THIS DISTRIBUTION CONSISTS OF DIVIDENDS, WHICH MAKE IT A VERY ATTRACTIVE INVESTMENT INSTRUMENT BECAUSE OF THE FLOW OF INCOME THAT CAN BE RECEIVED.

SOURCE: NATIONAL COMMISSION OF THE SAVINGS FOR RETIREMENT SYSTEM (CONSAR), MEXICO.

FIGURE N° 3

MEXICO – EVOLUTION IN THE INCORPORATION OF NEW INVESTMENT INSTRUMENTS

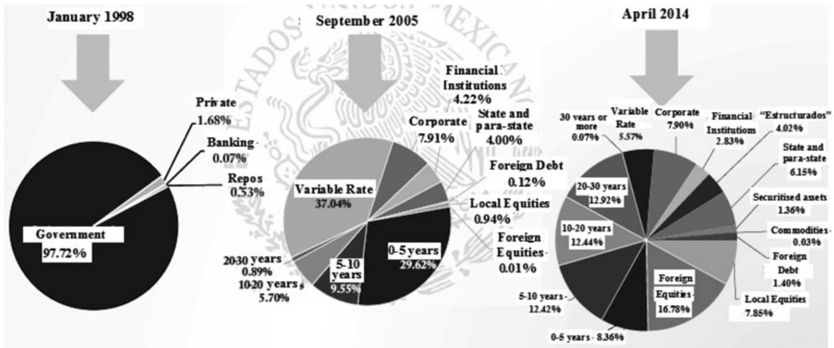
Year	Change in regulations
1998	Government securities.
2001	Derivatives and Securities Loan operations.
2002	Value at Risk (VaR) introduced.
2005	Foreign debt securities and equities. ETFs.
2007	Alternative Assets (FIBRAS and ESTRUCTURADOS).
2008	Expansion of Life Cycle Funds. Net Yield Indicator.
2010	Anti pro-cyclical VaR. Broadening of equities limits. Initial Public Offerings. Broadening of credit ratings. Subordinated Debt.
2011	Facility for replicating indexes of Foreign equities. Investment mandates. Increase of limits. Expansion in foreign currency. Expansion in eligible countries. Commodities.
2012	Reorganisation of Siefores family. Differential of CVaR and CVaR. Expansion of degree of investment. Adjustments in Securitised Instruments.
2013	CAR put in place to fix the set of historic scenarios for calculating the measurement of the Differential of the CVaR. Expansion of Eligible Countries (MILA). "Swaption" type derivatives. Change in the cost structure for Agents.

NOTES:
- "ESTRUCTURADOS": SECURITIES THAT GUARANTEE THEIR NOMINAL VALUE AT TERM. THEIR PARTIAL OR TOTAL YIELD IS LINKED TO UNDERLYING ASSETS IN TRUSTS THAT GRANT RIGHTS ON THEIR FRUITS AND/OR PRODUCTS.
- CVAR (CALCULATION OF THE CONDITIONAL VALUE AT RISK): INDICATOR THAT EVALUATES THE RISK OF A PORTFOLIO AS A WHOLE, BEARING IN MIND THE CORRELATION THAT EXISTS BETWEEN THE ASSETS OF WHICH IT IS COMPOSED.

SOURCE: NATIONAL COMMISSION OF THE SAVINGS FOR RETIREMENT SYSTEM (CONSAR), MEXICO.

GRAPH N° 2

EVOLUTION IN THE COMPOSITION OF SIEFORES PORTFOLIOS



SOURCE: NATIONAL COMMISSION OF THE SAVINGS FOR RETIREMENT SYSTEM (CONSAR), MEXICO.

Recent modifications and actions still pending

To close, I would like to explain where Mexico is today in terms of investments and the risks that loom ahead.

Some recent regulatory reforms that are already being implemented or have just come into effect are: the broadening of the investment scheme, the opening up of new investment possibilities for the AFOREs, the obligation to have benchmarks to enable the performance of each administrator to be measured more clearly, the elimination or gradual substitution of Value at Risk (VaR) and the widening of horizons in calculating the Net Yield Index (IRN) – the index to which workers have access in order to compare administrators.

Last year, an initiative was sent to Congress to reform various aspects of the Law of the Savings for Retirement System (SAR). These were passed recently in the Chamber of Deputies and are currently under consideration in the Senate. Among the main modifications proposed are the following: a commission for performance (which seeks to reward the performance of those administrators with the best financial management), a broadening of the investment scheme, an improvement of the AFOREs' corporate governance and greater powers for the authorities to carry out Risk-based Supervision (SBR).

Finally, among the changes that are necessary but still pending, it is important to mention the increase of mandatory contributions, the increase of investment limits in foreign securities, which are currently very low (20%) and the broadening of the investment limits in equities.

YIELD AND RISK MANAGEMENT

PEDRO GRADOS[1]

1 *Pedro Grados has a Master's degree in Banking and Finance and graduated in Economics at the University of Lima, Peru. He has also specialised in Accountancy and Finance at the Universidad ESAN in Lima, Peru. He is currently concluding his studies for an International Doctorate in Company Administration and Management at the Universidad Politécnica de Cataluña in Barcelona, Spain. Since July 2012 he has been Managing Director of Profuturo AFP, a Peruvian Pension Fund Administrator belonging to the Scotiabank Group. Pedro joined Profuturo in 2008 as Investment Manager and was then promoted to Associate Managing Director in April 2011. Prior to Profuturo, he pursued an extensive career of over 30 years in Investment, Finance and Consultancy areas. He has also worked as a Consultant in organisations such as the International Financial Corporation of the World Bank and USAID. Alongside these activities he has held executive positions in the Superintendence of Banking, Insurance and AFP (SBS), the Santander Central Hispano Bank, Santander Investment and the Lima Stock Exchange.*

In these brief comments I shall be referring to two ideas: first, the importance of financial education with regard to expected yield and expected risk, and second, to financial education from the point of view of the general public and the members enrolled in the system (who amount to almost 6 million people in the case of Peru, though there are slightly over 2 million contributors).

In Peru, the daily yield of the pension fund appears frequently in the press, comparing it with a day's yield of a term deposit or a short or medium-term mutual fund. However, in practice these measurements are not comparable. The yield of short-term instruments cannot be compared with that of long-term instruments. I am not saying that comparisons should not be made – I believe that transparency is a good thing – but doing it in this way leads to a series of distortions. It is important to explain to the population that their funds are long-term funds, and also that the fund that is 20 years old (Fund 2, intermediate risk), has a nominal yield of approximately 12.5%, which is quite acceptable. Since the start of the multi-fund system at the end of 2005, the average annual yield has amounted to 7% (for the most conservative fund), 9% (intermediate fund) and almost 13% (the most aggressive fund).

There is no doubt that the last few years have been complicated, particularly if we analyse fund 2, with a yield of 12.5% in 20 years, but with a yield of 9% since the beginning of the multi-funds.

The matter of teaching the population and explaining the concept of expected yield and risk in the most appropriate way, without restricting the freedom of the individual, is vital. That is the reason for the 3 funds that exist at the moment. The so-called fund 0 (the ultra-conservative fund) will be starting in the near future and this, theoretically, should be very unlikely to produce a loss.

From the point of view of the industry, the concept of expected yield has to be explained to the general public and to the political segment, and that is no easy matter.

The implementation of a reform is currently under way for the whole pension system. In the part concerning investments, I believe that there has been a significant step forward, because what it allows, essentially, is more freedom with more responsibility. With the reform, the AFPs will be allowed to invest in practically all the assets that exist. There is even going to be a limit (still to be defined, but a low one of possibly 1% or 3%) that will be free, so that administrators can have access as a fund to non-rated assets. That is undoubtedly to trust in the management of the higher-risk funds.

It is important that this increased freedom with increased responsibility be also associated with a higher level of transparency. In Peru today, unlike other markets, not all the investment portfolio of the pension funds is made public. Whatever the level of delay may be in publishing the information, I believe it is essential, to avoid herd-like behaviour, for the public and the specialists to have the possibility of really analysing the rationale behind the management of an investment portfolio, where the professional teams of the AFPs have also seen very considerable growth in both quantity and quality.

What are the implications of this reform? This reform implies that instead of application having to be made at the Superintendence for authorisation, instrument by instrument, that body is going to authorise a set of instruments with specific characteristics, so that the AFP itself can take the decision on what to invest in, or not, on the basis of an evaluation of the risk and expected yield. In the first stage this will be only for equities and fixed-income instruments (listed shares and bonds, which mean public markets).

In a second stage, other assets will be included that require systems, personnel, knowledge, etc. (basically derivative and alternative instruments). Today, for example, it is almost impossible to operate in derivative instruments, because to the extent that authorisation has to be sought for an instrument, authorisation has also to be requested for one day's hedging, which takes time, meaning that ensuring that the hedging actually continues to be effective is quite complicated. So, I believe that this reform represents a significant step forward.

The derivatives are going to focus only on hedging, and that is essential for the funds in a first stage. As regards alternative assets, the route already taken by Peru is important: the alternative assets are within the *equity,* which does not make much sense, because they behave differently. This is a difficult subject, because it is also true that alternative assets do not necessarily have short-term yield (I am talking about private capital funds, for example); the yield will be seen in 4, 5, 6, 7 or 8 years, which fits perfectly with the investment period of the pension funds. Those alternative assets allow us to reach different parts of the world and different sectors inside Peru with investors who are really knowledgeable. I believe that the route has been the correct one. First, the AFPs entered funds of funds and there was a learning period. Then we have been entering various funds at international level. There has also been development in the local market. First we invested in local private capital funds, when the expertise was at international level. Currently, the legal limit on investing abroad for the pension funds is 50%, but there is an operating limit (controlled by the Central Reserve Bank) because of the macroeconomic implications of investment abroad on the flow of capital. That operating limit had been rising 0.5 percentage points, month on month (as of July 2014, this limit has reached 40%). Obviously, from the point of view of managing the portfolio, we would prefer total legal openness.

As regards investment in infrastructure, the AFPs should enter this area, because it would be a way of contributing to the maximisation of the fund's yield and therefore, the pension. This is by no means incompatible with the alternatives for investing in infrastructure that exist in Peru today. Some years ago, the AFPs set up what is called an "infrastructure trust" which is already totally invested, consisting of some USD 400 million for three infrastructure projects (though there are currently plans to expand it): a highway which is still under construction and involves building a tunnel under the river Rímac; a sewage-treatment plant that will improve the quality of the water that goes out into the sea; and a water decantation and electricity generation project.

In the year 2013, CADE Executives[2] announced the setting up of a new infrastructure trust worth USD 1,000 million. The problem is that there are no instruments. The AFPs are being quite proactive in contributing to the generation of instruments and different types of alternatives. I believe that we are experiencing an infrastructure boom. And there are franchises worth almost USD 12 thousand million during this government's term so far. To the extent that there are appropriate instruments, the AFPs are going to participate, producing a balance and a virtuous circle. We will do this because they are instruments that produce yield for the members and match the investment term or horizon of the pension funds (there are bonds of up to 20 and 25 years, at levels of inflation that are over 6, which is very attractive), and because in this way we also contribute to improving the country's infrastructure, which is one of the poverty traps of middle-income countries.

I would like to close with a few ideas. The first is that it is necessary to produce a lot of yield focused on risk, but we have to communicate what we are doing. This industry has come to stay and to benefit everyone. If people do not understand that

2 *CADE is the main business forum in Peru, where matters on the national agenda are discussed and proposals put forward from the business sector.*

they are benefiting from it, there will always be risks. That is really vital, much more important that we sometimes realise when we shut ourselves up in our bubble, with super-sophisticated models.

On the other hand, we have to work together with the regulator, who sets the rules of the game. Undoubtedly there must be close cooperation between the industry and the authorities, working hand-in-hand for the best development of the pension system.

I also believe that good progress is being made in the investment field. We have to continue consolidating this area through healthy feed-back and reviewing of standards.

One last comment about the benchmark: to tell the truth, defining the benchmark is quite complicated, because it sometimes produces herd behaviour. To fix a benchmark together with limits is also sometimes contradictory, because the investment limits themselves lead us to the benchmark. On the other hand, there is the commercial issue which is sometimes applied in the short term, whereas the structure of the pension funds is long-term, so I do believe there is still much thinking to be done in that area and nothing has as yet been 100% defined at international level.

REGULATION AND PENSION FUND INVESTMENT PERFORMANCE

MARIE BRIÈRE[1]

1 *Marie Brière graduated as a statistician economist from the National School of Statistics and Economic Administration (ENSAE) and holds a Master of Economics in "International Economics and Finance" from the University of Paris IX Dauphine, Paris, France. She also earned a PhD in Economics from University of Paris X Nanterre, Paris, France. She is currently Head of Investor Research Center for Asset Management at Amundi (Crédit Agricole and Société Générale) in France, Paris. She is also Associate Professor at Paris Dauphine University and Associate Researcher with the Centre Emile Bernheim at Solvay Business School, Université Libre de Bruxelles, in Brussels, Belgium. She started her working career in 1998 as a quantitative researcher at the proprietary trading desk at BNP Paribas. She has taught in several universities and business schools. Since 2012 she has taught empirical finance, portfolio management and quantitative investment strategies at Paris Dauphine University. She is the author of a book on anomalies in the formation of interest rates, and a number of her scientific articles have been published in books and leading academic journals including the Financial Analyst Journal, Journal of Banking and Finance, Journal of International Money and Finance, Journal of Portfolio Management, etc.*

One key issue in the forefront of most regulators' minds is the optimal design of pension regulation. Demographic trends and the poor performance of financial markets during the most recent crises have led many countries – not only in Latin America but elsewhere in the world, especially Europe – to rethink the organisation of their pension system, or to consider redefining their regulations. The key question is how to design regulation in order to protect beneficiaries, meaning it should allow adequate replacement rates upon retirement and enable consistent investment strategies that generate attractive returns on savings, with limited risk.

Interestingly, from an international viewpoint, various countries have adopted different regulatory options. Which option is best suited to providing beneficiaries with attractive and sound performances? This short article addresses the regulation of pension fund investments. Some of the views and comments presented here are taken from our recent research papers on the subject (Boon Brière Gresse Werker, 2014; Boon Brière Rigot, forthcoming).

The diversity of pension investment regulation

A wide range of investment regulation options can be taken up. These include direct investment limits, concentration limits, minimum return guarantees, but also performance deviation from peers, absolute risk limits, and, in some cases, capital requirements based on a risk assessment of the fund's funding status.

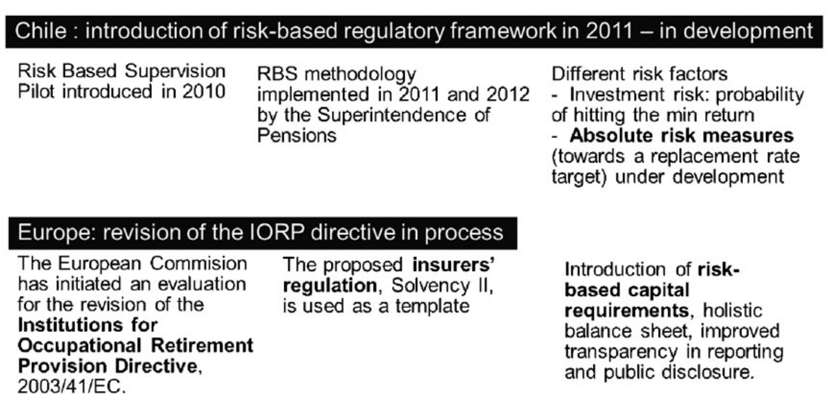
If we try to classify all these regulatory options, they basically boil down to two types. The first is rule-based regulation, i.e. inflexible bright-line requirements such as direct restrictions on investments, which are common in many countries in both Latin America and Europe. We are well aware of the drawbacks of these kinds of rules, namely loss of efficiency and suboptimal portfolios.

The second broad type of regulation is risk-based, and relies on risk quantification and assessment. One example is quantitative risk limits that rely or not – depending on the country – on the quantification made by a risk model.

From rule to risk-based regulation

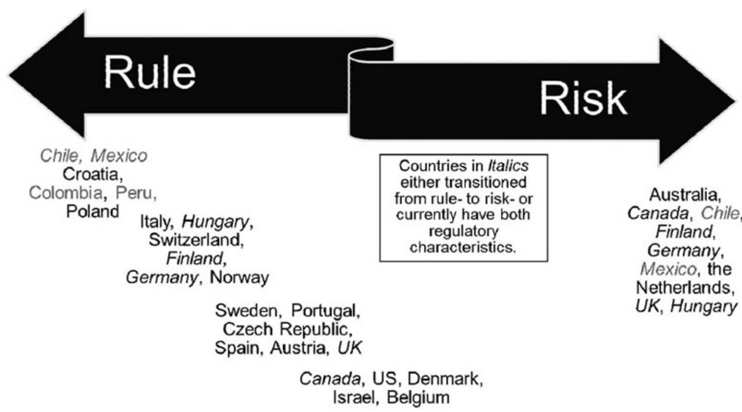
Many countries are moving from rule-based to risk-based regulation. Most of them may not necessarily be abandoning rules, but are sometimes starting to implement a mix of both types of regulations. Countries such as Canada, Chile, and Mexico to name but a few have already moved to risk-based regulation. Mexico introduced value-at-risk (VaR) quantitative risk limits in 2004. In Chile, risk-based regulation was introduced in 2011 and is still under discussion and development, with the introduction of absolute risk measures currently being mooted. In Europe, the European Commission (EC) has initiated a revision of the Institutions for Occupational Retirement Provision (IORP) directive to establish a common framework for all European countries. The EC's idea is that pension funds should be regulated in the same way as insurance companies, with a holistic balance sheet measure and risk-based capital requirements. This approach is currently under discussion and a first quantitative impact study was published in June. In sum, we are now seeing a shift from rule-based to risk-based regulation in many countries, although most of them are still implementing rule-based regulations (see Figures 1 and 2).

FIGURE 1



SOURCE: THE AUTHOR.

FIGURE 2



SOURCE: BOON, BRIÈRE, GRESSE AND WERKER (2014).

Unintended consequences of risk-based regulation

What are the possible unintended consequences of introducing risk-based regulation? The question is tricky, especially in terms of pension funds, because experience in this area is lacking. However, we do have some experience in the banking industry, regulated under Basel III[2] , and, more recently, in insurance, subject to Solvency II starting in 2016. Both texts are excellent examples of risk-based regulation. There is much theoretical academic literature on this topic, and extensive practitioner discussions are underway in an effort to understand the possible consequences of such risk-based regulatory constraints.

2 *Basel III is a comprehensive set of reform measures developed by the Basel Committee on Banking Supervision to strengthen the regulation, supervision and risk management of the banking sector. These measures aim to: (i) improve the banking sector's ability to absorb shocks arising from financial and economic stress, whatever the source, (ii) improve risk management and governance, and (iii) strengthen banks' transparency and disclosures. More information is available online from http://www.bis.org/bcbs/basel3.htm*

Two important issues have been addressed. The first is the debate around the quantitative risk models used to calibrate solvency buffers. It has been proven that the use of risk limits based on quantitative risk models impairs financial institutions' ability to take risk (Calem and Rob, 1999; Basak and Shapiro, 2001; Dangl and Lehar, 2004). Moreover, risk-based regulations are accused of generating procyclical investment behavior (Pennacchi, 2005; Gordy and Howells, 2006; Bec and Gollier, 2009; Repullo and Suarez, 2013; Papaioannou et al., 2013), especially when solvency buffers are calibrated using risk models like the VaR estimated on a short history. These buffers tend to fall after periods of rising prices associated with low volatility, giving an incentive to take on more risk (Adrian and Shin, 2008). Risk-based regulation can also generate substantial economic costs, especially when short-term VaR constraints are repeatedly imposed on long-term investors (Shi and Werker, 2012).

Furthermore, the use of risk models and risk quantitative assessment usually goes hand in hand with mark-to-market valuation, which has been shown to constitute an additional source of price volatility in portfolios. This is particularly detrimental for long-dated or illiquid assets (Plantin et al., 2008) and also limits investors' ability to take risks (Severinson and Yermo, 2012).

All the above remarks are largely based on what has happened in banking. As far as pensions are concerned, there has been little empirical investigation. We conducted empirical work on the drivers of pension funds' asset allocation to assess the importance of regulatory factors (Boon, Brière and Rigot, 2014). Luckily we had access to the detailed asset allocations of more than 800 direct-benefit pension funds in three countries, the USA, Canada and the Netherlands, which have very different types of regulation. Of the three, only the Netherlands has introduced quantitative risk-based capital requirements (in 2007), while Canada has "soft" risk-based regulation predicated on risk assessment and disclosure. What we found is that imposing risk-based capital requirements made pension funds less able to invest in risky assets. This is true on the whole, but if we look in greater detail, it is particularly true for equities. Interestingly, this type of regulation has had a much less impact on alternative investments such as private equity. Why is that? Because risk-based regulations are closely associated with mark-to-market valuation, and these illiquid/unlisted alternative assets do not have to be marked to market. In consequence, pension funds have incentives to switch part of their equity position to private equity, in order to reduce balance sheet volatility.

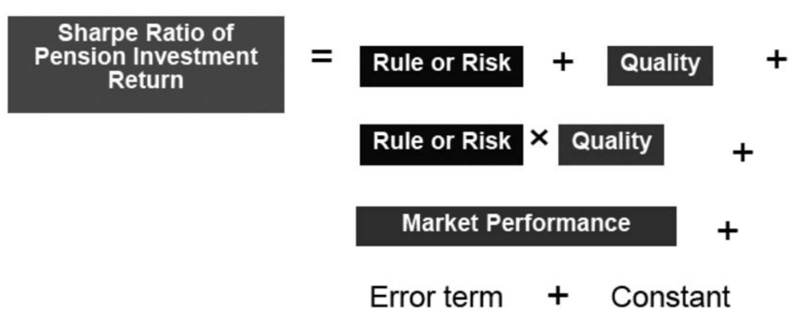
Another result of our study is that risk-based regulation has no impact on procyclicality. This finding is totally counterintuitive, because the opposite might have been expected. The lack of convincing evidence of any procyclical behavior of Dutch pension funds could be attributed to regulatory slackening in the Netherlands in response to the subprime crisis. The Dutch pension supervisory authority, De Nederlandsche Bank (DNB), announced numerous waivers to the standing regulation in order to help pension funds recover. For example, pensions could be reduced or de-indexed. The supervisor also extended the recovery period, so that pension funds could maintain their risky asset exposure. The Dutch experience is very interesting because it shows that risk-based regulations do not necessarily lead to procyclicality if the regulator is proactive and moves with markets.

Do regulatory choices influence performance?

In a recent paper (Boon, Brière, Gresse and Werker, 2014), we analysed the extent to which the chosen type of regulation and its quality (for this we used the World Bank indicator[3] as a measure of regulatory quality) can influence a pension system's financial performance in a cross-country analysis.

We tackled this question simply by trying to see whether the imposition of either rule-based regulation or risk constraints had an impact on pension systems' investment performance, measured by the Sharpe ratio of real pension investment returns (see Figure 3).

FIGURE 3

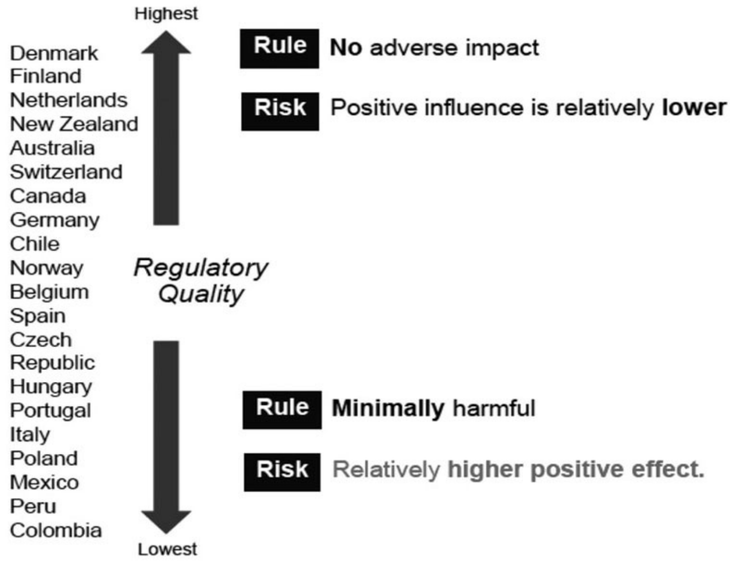


SOURCE: BOON, BRIÈRE, GRESSE AND WERKER (2014).

3 *This is the Regulatory Quality Index of the World Governance Indicators (World Bank), based on a survey of firms, nongovernmental organisations and individuals, on the quality of governance (investment freedom, competitiveness, business development, etc.).*

On the one hand, we found that rules had little real impact on pension fund performance. We did not find any significant effects from imposing strict investment restrictions (performances fell slightly but not meaningfully). On the other hand, we found that imposing risk-based regulation led to slightly better performances, especially for countries with low regulatory quality (Figure 4 shows the country rankings).

FIGURE 4



SOURCE: BOON, BRIÈRE, GRESSE AND WERKER (2014).

Concluding remarks

What have we learned from this research? First, investment restrictions can in theory be harmful for performance, limiting the ability to take risk and seize investment opportunities. This, in turn, leads theoretically to suboptimal portfolios and efficiency losses. In practice, the impact looks limited. Looking at a cross-section of countries, we found no significant effects.

Imposing risk-based regulation tends to have a slight positive impact on performance, at least as far as our empirical investigation shows, especially for countries with low regulatory quality. Caution is needed, however, because this type of regulation is not without drawbacks. We lack experience in terms of pensions to determine what the impact might be; but we know from theoretical discussions that risk-based regulation can limit the investor's ability to take risks. It can also encourage short-termism and procyclicality if the regulator is not proactive. As a result, the importance of the regulator is paramount.

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PART III

EFFICIENCY, COMPETITION AND ADMINISTRATION COSTS

EFFICIENT INDIVIDUALLY-FUNDED SYSTEMS MARKET FRICTION AND POLICY CHALLENGES

AUGUSTO DE LA TORRE[1] AND HEINZ RUDOLPH[2]

1 *Augusto de la Torre, originally from Ecuador, has a master's degree and doctorate in Economics from the University of Notre Dame and a licentiate in Philosophy from the Catholic University of Ecuador. He is currently Chief Economist for Latin America and the Caribbean at the World Bank, having entered that institution in 1997 and held the posts of Principal Advisor in the Financial Systems Department at global level and Principal Advisor for the Financial Section of the Department for Latin America and the Caribbean. Between 1993 and 1997 he was Managing Director of the Central Bank of Ecuador and was chosen in November 1996 as the "Best Central Banker in Latin America" by Euromoney Magazine. From 1986 to 1992 he worked for the International Monetary Fund (IMF), where he was resident representative of this institution in Venezuela (1991-1992), among other posts. Augusto de la Torre is the author of numerous publications on a wide range of macroeconomic and financial issues.*

2 *Heinz Rudolph is a Leading Financial Economist at the World Bank.*

The aim of this article is to initiate a conceptual reflection on the great challenges of the individually-funded pension systems that are now operating in a considerable number of countries in Latin America and Eastern Europe.

In that context, it looks at a typology of the challenges inherent in individually-funded pension systems (costs and short horizons associated with imperfections in the demand and peculiarities of the pension market's industrial organisation), the typological methods used in the attempt made to come to grips with those challenges, and a recent reform proposal that helps to provide an answer to the various objectives and different tensions.

1. Raison d'être and challenges

Every pension system, whatever the characteristics of the country, must contain a component of individual savings, even if the predominant system in a country is public and pay-as-you-go. It is difficult to conceive of a good design for pensions without an important component of individual savings. When talking dogmatically or ideologically about the pension system, the tendency is to think of "corner" solutions: individual savings accounts at one extreme or pay-as-you-go systems at the other. But the fact is that pension design needs integrated components and individual savings have a vital role to play among these. This is a result of simple economic logic, because if one thinks of the risks associated with old age, it is obvious that at least one of them can be solved more efficiently with individual savings than in any other way.

In fact, let's take a look at the typical risks of old age and the mechanisms for mitigating them, as summarised in Table Nº 1. The most common risk is that the person's life lasts longer than his/her (physical and intellectual) ability to work. That is a high-probability risk, because, unless the person dies or becomes disabled before retiring age, that risk is going to occur in the majority of cases. The probability that a person will outlive his/her ability to work is also growing throughout the world with the increase in life expectancy and the average ageing of the population.

What economic theory says is that when the probability of the risk in question is high, it is better to save than to have a system of insurance, due to the fact that the interest rate, which is the benefit of saving, does not vary with the probability of the event[3] . It is therefore better to save than insure in the case of high-probability events.

By contrast, insurance systems offer a better solution than individual saving for confronting risks of relatively low probability – such as the risk of falling into poverty in old age (which tends to decrease with economic development) or mortality risk (which, from the pensioner's point of view, is the risk of his/her savings being used up before the end of his/her life). Insurance mechanisms imply group or collective solutions, in which risks are pooled in order to diversify them better. Pooling of risks can take place at different levels. Insurance companies pool the mortality risks of a multitude of policy-holders to offer individualised life annuities. The State can pool the risks of falling into poverty during old age for the population as a whole through the taxation system, and so offer social protection by income redistribution (by means of a universal minimum pension, for example).

Quite apart from the theoretical reasons, there are practical reasons in favour on individual savings accounts for old age, including the portability of such accounts (the benefits of portable savings increase in direct proportion to the mobility of labour), the better definition of ownership rights (at least in principle), and the greater transferability of the accumulated savings to the heirs in the case of the saver's death.

TABLE N° 1

TYPICAL RISKS OF OLD AGE AND MECHANISMS TO MITIGATE THEM

Risk of loss due to	***Probability/Impact***	***Protection mechanisms***	***Risk mitigation mechanism***
Outliving ability to work	High and growing probability/ Great losses	Saving (Individual risk fund)	Individual pension fund (Defined Contribution)
Death or premature disability	Low probability/ Great losses	Insurance (Common risk fund)	Disability Insurance
Premature spending of retirement savings	Low probability/ Great losses	Insurance (Common risk fund)	Life Annuity
Poverty in the third age	Decreasing probability/ Great losses	Insurance (Common risk fund)	Social security solidarity pillar

SOURCE: PRODUCED BY THE AUTHORS.

3 *See for example Ehrlich and Becker (1972)*

The emphasis on individual saving implies a public policy decision by which the financial sector takes part in handling people's savings for old age. This would not perturb the regulators unduly if:

(i) The contributors (the "principals") who save for their old age maximised their individual long-term interests in a perfectly rational manner.
(ii) The interests of the Pension Fund Administrators (AFPs, the "agents") coincided perfectly with those of the contributors: in other words, if the agent-principal incentives were perfectly aligned.
(iii) The information available for both contributors and AFPs were the same (in other words, if the information were symmetrical).
(iv) The structure of the market were not subject to economies of scale and therefore subject to decreasing costs (in other words, if competition, always and everywhere, led to efficiency).

If these four ideal conditions were really met, the role of the regulators would be quite limited. But the real situation of the pension systems is more complicated, meaning that the regulator does have cause for concern. In practice, there are four fundamental challenges:

(i) **Information is asymmetrical.** The agent (AFP) has advantages over the principal (contributor) in terms of information. In view of the complexity of the financial systems, the agent handles more information about the pension fund's investments than the principal does. This creates the first challenge for the regulator, who has somehow to ensure that there is enough information with transparency for all, so that contributors and AFPs can solve the problem of asymmetrical information appropriately.

(ii) **Naivety is part of the markets.** Perfect rationality (*homo economicus*), as defined in the microeconomics textbooks, is never achieved in real life. Real people of flesh and blood have more or less systematic cognitive biases, which are currently being documented by means of "Behavioural Economics". When part of the population is naive, in the sense that it is less able to process financial information than the rest, a space is created to allow the wilier to take advantage of the more naive[4]. Naivety therefore produces a further worry for the regulator and gives rise to consumer protection measures.

(iii) **There are activities subject to economies of scale.** The industrial organisation of the pension market creates another worry for the regulator to the extent that there are certain activities, such as the administration of accounts, for example,

4 *See Akerlof and Shiller (2013).*

that are subject to considerable economies of scale. In this case, the most efficient approach is to harness them by means of high volume, which involves some kind of monopolistic activity (which has to be regulated) and creates entry barriers. There are other activities in the pension market (such as investment management) that are not subject to such economies of scale and where it is therefore efficient for competition to exist. The challenge for the regulator is to avoid there being unhealthy competition, such as occurs when a pension system becomes involved in a market war (an aggressive marketing drive aimed at raising market share and so capturing economies of scale and decreasing costs). So then, competition, which is basically an activity of economies of scale and therefore prone to a natural monopoly, ends up being inefficient: it simply pushes up costs for the user.

(iv) **There are non-integrated externalities.** Non-integrated externalities are another basic issue that concerns the regulator. These occur in the pension market, for example, when the AFPs fail to integrate into their behaviour the social benefits of long-term investments, which tend to be rather illiquid and prone to greater short-term volatility and are therefore less appealing for AFPs that operate on short horizons. In this case, a breach occurs between the private interest of the AFP and the social interest. The challenge for the regulator is to find appropriate ways to lengthen the AFPs' investment horizons.

Each of these challenges requires public policy responses that are of different kinds. Sometimes the policy decisions taken to improve or overcome the challenges involved in asymmetrical information cause harmful effects in terms of other challenges; they may reduce investment horizons, for example. Tensions of this type are discussed in the next section.

II. Facing up to the challenges

This section describes how the challenges mentioned above have been coped with in the history of individually-funded pension systems in the region. It is a drama consisting of two main acts.

Act 1: The attack on agency problems

Since the creation of the first individually-funded system in Chile in 1981, a substantial part of the regulation and public policy has been concentrated on attacking the problems of agent-principal, particularly the problem of asymmetrical information. This has been done in three ways:

(a) **Monitoring:** By means of:
- Improving the quality of the information that contributors need, making it increasingly complete, regular and pedagogical. In most cases, the contributor receives information that compares his/her fund's performance with that of other funds or with the system average.
- Sponsoring financial education for contributors.
- Imposing transparency and integrity requirements for the financial statements of both AFPs and pension funds, including mark-to-market valuation of the assets.

(b) **Departure option.** If the contributor is not satisfied with the performance of his/her current AFP, he/she has the option of transferring the funds from that AFP to another. This is a classic mechanism for controlling the problem of asymmetrical information: *"If you don't manage my money really well, I can leave".*

(c) **Capital/Collateral requirements ("*Skin-in-the-game*").** This involves requesting the company managing the pension funds to have some of its own capital invested in the same instruments/portfolio in which the contributors' funds are invested. In most countries, the term "encaje" (obligatory reserve) is used for this concept.

In this first wave of reforms, there were three great underlying assumptions in the regulators' minds: first, the assumption that the principals (the savers who contribute to the pension funds) are perfectly rational: so that if they receive appropriate information and financial education, they will have a better idea of their own long-term interests than anyone else; second, the assumption that there are no serious problems of non-integrated externalities in the pension market; third, that economies of scale in the pension fund industry are not important.

These assumptions, combined with the almost exclusive emphasis of the first wave of reforms on seeking solutions to the problem of asymmetrical information, left behind a series of unwanted consequences, which have been causing the regulator concern with ever-increasing intensity. The first unwanted consequence is the AFPs' systematic tendency to adopt a short-term emphasis in their investment decisions (the AFPs show a high preference for short-term or very liquid assets). This consequence is associated with the lack of differentiation between investment portfolios, which are excessively concentrated in liquid, short-duration assets (herd effect), and the AFPs' tendency to behave pro-cyclically. At the end of the day, this consequence revolves around the systematic criticism that AFPs tend to behave as if they were managers of mutual funds.[5]

5 *See Castañeda and Rudolph (2010) and Raddatz and Schmuckler (2011).*

A second consequence lies in the fact that, if the AFPs have to compete for contributors, then the market can become very aggressive, and this has in fact been the case. There is a tendency in the AFP industry to use aggressive sales forces that offer immediate incentives (gifts, lotteries, etc.) in an attempt to persuade contributors to switch from one AFP to another. This pattern has led in many cases to real marketing wars. It is a well-known fact that, in the end, such wars make the system more expensive, without any visible benefits for the contributors as a whole. Part of the above is reflected in the high administration fees that are charged.

A third consequence is the persistent problem of contributors' low or inadequate responsiveness in terms of demand: they do not react systematically, swiftly and rationally to the differences in yield-risk net of fees offered by the various pension funds (inertia).

Act II: A wave of ad hoc answers

A second wave of ad hoc reforms was therefore designed to get to grips with the unwanted consequences mentioned above, with more success in some cases than in others.

First, in order to try to increase the differentiation of the investment portfolios and mitigate the herd effect, a process was launched to liberalise the investment scheme. The idea has been to move towards systems in which, theoretically, the AFPs invest prudently to the contributor's advantage (or so it was hoped) and have more freedom to choose the assets in which to invest the contributors' resources. Authorisation was even given for investment in foreign assets. Other initiatives aimed at differentiating the portfolios are commissions for performance (if the performance exceeds the industry average) and the creation of the Multi-funds.

Second, in order to reduce administration costs, maximum limits on fees have been introduced, in addition to systems of tendering in which new members are assigned to the AFPs that charge lower fees, and transfers are only authorised to AFPs that charge lower fees. Another idea has been to encourage the AFPs to offer contributors financial guidance rather than using sales forces and aggressive marketing strategies.

Third, in order to extend investment terms and horizons, countries have tended to liberalise the scheme regulating permitted investments, with the idea that doing so will enable assets with higher risks and duration to be included in the pension fund portfolios. Multi-funds for pensions have also been a response to this objective. Countries have also tried to implement reforms to increase the liquidity of the long-term debt markets, to enable the AFPs to invest in a 30-year bond, for example, with the confidence that they can sell it, if necessary, without significant loss. In other countries, based on the argument that the AFPs do not take longer-term positions for fear of contributors switching– for reasons of short-term interests – to another AFP (so forcing the AFPs to hold more liquid, short-term assets), have introduced obstacles to make it more difficult to switch from one AFP to another. The interesting thing is that this last type of regulation has been implemented despite the fact that the "departure option" is vital for solving the agent-principal problem. That illustrates the fact that considerable tensions can arise between different goals.

Despite all these ad hoc answers, problems of substance still remain, in particular the problem of the short-term approach. In some studies carried out by the World Bank, what emerges is that, in general, pension funds behave very much like mutual funds[6] . It is still not possible to see the difference that one would like to see between these two types of institutional investor (pension funds and mutual funds). In addition, the pro-cyclical approach of the institutional investors continues to be very important all over the world (it also occurs in the North American 401k plans). Furthermore, fees remain high and there is still the problem that pension fund contributors (the demand side of the market) do not react rationally to cost and risk-return incentives, despite considerable efforts to provide financial education.

Added to the problematic situations listed above is the high yield registered by the AFPs. The yield of the AFPs is generally higher than that of the banks and certainly higher than the yield of the companies that sell life annuities. This represents a certain paradox. The shareholders and managers of the AFPs generally take very little risk, compared with the risks taken by the shareholders and managers of banks and life insurance companies. It is the contributors to the pension funds (and not the shareholders and managers of the AFPs) who are exposed to the risk of the investments and absorb their losses or profits. One would expect that, given the low risk, the yield obtained by the AFPs would be lower. But what one actually sees is that life insurance companies that sell life annuities, for example, and manage high, complicated risks in the assets and liabilities of their balance sheets, have far lower yields than the AFPs.

All the problems mentioned here create a challenge for the pension industry in terms of image, and raise the political risk of an anti-reform. In fact, this has already been seen in some countries. In Hungary the pension system was nationalised, and in other Eastern European countries (Poland, for example), the individual funding system was cut back dramatically. A large part of the challenge lies in the fact that there are still unresolved problems in the individually-funded systems. Despite the conviction that individual saving is necessary in any pension system, the importance

6 *See Opazo, Raddatz and Schmukler (2014).*

of the unsolved problems must be recognised and dealt with frankly. It is therefore necessary to have a more comprehensive reform that takes the multiple challenges and trade-offs into account, plus the tensions that exist between different objectives.

To summarise, the main remaining problems are the following:

(i) Given the structure of incentives, the AFPs tend to act tactically and with short-term horizons, in a way similar to a mutual fund. It is well-known from the works of Merton and Samuelson, that short-term financial optimisation does not generally coincide with optimisation on a long-term horizon. This means that the regulatory framework currently in force is not efficient in aligning the yield targets of the pension funds with the target of contributor welfare in old age.

(ii) The AFPs are "asset managers" (not "asset-liability managers"). The AFPs do not have any formal liability with regard to the contributor. It is the contributor (and not the AFP) who absorbs both the profits and losses of the investments. Since they do not have a long-term liability, the incentives of the AFPs work in favour of short-term horizons. By contrast, a life-insurance company that sells life annuities has a formal long-term liability and therefore acts on the side of an asset management that is consistent with its liability. The non-existence of a formal liability for the individually-funded pension funds has enormous implications in the design of the investment structure.

(iii) The industrial organisation of the pension fund administration market that is currently in effect is a hybrid of activities that are subject to economy of scale (with descending costs) and activities that are not. If the design is not based on a correct understanding of the industrial organisation of this market, important mistakes may be made. In particular, unhealthy competition may be encouraged.

(iv) At least some of the contributors are naïve[7]. They do not always maximise their long-term benefits rationally. Given this fact, it is difficult to avoid aggressive or abusive sales mechanisms that seek to take advantage of the contributors' emotional or cognitive weaknesses.

This is undoubtedly a series of non-trivial issues that have no simple answer. Optimisation of the individually-funded system calls for public policy options to be adopted that will make it possible to deal not only with the agent-principal problems, but also with the problems of collective action, economies of scale and naivety.

7 *See Akerlof and Shiller (2013).*

III. A reform proposal

The proposal described below has components that help to provide an answer to the various targets and the different tensions.

i. To overcome the naivety problem: default option

If one leaves aside the assumption that contributors are completely rational, the world changes completely: there is immense space for abuse. If this situation is taken seriously, as stated in the theory of Behavioural Economics, it is worth considering a default option for the worker who has not the time, inclination or interest to make an active choice in the composition of his/her investment portfolio[8]. The default portfolio should be set up in such a way that the investment of the contributor's savings is put on "autopilot" in search of a target "replacement rate". The availability of graded information and the development of long-term models enable appropriate default options to be put in place, bearing in mind the restrictions in the regulation.

ii. To align incentives, increase transparency and extend horizons: a benchmark portfolio that varies with the contributor's life-cycle

In order to continue with a more effective alignment of the incentives between the contributor (principal) and the AFP (agent managing the contributor's resources), and to continue increasing transparency and extending investment horizons, it would be appropriate to introduce a benchmark (or reference) portfolio, which would vary with the contributor's life cycle. So, for example, the portfolio of a person aged 25 should be compared with a benchmark that is appropriate for a person aged 25, and the portfolio of a person aged 60 should be compared with a benchmark appropriate for that age.

To put this idea into practice, an independent committee of experts could be set up (composed of people who are respected in society) whose mission would be to define the benchmark portfolio. That committee would in some sense state a credible version of the contributors' rational, informed demand. With the default option and benchmark portfolio in place, the relevant discussion would be on what really matters, namely the "replacement rate" that the contributor wants, given his/her effort to save[9].

8 *See Benartzi and Thaler (2007, 2013).*

9 *For a discussion on this subject, see Randle and Rudolph (2014).*

According to this proposal, the AFPs would be free to allow the portfolios that they manage to differ from the benchmark, but the differentiation, and consequently the competition between the AFPs, would centre on differences of expected return (in other words, differences in the alpha), because the benchmark would fix the risk level (the beta) of the portfolios, depending on the point at which the contributor is placed in the life cycle.

In this way, the performance of the pension funds would be measured not against the return of the average of the system, as usually occurs, but against the performance of the benchmark portfolio, which would vary with the contributor's life cycle.

iii. To reduce costs: centralisation of administration for accounts and blind accounts.

In order to reduce fees, serious thought must be given to centralising the functions that are subject to great economies of scale, precisely in order to harness them and so bring down costs. The reasoning is very simple: it is much more efficient to have a wide motorway with a low toll than multiple narrow motorways with high tolls and marketing wars; there is no sense in having a lot of motorways, when it would be better to have one large one that serves everybody. The idea of centralising accounts administration is not a bad one, as long it enables the economies of scale to be harnessed. That means some version of regulated monopoly that takes charge of the back-office processes involved in handling individual savings accounts.

But centralising the back office of accounts administration is not enough to eradicate the problem of marketing wars. It should therefore be complemented by a system of "blind accounts", a system that has worked successfully in Sweden during the past decade. Under this system the manager of the funds organises their investment but does not know the identity of the contributor. This reduces the incentive for marketing wars, which in turn reduces costs and increases the incentive to publicise performance in terms of returns (compared with the respective benchmark) and fees. Notice, too, that the blind accounts do not interfere with solving the problem of agent-principal, because the savers are familiar with their AFPs and can monitor them, and can switch between AFPs if it seems advisable to do so.

iv. To optimise returns, given the risk fixed by the benchmark: free competition in the management of the investment portfolios.

In order to optimise the returns, given the risk fixed by the benchmark, competition between the AFPs should be allowed as far as the management of the investment portfolios is concerned. The handling of investments is an activity where economies of scale can be achieved with amounts that are relatively low for an institutional investor. Separating the back office of accounts administration from asset management is an efficient way to unpack the industrial organisation of the pension sector.

v. To protect the consumer: a minimum standard of service quality

In order to protect the consumer even more, it would be appropriate to set minimum standards of service quality. This is a key decision variable in the pension market, especially because service quality imposes additional costs on the social security system.

IV. Final reflections

Everything done to improve the social efficiency of the individual funding accounts by optimising the accumulation stage will be left weak and limping if efforts are not made at the same time to perfect the drawdown stage. One thing is to build up savings while one is working and another is what is done with those savings when the worker retires. Leaving Chile aside, the great Achilles heel of the countries in the region is that they do not yet have a socially efficient system of life annuities. This vacuum represents a time-bomb for the individually-funded systems and therefore needs to be dealt with at the first possible opportunity.

In Colombia, for example, only 25 per cent of members are going to receive a monthly pension. The others will not manage to accumulate enough to qualify for a pension (due to a serious deficit in contribution density). The development of the life-annuity market in Colombia has been postponed for legal and regulatory reasons.

Even though we have well-constructed systems of accumulation in individual funding accounts, the broader problem of old-age pensions will not be solved if the appropriate complement is not put in place, namely a deep, well-regulated life-annuity market.

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EFFICIENCY, COMPETITION AND ADMINISTRATION COSTS

PANEL OF COMMENTARY AND ANALYSIS.
EDUARDO MORÓN. Efficiency, competition and administration costs.
SOLANGE BERSTEIN. Competition in the pension system: where are we going and where should we be going?
RENZO RICCI. Efficiency, competition and administration costs.
MELVIN ESCUDERO. Efficiency, competition and administration costs.

EFFICIENCY, COMPETITION AND ADMINISTRATION COSTS

EDUARDO MORÓN[1]

1 *Eduardo Morón has a Doctorate in Economics from the University of California, Los Angeles, U.S.A., a Master's in Economics from the Universidad del CEMA, Buenos Aires, Argentina and a Licentiate in Economics from the Universidad del Pacífico in Peru. He is currently President of the Peruvian Association of Insurance Companies. He has been Director of Economic Studies at the Latin American Reserve Fund (FLAR), Colombia, Deputy Minister of the Economy in Peru, Director of the Financial Development Corporation in Peru. He is also Senior Professor at the Universidad del Pacífico and has been Director of the Research Centre of the Universidad del Pacífico and Chairman of the Board of Directors of the Consortium of Economic and Social Research (CIES). He has written and edited several books, discussion papers and academic articles.*

I am in agreement with Augusto de la Torre's presentation, though I believe that he has emphasised certain things that belong more to the theory than to the reality.

I believe that there is one very special characteristic of the pension market that must be emphasised. A pension is not like a lunch, where if you go to a restaurant and dislike it, you do not go again the following day. Market discipline is brutal in such cases, because there is immediate transmission of information. In the pension market you pay for 40 years, and it is only in year 41 that you begin to receive something from the menu, making it a really strange service. This produces an absence of market discipline. It is vital to understand and take account of this phenomenon in the context of financial education, so that effective public policies can be formulated.

We have seen a debate about the pension system in Peru recently, supposedly among experts, but in fact they know little or nothing. They have literally confused the public debate on crucial issues concerning the private pension system. If the experts do not know, whatever are the members going to know? It seems to me that this is a second important point in the debate about efficiency. I believe that there was a demand for lower fees in the case of Peru. The route chosen was tendering for new members in blocks. This process, which would have made it possible to explain simply that fees had really come down, was made more complex at the last minute by the reform's introduction of fees on both balance and flow. The message became unnecessarily complex and involved. Currently, Peru is probably the country where the pension system is one of the most complicated for a member who wishes to calculate which AFP is the cheapest, (simply because the fees-on-balance method has been combined with that of fees-on-flow), even if he/she seeks professional advice. This is a great defect of this reform and we are going to suffer as a result unless we can correct it promptly.

I would like to highlight three issues mentioned by Augusto de la Torre that I consider to be important discussion topics. First, how does the proposal described fit with a population of members in which the majority does not pay contributions regularly? What happens with a system of life-cycle funds in which there are these gaps in the middle?

Second, I agree with the statement that it is much better and cheaper to have one single, common highway. Obviously, from the point of view of the AFPs, everything possible will be done to maximise profits, and they know how to do that perfectly well. However, the problem is how to translate the reduction in costs into a lower fee for the members. There is no cast-iron guarantee that this will occur, which is why auctioning of members is used.

Third, there is the matter of blind accounts, where it is mentioned that there is no longer any sense in the AFPs' going out to win members. However, we have these members who do not understand, and given that the product is so complicated, there will be no incentives or publicity in general. Since it is a blind account, if I were manager of the AFP, I would simply reduce marketing costs to zero and increase the AFPs' profits. Once again, this does not necessarily mean a reduction in fees for the member.

COMPETITION IN THE PENSION SYSTEM: WHERE ARE WE GOING AND WHERE SHOULD WE BE GOING?

SOLANGE BERSTEIN[1]

1 *Solange Berstein has a degree in Business Administration, specialising in Economics, from the Universidad de Santiago, Chile and a master's in Economics from the University of ILADES/Georgetown, U.S.A. and a PhD Economics from the University of Boston, U.S.A. She has been a consultant for the World Bank on pension affairs, an area in which she has specialised for over 20 years, writing various articles on a number of subjects, such as: pension fund investments, competition in the fund-management industry and pension system coverage in Chile. She headed the Research Division of the Superintendence of Pensions between 2003 and 2006, having worked there as an analyst between 1994 and 1997. She was Superintendent of Pensions from August 2006 until April 2014, and from that position played an active part in the Pension Reform that was enacted in 2008. She also has been President of the Technical Committee of the IOPS (International Organisation of Pension Supervisors), the body that heads up the debate on regulation in pension matters. As Superintendent of Pensions she chaired the Risk-Rating Commission between 2006 and 2008 and continues to be a member of the Financial Stability Committee in Chile and a member of the Board of the Fulbright Commission in Chile.*

It is a pleasure for me to be able to comment on this question, no longer as an authority, but as a person. I want to illustrate a few points with regard to what Augusto de la Torre was commenting, but with a slightly different view.

As regards the aims of a pension system, I believe it is necessary to underline the fact that this system seeks, on the one hand, to prevent poverty among elderly people and, on the other, to smooth the difference in income between active life and the moment of retirement. In that sense, I am in full agreement that the role of savings is an important one. For that reason, it is society that must decide what levels of savings to reach for its citizens in relation to these aims, through a pension system that is mandatory in nature, while supporting the development of voluntary pension schemes.

Now I am going to refer to a slightly different view, though I believe that the fundamental point is the same. When we speak about the role of competition, I believe that this should contribute towards generating good pensions into the future. In that sense, how can competition make a contribution in that direction? I can identify four channels: first, the yield and security of the Pension Funds' investments, aimed at achieving adequate and financially sustainable pensions; second, efficiency in administration with reasonable costs that result in fair prices for the members; third, quality services that contribute to enabling the benefits of the service to be appropriately obtained; and fourth, transparency and trust that allow a long-term, sustainable relationship with the system (the issue of trust is crucial in the financial industry in general, and especially since these are long-term savings products).

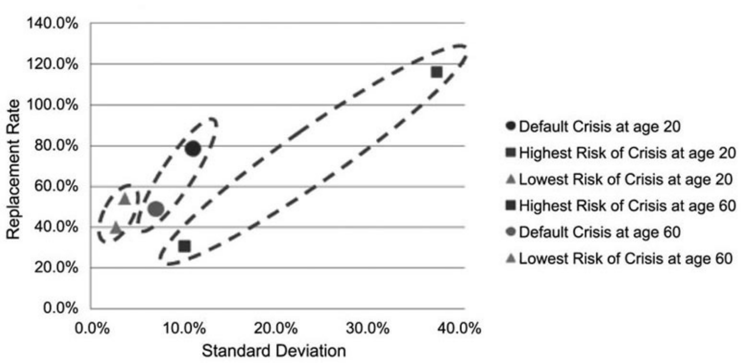
Yield and risk

When we speak about yield and risk, this is precisely where the matters of investment portfolios, agent-principal incentives and replacement rate objectives for pensions come in. In Graph Nº 1, I show portfolios of different types for the Chilean case: one very conservative portfolio, which has a very small return and the lowest variance in terms of future replacement rates; and some more risky portfolios, which are on the right, with higher risk and also a higher return in terms of replacement rate. What we see on the graph is exactly how a crisis at age 20 differs in its impact from a crisis at age 60, depending on the portfolio in which the worker is registered. For a person aged 60, if he/she is exposed to a higher-risk portfolio, the impact that this has on his/her replacement rate is massive. There are therefore various questions that I believe to be critical. What is the appropriate balance between yield and risk for a member? Is the member capable of understanding the risks? How much guidance or advice should we give the member? How can we set up default portfolios? How can we provide information in such a way that, when members take a decision, they take the most appropriate one and do not come back after the event, saying: *"it's that I didn't understand"* or *"but I didn't know"*, or "*but no-one told me"*?

I would combine these subjects with those related with financial consultancy, which are necessary to enable the member to take appropriate decisions, in addition to having a portfolio that is suited to the purpose. Furthermore, each of these portfolios, as was also mentioned by Augusto de la Torre, has a combination of yield and risk. When in Chile we talk about a fund such as the B (which is the second riskiest), this may end up being even riskier than the A (the riskiest of the five Multi-funds). The risk level of each of these portfolios is also in the hands of the administrator, and we may possibly see an increase in these risks. And if these risks do increase and have no anchor, then that is not necessarily consistent with the long-term objective. So the issue of yield and risk has these two faces.

GRAPH N°1

REPLACEMENT RATE AND STANDARD DEVIATION



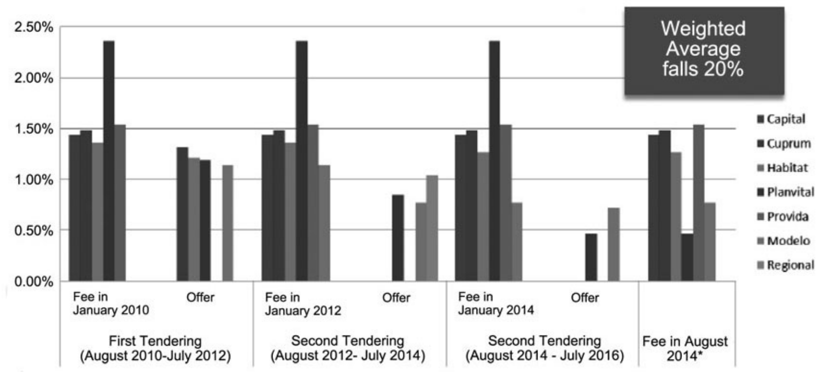
SOURCE: THE AUTHOR.

Efficiency and prices

Graph Nº 2 shows the impact of tendering on administration fees in the case of Chile. When we are talking about efficiency, we are not referring only to greater efficiency per se, but also to the fact that it has to be converted into lower costs for members. In that sense, the tendering processes have gone in the right direction: they have allowed a reduction of 20% in fees (weighted average). An efficient industry that is less expensive for members leads to greater confidence and better pensions.

GRAPH N°2

FEES AND THE EFFECT OF TENDERING



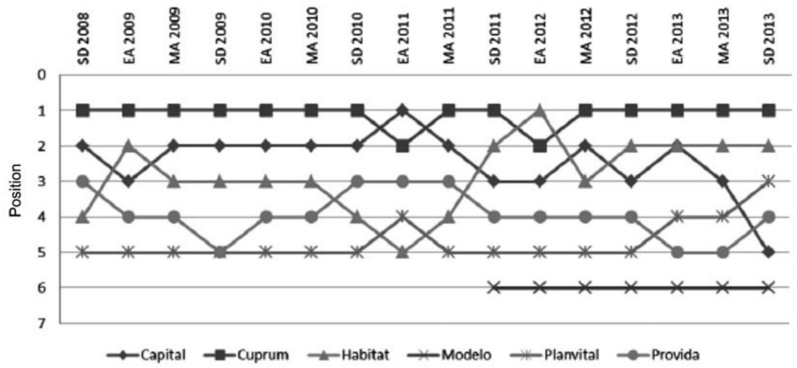
SOURCE: THE AUTHOR.

Quality of Service

In the case of Chile there is the so-called AFP Service Quality Index (ICSA). Its development has been quite important, introducing a new additional variable which has to do precisely with advisory assistance (see Graph Nº 3). We did not know much at the beginning about how to include an advisory variable, but this has become a crucial element in evaluating the AFPs' management of service quality towards people. I believe that the whole issue of service quality is something that cannot be neglected.

GRAPH N° 3

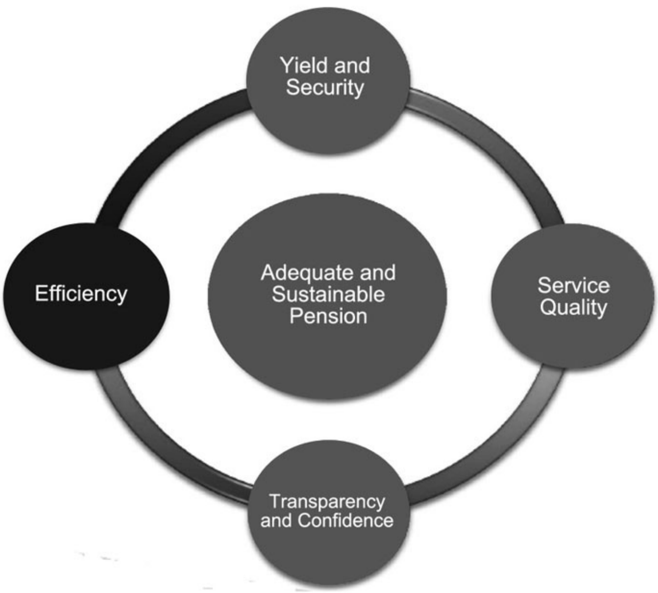
ICSA – GENERAL RESULT



SOURCE: SUPERINTENDENCE OF PENSIONS.

We therefore have an interaction between all these points mentioned above in order to achieve the aim of an adequate, sustainable pension (see Figure Nº 1). In some of the issues mentioned there are synergies (as Augusto de la Torre pointed out), but there are also trade-offs between others. The important point is to see the appropriate balance between all the elements, in such a way as to achieve the final aim already stated. In that sense, I believe it is very important not to lose sight of the matter of confidence and transparency in the pension systems. Furthermore, when we talk about service quality - commenting on the proposal put forward by Augusto de la Torre – the thing that most disturbs me about the separation of fund management from the handling of accounts is that it leaves the person in the dark about who is offering him/her the fund-management service, and leaves the administrator in the dark about the person to whom it is offering the service. This connection with financial advisory assistance is therefore lost, and I believe that it is necessary for taking appropriate decisions.

FIGURE N°1
GOING DEEPLY INTO THE ACHIEVING OF AN AIM



SOURCE: THE AUTHOR.

In my opinion, competition should contribute through these four channels, making it possible to have efficient and sustainable systems in which service is one of the key pillars. This calls in turn for appropriate regulation and monitoring. The challenge is a great one, including the incentives of the various agents and how these are reconciled in order to achieve the system's aims.

EFFICIENCY, COMPETITION AND ADMINISTRATION COSTS

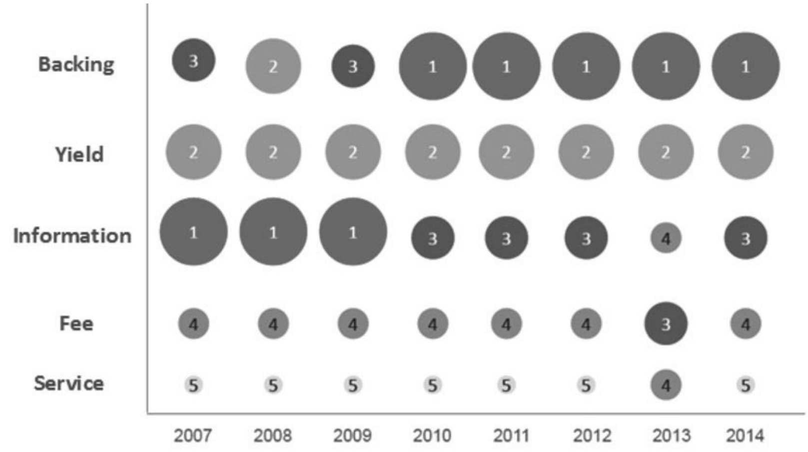
RENZO RICCI[1]

1 *Renzo Ricci qualified in Industrial Engineering at the Catholic University of Peru, with an MBA from the Business Administration School for Graduates (ESAN) and Master's in Finance from the London Business School, United Kingdom. He has wide experience in the banking sector, having worked in the Banco de Crédito del Perú (BCP) as Manager of the Financial Planning Area, Manager of Consumer Banking and Manager of the Commercial Area. In 2008 he became Manager of the Commercial Division of Prima AFP and has been Managing Director of that same AFP since May 2012.*

I would like to start these brief comments by focusing on the customer. One of our defined premises is that the customer is 100% rational, and in that sense it is very important to understand what he/she wants. We have carried out market studies every year since Prima AFP began its operations, with a view to understanding which qualities are most highly valued by our customers and defining the ideal AFP (see Figure Nº 1). In the order of qualities that are mentioned in them, backing is the one that heads the list, because obviously we are talking about a long-term service. In second place comes yield; in third place information and consultancy services, as Solange Bernstein has told us, which is undoubtedly a very important factor. And finally we find the fees charged for fund administration and the quality of the service provided.

FIGURE N° 1

IDEAL AFP – MOST HIGHLY-VALUED ATTRIBUTES



SOURCE: IPSOS.
BASE: MEMBERS OF AN AFP. THE MOST IMPORTANT CHARACTERISTICS THAT THE IDEAL AFP SHOULD POSSESS.

When we refer to backing, each AFP builds up its prestige gradually over the course of time. With regard to yield, the recent reform concerning matters of yield and risks (which was the subject of an earlier panel) is extremely important, because it allows processes that are far more flexible and makes it possible to invest in longer-term assets (such as alternative funds) and also to use derivatives for covering certain risks. In general, yield - that most highly-valued attribute – should be far more closely matched and aligned with customers' preferences from now on.

The third attribute, consultancy services and information, is basically what underpins competition. It is very important for customers to be constantly informed and for consultancy services to be attuned to the life cycle.

As far as fees are concerned, the critical success factor in managing to reduce them is efficiency, understood as expenditure over income.For the expenditure component, there have been initiatives to centralise processes. For example, the AFP Net system was created at trade association level (a system for collecting contributions which operates in Peru). This began by being available to the largest companies (in terms of the number of workers) and has expanded little by little to the remaining companies, producing very good savings in terms of operating costs. However, there is a series of processes that the AFPs are obliged to perform today because they form part of the law, and these increase operating costs without necessarily producing value for the customer. The AFPs in Peru, for example, have to record all the pension processes, issuing a statement of attention for every visit made by customers to their offices, all of which generates costs and inefficiencies without necessarily adding any value for the member. There are also some costs that are not related directly with the pension industry. The AFPs have taken on a series of functions that are not within their sphere of competence and responsibility, but have been regulated in such a way that they are obliged to perform them. As an example, we can mention the paperwork and customer service involved in obtaining the Recognition Bond, which is undertaken by the AFPs even though the responsibility corresponds to the National Pensions System (SNP); the time and process depend on the SNP but the costs are shouldered by the AFPs.

Other examples are the process of collecting the premiums of the Disability and Survivorship Insurance for the Insurance Companies, or paying Life Annuities to pensioners. In both cases the processes are carried out entirely by the AFP, which bears the total costs, but we should remember that in these two cases they are the result of the contract between the member and the insurance company.

Last of all, in the relationship with employers, when the latter fall into default and pay the retained contributions to the members following a judicial action, the legal and collection costs are being covered by the AFP, whereas that cost should be transferred to the defaulting employer. Finally, in the process of collecting contributions, if the company uses a means of payment other than AFP Net, such as using the payment desks in the banks, that additional transaction cost caused by not using the remote method should be borne by the employer.

The final question is, should these processes be undertaken by the AFPs or by the bodies to which they correspond?

As regards the Income component, obviously the expansion of coverage is an extremely important factor. In that sense, it would be worth considering whether we should rethink the tendering scheme later on, since in an open market the expansion of coverage will achieve a higher growth rate, so expanding coverage for all the AFPs. This will result in an improvement in the efficiency ratios of every one of them. If this efficiency is transferred to the fees, all the members of the Private Pension System will receive the benefit of the reduction in fees, unlike the tendering scheme, where only the new members enrolling in the winning AFP reap this benefit.

EFFICIENCY, COMPETITION AND ADMINISTRATION COSTS

MELVIN ESCUDERO[1]

1 *Melvin Escudero is an Economist who qualified at the Universidad del Pacífico, Peru. He has over 21 years' experience in financial and capital markets and has taken part in the structuring and analysis of more than 2,800 financial products, valued at over USD 3,200 million, both in the Peruvian market and in international markets. He is Director of the Master's Course in Finance at the Universidad del Pacífico and is also President of the CFA Society Peru (Peruvian Association of Investment Professionals), which is a member of the CFA Institute. He is currently CEO of El Dorado Investments, a consultancy and asset management firm for the institutional market in Latin America (Mexico, Colombia, Peru, Chile and Brazil).*

What I hope to do in these remarks is give my own view in the light of a wide context, since I have been part of the pension regulatory authority and am now a businessman in the private sector. I worked for the State for the 16 years up to 2010, also regulating AFPs. I was fortunate enough to go through this on-going process of improvements in the regulation of private pension funds, and I believe that the model in general is a very good one, but it is also capable of improvement and will continue to improve as time goes on.

In the past four years I have dedicated myself to travelling around the world, acquainting myself with the needs of the pension funds and trying to design some innovative products which they, or other institutional investors, might need. In this adventure of understanding, getting to know and seeing how to improve pension systems, I have identified three factors that are linked with certain aspects described by the speaker.

The first of these factors has to do with the question of investments. Much of the discussion that occurs in the media and the press is related with costs and investments. However, on the one hand the press devotes the majority of the front pages of its articles to the cost issue, saying that the AFPs are abusing their dominant position (in general, in all the countries in the region). On the other hand, and as a result, little space is given in the articles themselves to the matter of investments. We know that yield is the most important factor in obtaining adequate pensions in the systems based on individual funding. What we all have to do: private sector, public sector and regulators, is make the greatest efforts to improve this. In fact, it is possible to see a marked trend at regional level towards opening up investment, not only to new products (such as alternative products and derivatives) but also to international markets. However, many of the portfolios are very similar, almost identical, not because the AFPs are behaving in a herd-like manner, but because their domestic markets are small and relatively illiquid, and in terms of infrastructure, it is literally impossible for anyone to diversify. So, with regard to this issue, it is obviously necessary to continue with the effort to provide more investment options and flexibility for the pension funds, while also continuing to reinforce risk-based supervision.

A proposal about the new scheme to integrate the Pacific Alliance (Colombia, Chile, Mexico and Peru) came out a short while ago. That alliance includes a series of commitments to evaluate and study the possibility of integrating the stock markets of the aforementioned countries. Specifically, the idea is to seek to eliminate obstacles for pension fund investment in the various markets of the countries that form part of this Alliance. In practical terms, this means that if, for example, a Chilean pension fund invests in Mexico, the investments would be included within the local Chilean limits. My impression, having some knowledge of how markets evolve, is that this change in regulation, which obviously needs to be discussed (there is a mass of detail involved), could really create a series of synergies in the domestic capital markets in the case of shares, fixed-income instruments, alternative products, derivatives for local currencies and others. All that could help enormously to improve portfolio optimisation.

The other factor to which I want to draw attention is the matter of transparency. Augusto de la Torre pointed out that investment portfolios should be very transparent and that members should have the possibility of finding out about the positions on a day-to-day basis. But when one looks at the question of investments, it is necessary to visualise the heads and tails of the same coin. The "tails" correspond to the members and many of them are not even going to look at that information. Those who do may well not understand it. However, on the "heads" side are the financial intermediaries, many of which are Hedge Funds, high-frequency trader platforms, market arbitrators, agents and stockbrokers. I remember, for example, that at the beginning of the Private Pension System (SSP), when we were working with my team at the Superintendence of Banking, Insurance and AFPs (SBS), regulation was absolutely transparent. All the measures were known on a weekly or monthly basis. I was surprised, when I visited different agents in New York or Lima, to see the positions of the AFPs on the desks of the traders in red, green, with an "x", etc. And what was happening is that there was perhaps a kind of "exploitation" or "front running" of the AFPs' positions for the benefit of other financial intermediaries. If information is available and legal, taking advantage and obtaining arbitrage is not prohibited either. So from that point of view, I believe that we must bear this issue in mind, since many countries and institutions cause delays in providing information, precisely to minimise these costs.

The other element linked with the question of pension fund investments is the benchmark. I am in agreement with the idea of having a default portfolio because, unfortunately, whether we like it or not, the vast majority of members will not have sufficient culture to be able to take decisions to move between Multi-funds at the most appropriate moments. In that sense, it is the regulator's duty to protect good decisions and ensure that there are gradual changes in that default portfolio during the life-cycle. However, I also agree with the possibility of having benchmarks that fix replacement-rate expectations, which is quite positive. But those benchmarks are in fact known today as *Strategic Tactical Allocation or Asset Allocation*. In one way or another, benchmarks of this type are already involved in the AFPs' investment policies. In this way, that set for fund 1, fund 2 and fund 3 appears in the regulations, but each AFP, within the regulatory framework (maximum and minimum limits) has the obligation to define the *Asset Allocation* benchmark. Nevertheless, within each asset class, it is the practice in the international market to use benchmarks that allow management efficiency to be measured, and those benchmarks are not only average market portfolios, but are benchmarks of risk-adjusted average portfolios. What is happening today in several countries in the region? Since there are no risk-adjusted indicators being published, many pension funds with a short-term strategy take on more risk than they should, precisely because they are competing for the monthly yield. Hence it is possible for a factor to be generated that will in the end cause the members serious harm.

The other element that I would like to comment on is the matter of cost efficiency. We know that one additional percentage point of yield means 25% more pension in 30 years. We also know that reducing costs by increasing efficiency is also going to produce an increase in the pension, as long as it is passed on to the portfolio. From that point of view, the regulatory framework in Peru is already in place. We have the reform law that was passed eighteen months ago, which clearly states the need to seek mechanisms to centralise processes in order to produce savings in costs. Through the AFP Association, centralisation in the matter of contribution collection has already been implemented (the AFP NET system). However, I invite you to think about the question of centralising accounts. I do not share the idea of "blind accounts" because they represent the definitive breaking of the link between principal and agent. The principal should always be in a position to evaluate or have the possibility of changing, if the agent is not a good one. In that sense, it should not be a third party (even the State) that defines the change, but rather the principal (in other words, the member). This in turn produces an incentive to compete and to acquire more financial culture.

What is the most difficult point in centralisation? Being honest and having checked the numbers and figures, the centralisation of collection, for example, does not appear to be too complicated. I am referring to all these cases in which employers have not paid contributions. In such cases, centralisation could create interesting economies of scale. The centralisation of individual funding accounts is also a matter that I believe should be evaluated practically. In the financial markets, the clearing and liquidation institutions (DTC and Euroclear) handle millions of facts and accounts without any problem, under standards of confidentiality and secrecy. What would happen if the Central Register of Securities and Liquidations in Peru (CAVALI), for example, were to handle the individual accounts? Talking it over with some experts, the truth is that it would apparently not be too complicated. Obviously, it would mean the disappearance of all the operational areas in the existing AFPs, which means a considerable saving in costs (fixed and variable) and might be very positive for the system if it results in a lower administration fee for the members. I have listened to many AFP spokesmen, saying. "*But the most important value of my account, let us say, of my work, is the list of members. I cannot be sharing the list of members with another AFP*". However, in these systems of clearing and liquidation, the main key is the confidentiality of the information. In other words, the fact of clearing and liquidation does not mean that that body is going to share information about the members with the AFPs. Mechanisms can be put in place so that each AFP knows who its members are, without the need to pass this on to third parties. Now obviously, the confidentiality of the information and secrecy must be at a proven level, because I have received comments on more than one occasion to the effect that this type of information leaks out; and that cannot happen.

I therefore believe that there is still much space for improvement, and it lies within a legal framework that already exists, both on the side of investments and on the side of cost centralisation.

PART IV

THE TYPE AND QUALITY OF PENSIONS IN THE INDIVIDUALLY-FUNDED SYSTEMS

THE PROMISE OF BETTER PENSIONS IN SYSTEMS BASED ON INDIVIDUAL SAVING:REFLECTIONS ARISING FROM EXPERIENCE IN CHILE

AUGUSTO IGLESIAS[1]

1 *Augusto Iglesias has a degree in Business Administration, with Economics as his special field, from the Pontificia Universidad Católica de Chile and a Master's in Economics from the University of California, Los Angeles. U.S.A. From March 2010 to March 2014 he was Undersecretary of Social Welfare in Chile. During his professional career he has been partner and Director of PrimAmérica Consultores S.A. a consultancy firm working in the areas of economics, finance and social welfare; researcher at the Centro de Estudios Públicos (CEP) and the Institute of Economics at the Pontificia Universidad Católica de Chile. He has lectured at various higher education establishments on the subjects of macroeconomics, industrial organisation and labour economics; and is a director of various companies. He was a member of the Technical Investment Committee of the Chilean Pension System. He has also been an advisor to international organisations, including the World Bank, the Inter-American Development Bank (IDB), the Economic Commission for Latin America and the Caribbean (CEPAL) and the United Nations, in addition to governments and private institutions. He has advised the governments of more than fifteen countries in Latin America and Eastern Europe on projects related with pension reform. He was a member of the Presidential Advisory Council for Pension Reform in Chile (2006) and has published more than twenty articles on various aspects of pension reforms.*

I. Preliminary Remarks

In Latin America, and particularly in Chile, the pension systems based on individual funding are coming under strong political criticism and have not managed to capture citizen support in a decisive, widespread manner.

The present situation produces a sense of frustration in many people. Why is it so difficult to convince the public and politicians in Latin America of the strengths and advantages of the systems of individual saving, even in times when demographic trends are making the weaknesses of the traditional pension systems abundantly clear, particularly those financed with pay-as-you-go mechanisms?

There is no doubt that part of the explanation for this situation lies in reasons that are outside the sphere of social security policy, including very especially the changes in the predominant political trends in several of the reformist countries. However, there is at least one situation that is fuelling discontent, and for which pension policy is responsible: in some cases the systems are not delivering the old-age pensions that people expect to receive.

The situation is delicate because, just as the stability of those systems would be assured if people did receive from them what they expect, so unmet expectations are a cause of instability. In contributory pension systems – most especially in defined benefit systems – the pension “promises” are always conditional (because the results depend on the frequency and level of contributions, the level of the rate of return, life expectancies, etc.). But whatever the degree of conditionality of these promises, they help to create expectations. And if the promise/expectation is not fulfilled, the system concerned will face political criticisms that are going to affect its image.

Responding to pension expectations is therefore a necessary condition for the long-term stability of a social security system.

Pension expectations

In Latin America the "structural" reforms of pension systems (in other words the changing of one system for another, or the introduction of new components into the structure of the existing pension system) were justified as a both a means of improving both their long-term financial sustainability, and also the "adequacy" (the level and fairness) of their benefits. Therefore, from the political point of view, the reforms were "sold" to the public with a promise – explicit or implied – that they would serve to improve pensions (not necessarily for all workers, but definitely for most of them).

That should not surprise us, and has perhaps been inevitable. Most people require their respective pension systems to pay them the pensions they expect. This is the main criterion on which they will be judged. From the point of view of the beneficiaries of a pension system, what matters is the destination, not the route taken to get there. It is consequently difficult to convince citizens with technical arguments about the bounties of one system versus its alternatives. They will be convinced, provided the system offers them better results and meets the expectations that are raised about them.

Workers form their pension expectations, in some cases in terms of the absolute amount that they expect to receive and, in what appears to be the majority of cases, the "replacement rate" (defined as: pension/ "reference" wage).

The "replacement rate" can be measured in many different ways. For example, it can be measured in gross terms (pension before taxes and contributions, over wages before taxes and contributions), or in net terms (net pensions after taxes and contributions, over net wages). It can also be measured using the final wage earned by the worker, or the average wages of the last working years, or the average wages of the whole working life.

In any case, the evidence suggests that people build up their pension expectations in the form of a "replacement rate" (and not an absolute amount) and on the basis of the last wages received (and not the wages received during their whole life). What is more, the international organisations tend to fix the objectives of the pension systems in that same way. For example, the International Labour Organisation (ILO) defines the target replacement rate as 45% of final wages, for those who complete 30 years of contributions or more.

In Chile, according to the results of some surveys, the members of the AFP system expect pensions that represent approximately 70% of "their final wages". These expectations may be high and "unfounded", but they exist, and it will no doubt take a long time to change them. Furthermore, the result should not come as a surprise. Some of the programs in the old Chilean pension system offered that level of replacement rate for people who retired with complete working careers, and that seems to have stuck in the public's mind. On the other hand, when the new system of individual saving was launched, reference was also made to this level of pension for those who paid regular contributions throughout their working life. Finally, the law that brought the system of individual funding into being fixed the 70% reference replacement rate in the case of total disability pensions and as the condition for allowing the member free withdrawal of funds that he/she may have accumulated in excess of those needed to fund a target pension level.

II. Pension expectations versus reality: the case of Chile

The case of Chile is relevant because this country began with its new pension system earlier than the other countries in the region, and the systems in these latter countries have important similarities of design with the Chilean one. Consequently, by looking at the Chilean experience, other countries in Latin America can learn a lot about the challenges that their own pension systems may face in the future.

In Chile, significant groups of members who are reaching the age for an old-age pension are not going to receive the level of pension that they expect. This is the situation, especially in the case of workers with average incomes who do not receive the pension subsidies given by the State – Solidarity Pillar – and have no voluntary savings, and in that of women.

So, a male member who retires at age 65 and began to pay contributions at the age of 25, and whose real wage grew at 1.5% per year throughout his life, will receive a net pension equal to 54% of the average of the last three years of his net wage. While in the case of a woman who retires at age 60, her net pension will represent 39% of the average of her last three years of net wage. There is consequently a conflict between the pension expectations of these workers and the real situation.

How can this gap between the expectations and realities of pensions be explained? It is possible to identify five situations that have a negative impact on the levels of replacement rate (pension/wage) and old-age pensions. Some of these are associated with Chile's process of economic and social development during the past decades, and others have to do with the characteristics of this country's labour market.

Growth of real wages throughout the working life

Chile has benefited from a process of sustained economic development during a very considerable number of years. It has been a stage during which employment and wages have increased. For purposes of our analysis, it is relevant to underline the fact that the growth in wages has not only occurred during the early working years, but has extended throughout the whole working life. For example, the generation of current pensioners who were 55 years old ten years ago, saw their real wages increase 3.3% per year for the last ten years before they began receiving a pension (between 2004 and 2011).

This is certainly good news, which helps to improve pensions (the higher the wage, the greater the contribution/savings). However, if wages increase until the point of retirement, the replacement rates (pension/wage) calculated with the later wages will be lower than those calculated with the wages of the whole working life (because the accumulation of funds – and the pension – depends particularly on the contributions paid in the early years of the working life). A stylised example shows that if wages grow at a real average annual rate of 1.5% throughout the working life, a wage of $100 in the first year worked will increase to $168 after 35 years of work. The average wage of 35 years will be $134 and the pension will be approximately 70% of that average. However, that same pension represents only 54% of the final wage (see Table Nº 1).

TABLE N°1

IMPACT OF GROWTH IN WAGES ON REPLACEMENT RATE (RATIO PENSION/WAGE)

REAL ANNUAL GROWTH IN WAGES	RETIRING AGE	NET REPLACEMENT RATES COMPARED WITH AVERAGE WAGE				
		FINAL WAGE	LAST 3 YEARS	LAST 5 YEARS	LAST 10 YEARS	HISTORIC
0%	60	53%	53%	53%	53%	53%
	65	78%	78%	78%	78%	78%
1.5%	60	39%	39%	40%	41%	49%
	65	53%	54%	55%	57%	70%
2.0%	60	35%	36%	36%	38%	48%
	65	48%	48%	49%	52%	68%
2.5%	60	32%	33%	33%	36%	47%
	65	43%	43%	45%	47%	66%
3.0%	60	29%	30%	31%	33%	46%
	65	38%	39%	41%	44%	64%

SOURCE: ESTIMATIONS FROM THE UNDERSECRETARY OF SOCIAL WELFARES´S OFFICE (CHILE).
ASSUMPTIONS:
- CONSTANT REAL AVERAGE GROWTH OF WAGES.
- CONSTANT REAL ANNUAL YIELD OF 4.5% ON PENSION FUNDS.
- MAN WITH BENEFICIARY SPOUSE FIVE YEARS YOUNGER, OR WOMAN WITH BENEFICIARY SPOUSE FIVE YEARS OLDER.
- DISCOUNT RATE FOR CALCULATING PENSION AS LIFE ANNUITY = 3.2%
- NET REPLACEMENT RATE = GROSS REPLACEMENT RATE * 1.17
- FIRST CONTRIBUTION AT AGE 25.

Therefore, as a result of the increase in real wages over the course of the whole working life, replacement rates measured on the basis of the final wages received are falling compared with the levels that they would reach if wages were to stop rising (or were to fall) in the final years of the working life. Paradoxically, when real wages grow, it becomes increasingly difficult for old-age pensioners to maintain the level of consumption that they had while working (with their "mandatory pension" alone).

Increase in life expectancies

When the system of individual savings began in the year 1980, a man who reached 65 years of age had a life expectancy of 13 years, while a woman reaching the age of 60 had a life expectancy of 21 years. Nowadays, a man of 65 has a life expectancy of 19 years and a woman of 60, a life expectancy of 28 years. So, since the system was created, the life expectancy of a man at retiring age has risen 45%, while that of a woman has risen 34% (see Table Nº 2).

TABLE N° 2

Valid life expectancy table	Life expectancies (years) at legal retiring age	
	Man	Woman
	65 years	60 years
1981-1984	13.04	21.14
1985-2003	16.65	24.32
2004-2008	18.16	28.38
2009-2013	18.86	28.25
2013	19.06	28.40
% Change 2013 - 1981	**45%**	**34%**

SOURCE: MORTALITY TABLES 70, RV 85, RV 2004 AND RV 2009 FOR MEN AND WOMEN FROM THE SUPERINTENDENCE OF PENSIONS AND THE SUPERINTENDENCE OF SECURITIES AND INSURANCE.

This trend has a negative impact on the level of the self-funded old-age pension. Due to the effect of increased longevity alone, a worker who retires in 2014 receives a pension almost 20% lower than the one he/she would have received in 1980 with the same amount of savings (because in 2014 he/she will have to fund a pension for far more years with his/her savings).

Fall in long-term rates of return

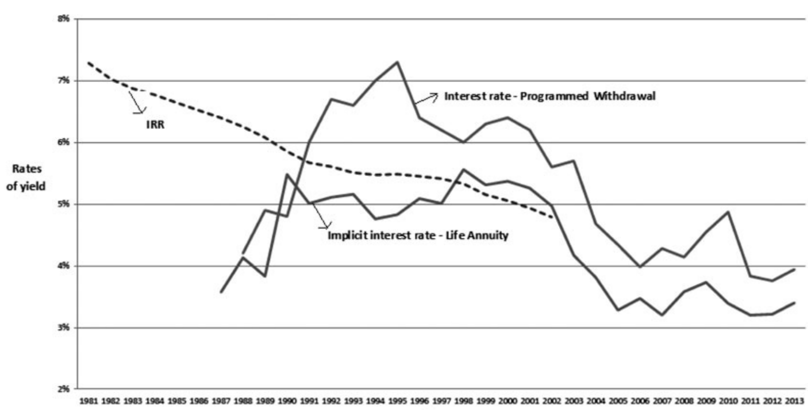
In the past few years, the rates of return on savings in Chile have fallen both during the accumulation period (affecting the level of pension savings available for purchasing the pension), and during the drawdown years (the years when the pension is being paid).

As a result, the younger cohorts of AFP members are obtaining lower rates of yield (though still within the range expected), compared with the yield obtained by the funds belonging to the cohorts of members in the older age group. For example, the savings of those who began contributing in the year 1981 have had an average return of 7.7%, a result very much above original expectations. By comparison, the cohorts that entered the system at the beginning of this present century have obtained returns in the range of 4% to 4.5%, in line with initial expectations, but significantly below those of the previous cohorts (see Graph Nº 1).

A similar trend can be observed in the case of the rates of return estimated for the retirement years, implicit in the "price" of life annuities, which has fallen from 5.2% in the 1990s to 3.2% at present (see Graph Nº 1).

GRAPH N° 1

LOWER LONG-TERM RATES OF RETURN



SOURCE: UNDERSECRETARY OF SOCIAL WELFARES´S OFFICE (CHILE).

The cumulative effect on the pension of lower rates of return during the accumulation and drawdown periods is very important. For example, the pension financed by an individual whose fund of pension savings earned 5% during life and buys a life annuity at 3%, is half (50%) of the pension received by an individual with the same income and contribution history, but whose pension savings earned 7% and bought a life annuity at 5%.

Low contribution density

In Chile, contribution density (the number of months contributed/number of months from the first contribution to retiring age) is, on average, 62% for men and 53.9% for women, a very long way from the 90% traditionally assumed for those with complete working careers. For example, 45% of men and 55% of women contribute for less than 60% of their active lives (see Table Nº 3).

There is a variety of reasons to explain the low contribution density. Among the most important are informality at work (it is estimated that 19% of wage-earners do not pay regular contributions) and periods in self-employment (in Chile, the self-employed are not obliged to pay contributions). In the case of women, the low contribution density is also explained by maternity. A further reason is that the Chilean system of social protection creates certain incentives for people to enrol in the pension system only for the purpose of receiving some social benefits (but not to contribute regularly) and others to remain outside the social security system altogether.

TABLE N° 3

CHILE: DISTRIBUTION OF CONTRIBUTION DENSITIES (*)

	Man	Woman
Average Density	***62%***	***54%***
<20%	**11%**	**19%**
20% to 40%	**15%**	**19%**
40% to 60%	**19%**	**17%**
60% to 80%	**22%**	**16%**
>80%	**33%**	**29%**

SOURCE: ESTIMATIONS FROM THE UNDERSECRETARY OF SOCIAL WELFARES´S OFFICE (CHILE).
(*): FOR MEMBERS BETWEEN 20 AND 59 YEARS OF AGE WHO PAID CONTRIBUTIONS AT LEAST ONCE BETWEEN 2008 AND 2010.

Certainly, low contribution density has serious effects on the level of old-age pensions. A worker who pays contributions for 80% of his/her working life will have a pension approximately 50% higher than that received by another who pays contributions for 40% of his/her working life. This difference may be even greater, depending on the stage of life during which the contributions are concentrated.

On the other hand, the combination of low contribution density with an increasing number of years for receiving the pension gives rise to an extremely challenging situation. For example, on average, in the case of women, the ratio of years contributed to years of pension is 0.51 (they pay contributions for a number of years equivalent to half the years during which they will have to receive benefits). For men, the ratio is 1.27.

Social security evasion

There are many workers in both the public and private sectors in Chile who pay contributions on only part of the wage they receive. This happens because the wages include components that do not involve any legal obligation to pay contributions (such as travel and per diem allowances; etc.). In the public sector it is estimated that these components amount to 18% of the wage, and in the private sector, 9% of the wage.

Since the pensions depend on what is actually contributed, while pension expectations are formed on the basis of the total wage received, this situation also contributes to creating the aforementioned gap between the pensions actually received and the pensions expected.

III. Final Comments

In my opinion, the gap today between the old-age pensions that individuals expect and the pensions that are actually paid represents one of the main challenges, (perhaps, the main challenge) to be resolved in some of the individually-funded systems in Latin America (and undoubtedly, in Chile). If the members of the AFPs are not satisfied with what they are being given, it is possible to say now, with a fair degree of certainty, that the system will face problems.

How can we respond to this challenge?

The current expectations about old-age pensions (replacement rates at 70% of the final wages) are not consistent with the increase in real wages over the course of the working life; the increased life expectancies; the lower rates of return; the low contribution density; and pension evasion.

From this point of view, there can be no doubt that making efforts to adjust expectations is important. In particular, the person who contributes little and contributes on only part of his/her income cannot expect a pension that represents a high proportion of his/her wage.

Adjusting expectations inevitably involves making a considerable effort in terms of pension education and information for workers. As regards pension education, the effort should concentrate on two areas: first convincing people of the importance of paying pension contributions, and doing so on the whole of the wage received; and second, managing to make the worker the main agent in controlling the payment of contributions. Clearly there are other important issues, such as developing skills to compare portfolios, compare prices, understand the relationship between risk and return, understand the difference between a face value and a real value, but all these require long-term efforts at education and, if experience is anything to go by, the probabilities of success are limited. As regards pension information, it is absolutely imperative that the AFPs themselves inform workers throughout their working life about the pension that they will receive if they keep up the savings conduct observed at each point in time. The final pension received must not come as a surprise to the worker. On the contrary, workers must be informed in good time of the options open to them to enable them to reach the pension that they define as a target at the end of their working life.

However, it will not be possible to close the gap between expectations and reality only by using a strategy for adjusting expectations, because this is a way that takes a long time. Also, and most especially when that adjustment has to be “downwards”, the strategy has very important political costs for the bearers of bad tidings.

Therefore, in order to meet the demands for better old-age pensions, the parameters of our individually-funded systems must be reviewed and, where necessary, adjusted. Given the reality of the labour market and the demographic and social trends, the level of pension savings being put aside by Chilean workers and very possibly by many workers in other similar systems in Latin America, is insufficient to fund the pensions that they expect from them. It is therefore necessary to increase the level of savings flowing into the individually-funded systems. In order to achieve that end, the most direct option is to review and adjust the parameters of contribution rate and retiring age on a regular basis, as also the incentives for voluntary pension saving.

Some people claim that the gap between pension expectations and real pensions is due to inherent faults in the system of individual saving. To solve this problem it would therefore be necessary to reform that system substantially. These are exactly the arguments being heard in Chile today, where some have even suggested going back to the system of state pensions and pay-as-you-go. However, this would be a very bad solution to the problem of pensions. As we have seen, the gap between pension expectations and reality has a wide variety of causes that are unrelated to faults in the structural design of the system of individual saving. In fact, under similar conditions, this type of system can pay better pensions than systems that are financed without pre-funding of their obligations. Furthermore, many of the challenges facing the individually-funded systems originate in social and economic trends that have an even stronger impact on the alternative systems (including those based on "pay-as-you-go"). Two examples: the increase in life expectancy strikes at the heart of the funding structure of a pay-as-you-go system. At the same time, low contribution density in any contributory system, whether it has defined benefits or not, and whatever its mechanism for funding the pensions, is going to result in low pensions.

In conclusion: to think of going back on the reforms that brought the systems of individual saving into being would not solve the problem of old-age pensions. Instead, in countries where trends similar to those seen in Chile are foreseen, the parameters of the individual savings system should be promptly adjusted. Countries where such a gap in expectations does not exist, must avoid its occurring.

THE TYPE AND QUALITY OF PENSIONS IN THE INDIVIDUALLY-FUNDED SYSTEMS

FELIPE MORRIS[1]

1 *Felipe Morris is an economist who graduated from the Universidad del Pacífico, Peru, and has Master's degrees in Economics from the University of Pittsburgh and Finance from the American University U.S.A. He worked as an economist for the World Bank in Washington D.C., U.S.A. and has been an adviser to several Ministers of the Economy in Peru. He is currently Chairman of Interseguro, Financiero Uno and the Peruvian Association of Insurance Companies. He is also a director of several companies, including Intercorp, Intercorp Financial Services, Interbank and Inteligo Bank, among others. He works as an international consultant on matters related with the development of financial and housing markets, having worked in various countries in the region for international bodies such as the World Bank, the Inter-American Development Bank (IDB) and several governments.*

One of the main conclusions left with me after listening to Augusto Iglesias' paper is that our private pension systems have great challenges if they are to meet the pension expectations of those who retire.

When I was invited to be a member of the panel in this session, I thought about speaking on life annuities and how they differ from programmed withdrawals, given that I am chairman of an insurance company. But having seen Augusto's preliminary paper, I thought that it made no sense at all to use the short time available to me to compare the various pension alternatives offered to future pensioners. Instead, it would be better to concentrate on the issues described by Augusto in his presentation. He highlighted the fact that in the Chilean case, it will be difficult to meet people's expectations in terms of replacement rates and pensions, either by programmed withdrawal or life annuity. The members of the private system in Chile are expecting replacement rates that represent approximately 70% of their "final wages", which does not coincide with what is actually happening in practice (replacement rates of between 50 and 60%). Augusto mentioned five factors or trends that explain this gap between expectations and the real situation: (i) the growth in real wages throughout the working life; (ii) greater life expectancies among pensioners (a percentage change between 1981 and 2013 of 45% in the case of men and 34% in that of women); (iii) lower rates of return on long-term investments, which have reduced the rates of sale for life annuities and programmed withdrawals); (iv) the low density of contributions compared with what was expected when the SPP was designed (the average contribution density in Chile is 62% for men and 54% for women); and (v) social security evasion (many workers pay contributions on only part of the wage that they really receive, but have pension expectations based on their total wages, which is naive).

These factors, which explain replacement rates below the expectations of members in Chile, also occur to a great extent in other countries in the region that have implemented pension systems based on individual funding. I believe that we have the same problems in Peru, or are on the way to facing the same obstacles. What is clear, and was mentioned by Augusto, is that it is going to be necessary to take some difficult steps in order to improve replacement rates and pensions, such as raising the age of retirement, increasing the percentage of the wage that has to be paid into the individual account and encouraging voluntary saving. It is very difficult to do this in a context in which private pension systems are in a fragile state and are being attacked from various fronts and where the private pension administrators are perceived as institutions that are more interested in their own profits than in the benefits for their members.

In Peru we have had various “little crises” in the private pension system in the last two years, linked with attempts by third parties to give the private system a bad name in order to weaken it. One of these crises occurred a few days ago due to the publication of a large number of newspaper articles criticising the private pension system, as the result of a study made by an NGO which concluded – quite incorrectly - that the AFPs are using biased mortality tables that underestimate the pensions of those in retirement, and are keeping their savings.

What has happened in the past few days simply reiterates the need to reinforce financial culture in Peru, because there is a lot of ignorance on the subject. When a person reaches retiring age, he/she is faced with two alternatives for choosing a pension: programmed withdrawal and life annuity. In the case of choosing programmed withdrawal, he/she receives the pension through the same AFP to which he/she has been paying contributions. The AFP uses his/her accumulated fund to pay the pension, and this is recalculated annually on the basis of what he/she has in the fund and a formula based on actuarial calculations, which simply involves the use of a mortality table that measures the probabilities of living to various ages. The SBS regulates the calculation formula and decides on the mortality table that has to be used.

It has been mentioned that “the AFPs calculate pensions assuming that pensioners will live to age 110”. This is false. The tariffs are based on calculating the probabilities that the person will live to different ages, and a weighted average is taken. This is how it is done all over the world. Obviously, there is the probability of dying at age 65 or at 110, but both are low and therefore have a low impact on the weighting for calculating the pension: the further from the average pensioner’s life expectancy as given on the table, the less the weighting.

If the pensioner wishes to avoid the risk attached to investment or longevity, he/she can opt for a life annuity, which is negotiated with insurance companies. These offer the member and his/her beneficiaries a life-time pension in exchange for the fund accumulated in the AFP. This applies even to his/her heirs if he/she bought a life annuity with guaranteed period. The life annuity is simply an insurance that protects the pensioner against the risk of living for many years and seeing his/her fund exhausted, because the return on the investments has been lower than the withdrawals he/she has been making under a programmed withdrawal scheme. Both the programmed withdrawal and the life annuity are calculated using a mortality table, and with assumptions on the future yield of the investments.

The most unbelievable aspect of this whole debate is that the problem is not that the mortality tables are penalising the pensioners, but the reverse. It is that people are living longer. The mortality table that we are using in Peru is the Modified Adjusted RV 2004, a table from Chile that the SBS first modified and then adjusted, hence the name. If there is a problem with the table, it is that it underestimates mortality, not that it overestimates it, as many are arguing. Calculations that have been made by various insurance companies show that Peruvian pensioners are living longer than the table suggests, and this must therefore be adjusted, but in the opposite direction from the conclusion of the NGO study. As Augusto mentioned, people are living longer, and that affects replacement rates.

On the other hand, there is a series of proposals that would end up reducing both pensions for the elderly and the replacement rate, such as proposing that members over the age of 65 who reach the legal retiring age should be able to choose between using the entire fund to purchase a life annuity or programmed withdrawal, or withdrawing part of this fund, always provided that the remaining balance allows them to acquire a minimum monthly pension similar to the one existing in the public system, or allowing the funds to be withdrawn to purchase a house or finance a business.

Without further analysis, these proposals might be seen by the members as favourable, because they give them greater freedom of choice, but they have a series of disadvantages that make this very dangerous. The main reason why workers are obliged to set aside part of their earnings for mandatory savings in an AFP, or this part is sent to the ONP, is so that, when they reach retiring age, they can have access to a pension that will cover their needs in old age.

There does not seem to be much sense in obliging members of the private pension system to pay contributions throughout their working lives if, when they reach old age, they can withdraw the surplus over and above what is required for a meagre minimum pension. That goes against the basic principle of a mandatory saving-for-pensions scheme and obviously affects replacement rates. Just as there is “short-sightedness” when the worker is young and fails to think about his/her old age, when a person reaches 65 and sees that he/she has the option of withdrawing his/her surplus, it is highly likely that he/she will do so, with the risks that this implies in terms of spending those resources in a short time or losing them in investments that do not make a profit for him/her, then remaining with a meagre pension for the rest of his/her life and bearing the risk of longevity. The purpose of those mandatory savings is to provide for old age, not to save money that can be used freely at age 65 to invest or spend.

The private pension system is often criticised without justification, but the attack is always against the AFPs, the way in which they work and the fees that are perceived as very high, using the argument that there is mercantilism and that the system does not work. There is a negative perception that we somehow have to change. There is a great deal of misleading information and ignorance about the benefits of this system. The public has a series of questions and the industry must answer them clearly and simply. That, however, is difficult, because many of the concepts involved in insurance and pensions are relatively intricate.

I suggest that we work on proposals to improve the system and not on absurd criticisms of the system or on proposals that, instead of allowing pensioners to receive larger pensions, actually reduce them. On the other hand, we, the insurance companies, AFPs and regulators, must work seriously on a program of pension culture that tackles the basic issues of the industry and the main criticisms of the system, enabling the population to understand the importance of saving for old age. I believe that this is a concept that has not yet permeated society. If we do not manage to do this, while proving that the private sector really is there to help with the task, it will be very difficult to make the changes that are needed to ensure the sustainability of the pension systems in all our countries.

There is very strong pressure in our countries to introduce pension system reforms, and in some cases the changes being proposed are very damaging. Some are even suggesting a return to a pay-as-you-go system that will guarantee small subsistence pensions for all and eliminate mandatory saving for individual funding accounts.

THE MARKET OF LIFE ANNUITIES ARISING FROM SOCIAL SECURITY: PROBLEMS AND SOLUTIONS IN THE MEXICAN MARKET

OSCAR VELA[1]

1 *Oscar Vela has a first degree in Economics from the Instituto Tecnológico Autónomo de México (ITAM) and has a Master's and PhD in Economics from the University of Chicago, U.S.A. He has worked as an academic at the ITAM and the University of Chicago, lecturing in Public Finance, Public Policies and Microeconomics. Some of his research papers have been published in specialist journals in Mexico and the United States. He is currently Head of the Insurance, Pensions and Social Security Unit of Mexico's Department of Finance and Public Credit.*

I. A brief outline of the development of the Life Annuity Market in Mexico

I am going to be referring below to the life annuity market in Mexico and a change in policy that we made very recently in December 2013. This change, despite having been implemented very recently, has already produced some results, and I want to put it as an example of public policies for designing retirement systems.

At present the Social Security Laws in Mexico stipulate that individuals who reach the point of retirement must choose a life annuity product or a programmed withdrawal with their Administrator of Funds for Retirement (AFORE). It is expected that over the next 21 years, the savings in the Savings for Retirement System (SAR) will mature and branch out into different financial products for retirement.

In Mexico today, in the AFOREs, there are already 13 points of GDP being managed by these companies. This is a dynamic that is going to continue increasingly into the future. Although the pension reform took place relatively recently (the first reform in 1997 for workers in the private sector, and the second important reform in 2008 for workers in the public sector), in the next few years and decades we are going to see a natural migration of pension savings into various options, and one of them of course will be the life annuity market.

Since the beginning of the reform in 1997, we have had a considerable growth in the accumulation of resources in the SAR (see Graph Nº 1). From 2035 onwards, the SAR will increase its drawdown phase.

The life annuity market has lived through three phases in Mexico:

(i) 1997-2001: 14 insurance companies were involved and there was a real average annual growth of 11% in the resources (see Graph Nº 2).

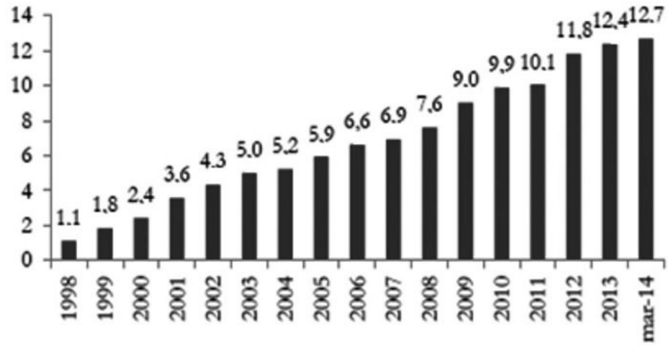
(ii) 2002-July 2009: due to a legal and administrative change, all those who worked before 1997 could choose the system under which they wished to retire, pay-as-you-go or defined contribution (the defined benefit option for the worker comes from Law 1973). This was applied not only to retirement pensions but also disability pensions. As a result of this interpretation and the fact of workers choosing the pensions that would give them greater monetary value (these pensions being absorbed by the Federal Government), there was a steep drop in participation in the private sector. From 2001 to 2003 the average rate of slowdown in the sector was 54% in real terms and participants in the market fell from 12 to 3, clearly putting at risk the very existence of the product.

(iii) August 2009 – 2014: The pensions of the State's Employees´ Social Security and Social Services Institute (ISSSTE) were incorporated into the life annuity system, achieving a partial recovery of the market (a growth of 9% in real terms in recent years, and today 4 insurance companies are already taking part).

In 2013 MXN 18,623 million were granted in premiums for 18,762 life annuities. In December 2013, the insurance companies were managing 81,284 pensions with a constituent amount of MXN 66,137 million. It is an important challenge for the industry and also for the policy-makers to lay down the bases from now on to give this market a positive dynamic in terms of competition, in the variety of products that can be offered to the consumer, and to prepare itself gradually over the next few years to absorb all this quantity of resources that are expected to migrate from the AFOREs to the Insurance Companies. Graph Nº 3 shows the level of concentration that exists in this market. When there are few participants, it is logical also to find a high degree of concentration.

GRAPH N°1

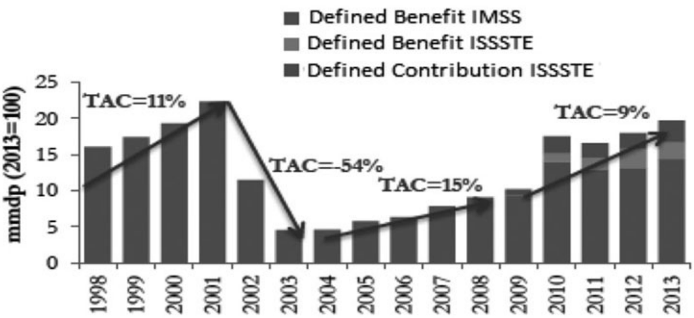
DEVELOPMENTS IN THE ACCUMULATION OF RESOURCES IN THE SAVINGS FOR RETIREMENT SYSTEM (% OF GDP)



SOURCE: NATIONAL COMMISSION OF THE SAVINGS FOR RETIREMENT SYSTEM (CONSAR), MEXICO.

GRAPH N° 2

DEVELOPMENTS IN THE LIFE ANNUITY MARKET

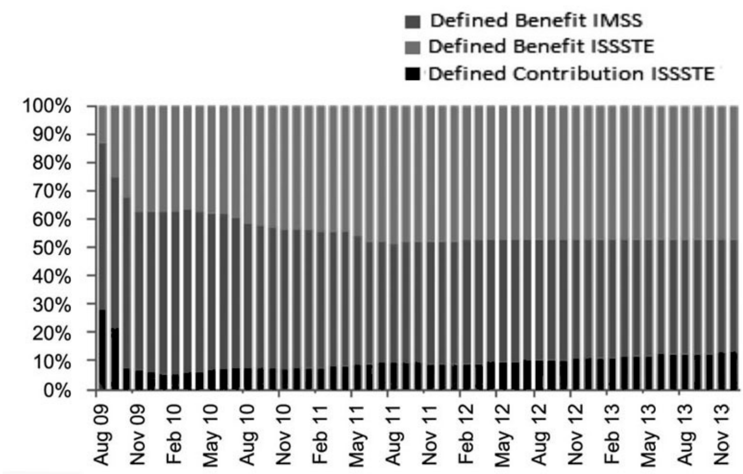


NOTE
- IMSS = MEXICAN SOCIAL SECURITY INSTITUTE;
- ISSSTE = STATE EMPLOYEES´ SOCIAL SECURITY AND SOCIAL SERVICES INSTITUTE.

SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

GRAPH N°3

CONSTITUENT AMOUNTS OF LIFE ANNUITIES PER INSURANCE COMPANY
(% OF TOTAL ACCUMULATED)



SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

II. Diagnosis

In these past few years we have carried out a diagnosis of some of the elements that we consider to be holding back the development of the life annuity market. Four points of constraint were identified.

First, this market was living with a controlled price, with a minimum rate (cap price) fixed by the regulator. Insurance companies were obliged to offer this to workers who chose defined-benefit life annuities (92% of all life annuities). The method for calculating the maximum price and the weekly reference values were published, meaning that they were familiar to the whole market, so it is not surprising that from 2009 to 2013 the difference between the rates of return offered by the Insurance Companies participating in this market, and the rate of return required or stated as a minimum by the regulator was practically nil (see Table Nº 1). On average, in 2011, 2012 and 2013, there were 0 base points of difference between the regulatory rate and the rate with which the market was competing.

Secondly, the incentive offered in the auctions was not sufficient to encourage the worker to choose the life annuity product that would give the highest rate of return. People never lose their ability to reason. People respond to incentives, and it is very important to bear that in mind. People may have different preferences and sets of information, they may place a different value on money over time, but in general, they all respond to incentives. If appropriate incentives are offered, to both individuals and companies, it may produce a good result.

TABLE N°1
REGULATORY MINIMUM RATES AND RATES OBSERVED IN THE LIFE ANNUITY MARKET

National Commission of Securities and Guarantees (CNSF)			Mexican Social Security Institute		State Employees Social Security and Services Institute (ISSSTE)	
Year	Technical Reserves Rate	Minimum Capital Guarantee Rate (CMG)	Rate of Offering over CMG or Reserves	Difference in base points	Rate of Offering over CMG or Reserves	Difference in base points
2009	3.43	3.61	3.51	8	3.58	15
2010	2.66	3.11	2.83	17	2.88	22
2011	2.89	3.41	3.41	0	3.41	0
2012	1.98	2.48	2.48	0	2.48	0
2013	1.85	2.34	2.34	0	2.35	1

SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

Other matters that we have identified as problem areas in this market are the obligation to offer only one product and the fact of having to offer workers a real return. We believe that making this market more flexible in the future is an important opportunity.

III. Recent policy measures

Once having a clear diagnosis, the way forward was very obvious. The first thing to be done in December 2013 was to free up the rates for offering defined-benefit pensions. It should be mentioned that the rates for defined-contribution pensions had already been freed up, which meant free competition with no regulatory point of reference, and a failure to publish the reference rates that the regulator thought or believed to be appropriate, which should have been offered.

In the second place, a direct short-term incentive was included so that the worker who chooses the option that will give him/her a larger return, and therefore a larger life annuity for the rest of his/her life, receives an immediate economic reward. In the first month of the life annuity, the reward may be a direct benefit for the worker of up to MX 9,000 in a single payment. This is important because people place a high value on money in the short term, and if we line up a decision with an economic incentive, this may have very positive results. At the end of the day, the worker chooses freely, and often the element of service, or the brand of the Insurance Company weighs more heavily than this economic incentive, and that is fine. The worker, in the end, chooses which insurance company is going to provide him/her with the life annuity.

In the third place, it was made possible for the regulator to declare any auctions null and void if zero variability is found in the returns offered. In this way, offers presenting anti-competitive behaviours are ruled out and there is an extraordinary auction 48 hours later. Furthermore, sanctions are applied by the Federal Competition Commission, where proof exists of non-competitive practices.

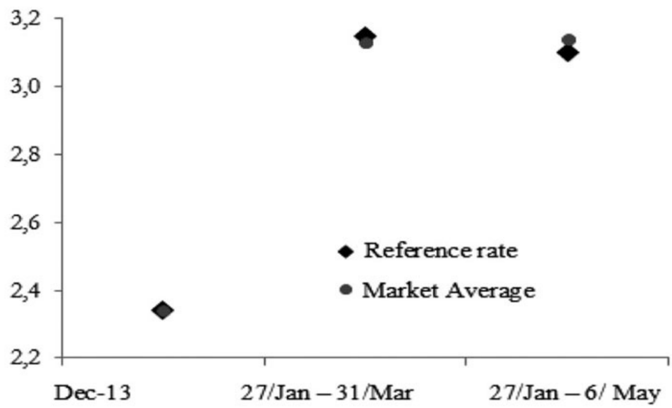
IV. Effects on the dynamics of today's market

The results of the policy implemented in the first quarter of 2014 show trends that are going in the direction we expected.

In December 2013 the weighted average offer rate was anchored slightly below 2.4% of all participants, and above the reference rate that was being published by the regulator. In the latest auctions it is already possible to see deviations in the offer rates compared with the calculation of the reference rate (which has not yet been made public) and scatter among the average rates offered (see Graph Nº 4).

GRAPH N° 4

WEIGHTED AVERAGE OFFER RATE

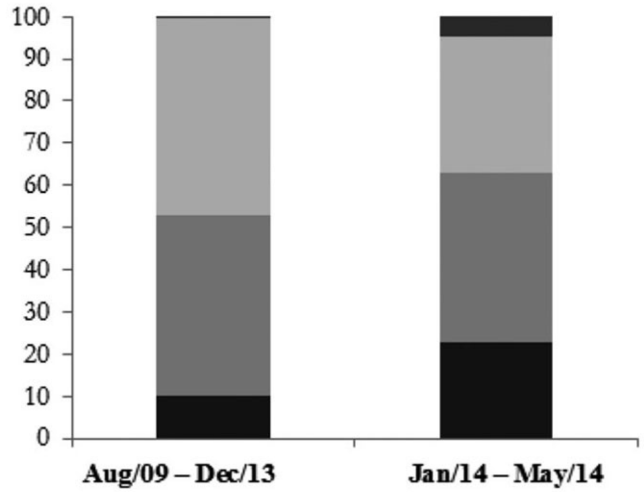


SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

Participation of insurance companies has also increased (see Graph N° 5). The fourth participant is already achieving a somewhat greater share of the market.

GRAPH N° 5

PARTICIPATION OF INSURANCE COMPANIES IN THE MARKET (%)

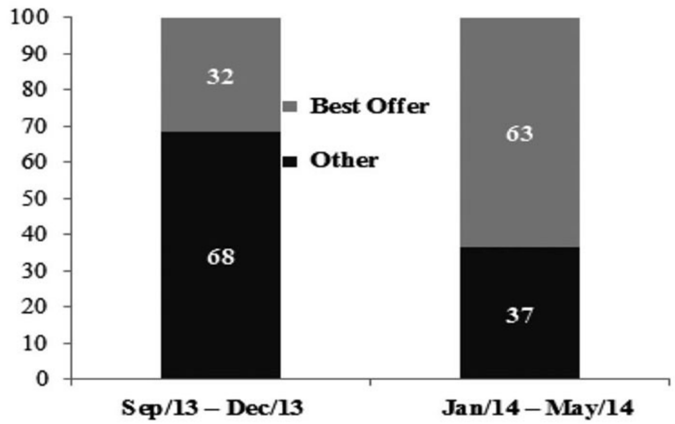


SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

Finally, the results show that the incentive to choose the best option has meant that the percentage of workers choosing the best offer has doubled. Up to December 2013, 68% did not go for the best-performing life annuity, and that has been practically reversed in recent months (see Graph Nº 6).

GRAPH N° 6

CHOICE OF BEST OFFER (%)



SOURCE: NATIONAL COMMISSION OF INSURANCE AND GUARANTEES (CNSF), MEXICO.

As a final comment, I want to emphasise that we have to seek any angle, whether on the part of the private sector or that of the regulator, which offers us efficiencies and incentives that are well-aligned and with a well-designed change, that will give us the possibility of a positive result in the short term.

BETTER PENSIONS, BETTER JOBS

MARIANO BOSCH[1]

1 *Mariano Bosch has a PhD in Economics from the London School of Economics, United Kingdom. He is senior specialist in the Labour Markets and Social Security Unit of the Inter-American Development Bank (IDB). Since he started in the Bank in 2011, Mariano has headed up research projects in the area of labour markets, pensions and welfare policies, and is one of the co-authors of the IDB publication "Better Pensions, Better Jobs: Towards Universal Coverage in Latin America and the Caribbean". Before joining the bank, Mariano worked as a consultant at the World Bank and as a lecturer at the Universidad de Alicante, Spain. He has published various articles in the area of labour markets and development in periodicals of recognised prestige, such as American Journal: Applied Economics, Journal of Development Economics, and World Bank Economic Review and Labor Economics.*

In this short article I shall be referring briefly to the practical aspects involved in improving pension quality. The lecture given by Augusto Iglesias was extraordinary. It is impressive: if we give just a little thought to how individually-funded systems work, we quickly find that people's expectations are probably not in line with the pensions that are going to be provided.

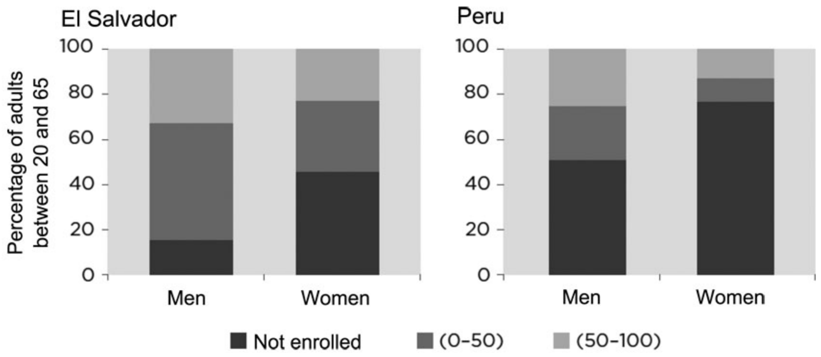
How can we improve the quality of pensions in the region? There are basically two things that we have to do. First, we have to increase the number of people who receive a pension, and that means increasing the number of members; and second, the level of pensions must be improved, and to do that it is necessary: (i) to increase contribution density; (ii) to increase the net returns of the investments; (iii) to increase the contribution rate; and (iv) to raise retiring age.

Thinking of the possible tools or concrete ways by which the level of pensions can be increased, I can visualise two types. In the first place, there are those tools that lie within the institutional context, where pension systems are built into larger systems and where those contributing to the pension systems (i.e. the formal workers) have also to contribute to other programs (such as health), and there is also protection for coping with a series of severance costs, regulations concerned with minimum wages and environmental issues, and others. Then there is a whole institutional context in the Welfare State, which directly affects the levers that we can pull and the tools that we have available for increasing the level of pensions. In the second place we can think about and discuss those policies that aim explicitly to increase the level of pensions, such as granting monetary/tax incentives, using behavioural economics mechanisms, incorporating better financial education and information (sending reminders, e-mails, etc.), improving investment strategies and implementing regulatory changes (such as raising retiring age). The fundamental question is to know which levers are going to bring us the improvements we want, both in terms of the number of people receiving a pension and in the level of pension that they receive.

And here is where we must put the emphasis when opening our eyes to the real situation that exists in Latin America: understanding that many of the things mentioned will probably have no effect at all, given the institutional context that we are managing. I shall be referring to a couple of examples in this sense. Figure Nº 1 shows the percentage of men and women by membership status and contribution density for El Salvador and Peru. In these countries, in the case of both men and women, the percentage of people who were never enrolled is relatively high. There are also people who were enrolled but had relatively low contribution densities (less than 50%), and people who take a more active part in the system (with contribution densities of over 50%).

FIGURE N° 1

PERCENTAGE OF MEN AND WOMEN BY MEMBERSHIP STATUS, ACCORDING TO THEIR CONTRIBUTION DENSITY



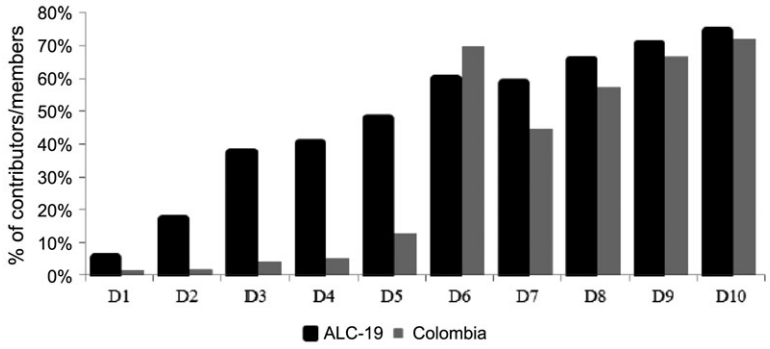
SOURCE: "BETTER PENSIONS, BETTER JOBS: TOWARDS UNIVERSAL COVERAGE IN LATIN AMERICA AND THE CARIBBEAN", INTER-AMERICAN DEVELOPMENT BANK (IDB) 2013.

When thinking about the tools that are going to give us more and better pensions, it is necessary to look at what these tools are going to move. A concrete example, mentioned by Augusto Iglesias is that of increasing the contributions to the pension systems. Chile currently has a contribution rate of 10% of the worker's gross income. If that is raised to 15%, is it going to bring about a change in the percentage of people enrolled in the systems? My feeling is that it will not, in fact it might even have a negative effect. If people see this contribution as a tax and not as a wage deferred into the future, it is likely that fewer people will enrol. Is this policy going to increase people's contribution densities? I tend to think that the answer is no, that it will not increase contribution densities either. That may probably have some truth in it in the case of people who always pay contributions and will continue to do so, whether the contribution rate is 10% or 15%. Therefore, when we are thinking about these levers, these tools that will allow us to increase the level of pension, we have to look at the institutional context in which we find ourselves and see which images are going to be moved by these tools, these concrete policies that we want to put into practice in order to improve pensions.

I am going to illustrate below some of the restrictions imposed on us by this constitutional context. One of them is the minimum wage. Graph Nº 1 represents the percentage of people in work who are paying contributions in Colombia and in the remaining countries of Latin America and the Caribbean (ALC), by income decile.

GRAPH N° 1

PERCENTAGE OF PEOPLE IN WORK WHO PAY CONTRIBUTIONS INTO THE PENSION SYSTEM, BY INCOME DECILE (COLOMBIA AND LATIN AMERICA AND THE CARIBBEAN)



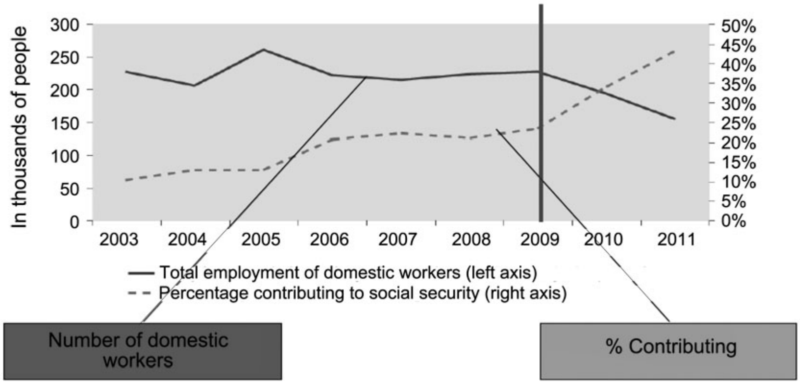
SOURCE: THE AUTHOR, ON THE BASIS OF HOUSEHOLD SURVEYS.

In Colombia the minimum wage is getting to be around 50% of the mean wage distribution, which means that 50% of Colombian workers are earning less than the minimum wage. It is clearly visible that at levels below the minimum wage, in other words, from decile five to decile one, there is almost no contribution at all in Colombia, whereas in the rest of the ALC countries (where that restriction exists to a lesser degree) we do see certain levels of contribution. What I want to explain by this is that there are restrictions that are probably outside our control and are going to tell us whether or not particular policies are going to be effective. Whatever is done in Colombia, in terms of increasing contributions or attempting to increase contribution densities, will probably have no effect at all in the lower part of the income distribution, and that is now a reality that we have to live with somehow. If we wanted to lift this restriction, we would probably need to be talking about things that are not necessarily concerned with pension systems, but are aspects related with the institutional framework mentioned above.

Often the solutions are not easy. It has frequently been said that greater supervision by the public sector can in some way increase contributions. With regard to this I want to refer to the case of Ecuador, where, with a new constitution, a tremendous effort was made as from 2008 to increase supervision, especially in the case of maids. Here there was special interest on the part of the President of the Republic: pointing, he stated specifically that all employers were to pay social security contributions for their maids, a group that has traditionally been excluded from social security. Graph Nº 2 shows the total number of domestic servants /maids, and the percentage of them who were contributing to social security. As from 2008, a brutal, almost draconian campaign of house-to-house inspection began, normally in the wealthiest sectors, where inspection brigades went in with television cameras, opened the door and asked the housewife: "*Is your maid enrolled in social security*?" If the answer was no, they put up a "little red notice", saying "*employment in this house is unworthy: the maid here is not enrolled*". There was therefore dramatic social pressure to enrol these maids. The result was the following: the percentage of maids contributing to social security rose from approximately 25% to 45%, but there was a dramatic fall in the number of maids. Much domestic employment was therefore destroyed.

GRAPH N° 2

THERE ARE NO EASY SOLUTIONS: INSPECTION INCREASES CONTRIBUTION BUT DESTROYS JOBS



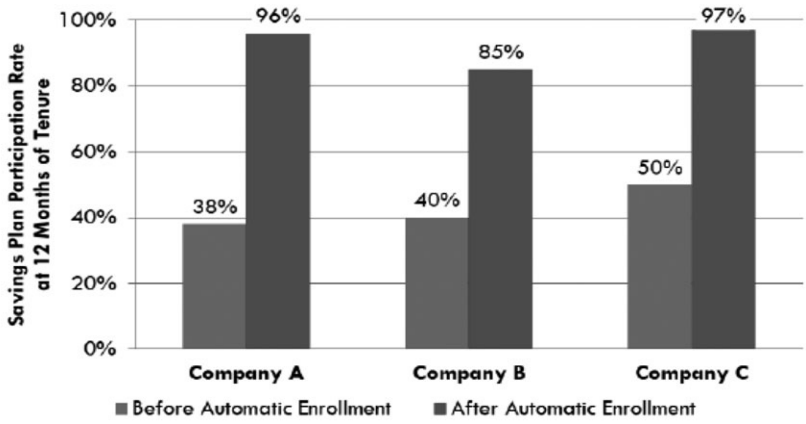
SOURCE: THE AUTHOR, ON THE BASIS OF HOUSEHOLD SURVEYS.

I insist once again that there is no simple solution that will transport us to a situation in which everyone pays contributions into the pension systems.

However, there are things that can be done, in this context where things are very difficult to manage. I believe that here there is a very important role for the AFPs. One of the things that I believe can indeed be done, and has already been mentioned quite a lot in the current debate is that there are opportunities for improvement through behavioural economics, the creation of good default options or automatic contribution mechanisms. We know that these will only work for a relatively small percentage of workers or members, but they will work. Graph Nº 3 shows the case of the 401k plans in the United States for three different companies where automatic enrolment in these voluntary savings plans was implemented. In such a case, when the worker starts working in that company, he/she is put voluntarily into a contributory pension plan. The rates of participation in the 401k plans before this policy was introduced were around 38%, 40% and 50% (companies A, B and C, respectively), whilst after that policy was put in place, the companies saw a dramatic increase in the participation rates, to 96%, 85% and 97% (companies A, B and C, respectively). This is something that can be implemented and would produce a partial improvement, at least, in some of the things that we see as very bad in the region, namely the levels of voluntary contributions in pension plans.

GRAPH N° 3

PERCENTAGE OF VOLUNTARY CONTRIBUTORS TO 401K PLANS IN 3 NORTH AMERICAN COMPANIES
(BEFORE AND AFTER AUTOMATIC ENROLMENT)



SOURCE: MANDRIAN AND SHEA (2003)

Final messages

Increasing coverage, pension levels and replacement rates is vital to give the pension systems legitimacy. Augusto Iglesias spoke of the fundamental case of what is going to happen if we do not manage to increase pension levels.

The global structure of the welfare state determines to a large extent the balance and possibilities of economic policy, imposing a series of restrictions on us. We have to operate with those restrictions, even though we hope that over the course of the next decades we will be able to relax some of them.

However, we must be positive and explore the policies that enable us to change incentives and understand the impact that they have on enrolment and improvement in contribution densities.

I want to finish these messages with some from Solange Berstein. First, communication with members is the key to revitalising private saving, through financial education, information about investments and the expected pension, and reminders. Secondly, it is necessary to seek higher rates of voluntary contribution by default.

THE TYPE AND QUALITY OF PENSIONS IN THE INDIVIDUALLY-FUNDED SYSTEMS

JORGE RAMOS[1]

1 *Jorge Ramos graduated in Economics from the Universidad del Pacífico, (Peru) in 1984. He had post-graduate studies at the University of Boston, U.S.A., where he received Master's degrees in Economics and Business Administration (MBA). He works currently as Managing Director of AFP Integra and CEO of SURA Peru. He was formerly CEO of ING for Peru and Colombia and President of ING Pensions and Severance Payments in Colombia. From 2005 to 2007 he worked in Chile as corporate Chief Financial Officer for ING Chile, with responsibility for the Life Insurance, Pensions, Health and Mortgage Loans businesses. He also took on the post of Managing Director of ING Investment Management in Chile. In Peru he formed part of the executive team that founded AFP Integra, occupying the post of Investment and Finance Manager. Previously he worked at the Central Reserve Bank of Peru.*

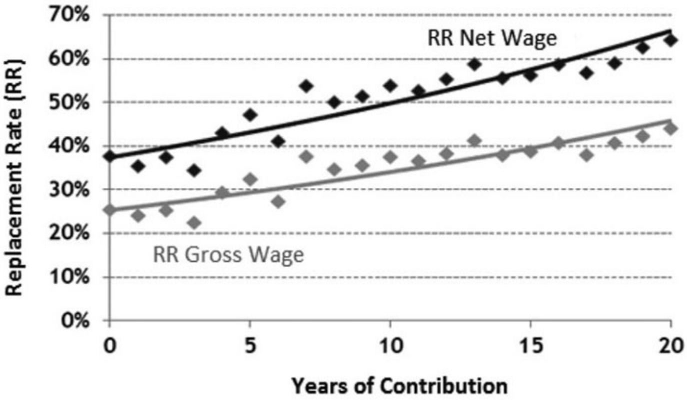
One of the issues that I have picked up personally from the comments made earlier is that the main challenge currently facing the private pension systems is that of coverage. Santiago Levi shows us that moving from pay-as-you-go systems to those based on individual funding has produced only modest gains in terms of coverage. Unfortunately, this gap is one of the largest in the case of Peru.

I shall be concentrating below on showing the Peruvian case in relation to the facts concerning the replacement rate. The data contains the experience of all the members who have retired in AFP Integra, which is fairly representative, given the level of this company's market share within the private pension system. Graphs Nº 1 and Nº 2 show the replacement rate of these retired people, in both net and gross terms. In the Peruvian case, the way in which the replacement rate is measured is by comparing the pension (gross or net) over the average wage (gross or net) of the last 10 years. This is because that is the method used for calculating the early retirement pension. The replacement rate is drawn on the vertical axis, while the number of years with contributions paid is shown on the horizontal axis. We started with people who have contributed practically nothing, some with one year of contributions and others with 5, 10 and up to 20 years.

As everyone knows, in the year 2014 the Private Pension System (SPP) in Peru has 20 years' of maturity behind it. As a result, there are very few people who have already retired with 20 years of contribution (a little less than 1% in percentage terms). As can be noted, the net replacement rate starts off at levels of 40% and in the best of cases we see that it reaches levels of over 60%. The positive correlation between the replacement rate and the frequency with which the worker contributes is very clear and evident. It must also be explained that the majority of people who have retired so far also have a recognition bond, and the levels of replacement rate shown here are therefore capturing, in part, what the State has recognised for the contributions paid by these people into the pay-as-you-go system, before the SPP came into force. That is the reason why those replacement rates have been achieved with so few years of contribution.

GRAPH N° 1

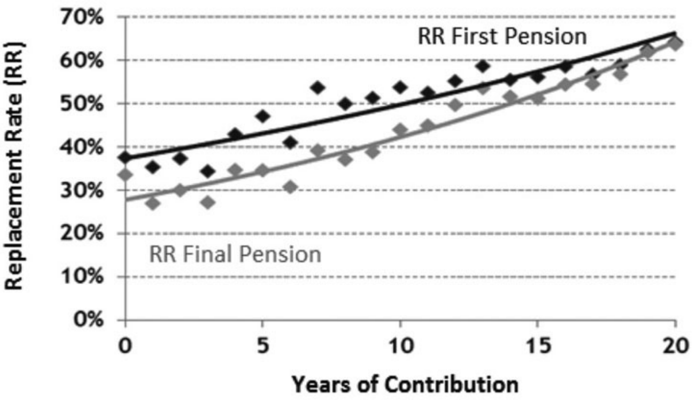
PERU: NET AND GROSS REPLACEMENT RATE COMPARED WITH
N° OF YEARS OF CONTRIBUTION PAYMENTS TO THE PRIVATE PENSION SYSTEM



SOURCE: PRODUCED BY THE AUTHOR FROM THE AFP INTEGRA DATABASE.
NOTE: N° OF PENSIONERS INCLUDED = 21,532.

GRAPH N° 2

PERU: REPLACEMENT RATE OF THE FIRST AND FINAL PENSION COMPARED WITH N° OF YEARS OF CONTRIBUTION PAYMENTS TO THE PRIVATE PENSION SYSTEM

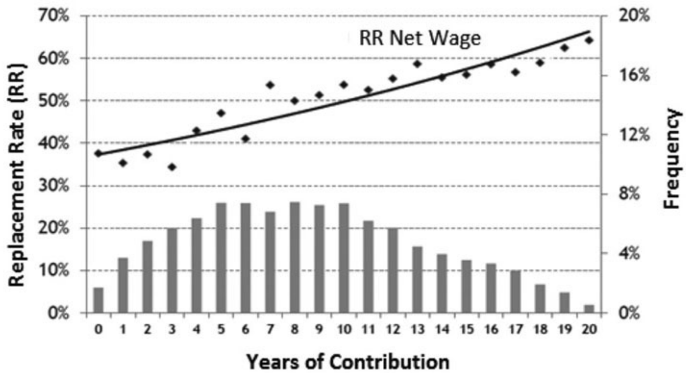


SOURCE: PRODUCED BY THE AUTHOR FROM THE AFP INTEGRA DATABASE.
NOTE: N° OF PENSIONERS INCLUDED = 21,532.

Therefore, what should be done to make the above calculation more accurate is to add the years in which contributions were paid into the pay-as-you-go system. But leaving aside that calculation, what can definitely be seen is that the deciding factor in obtaining a better pension is the number of years contributed in the SPP. One of the most obvious conclusions is that if the person is really consistent in his/her saving, he/she will have a good replacement rate because it is hoped that the SPP will continue to mature and that there will be people with 25 or 30 years of savings, which will allow them to reach replacement rates that are obviously higher.

In the Peruvian situation, most people are concentrated between 5 and 14 years of contributions (see Graph Nº 3). There are considerable gap periods, corresponding to people who do not pay contributions in certain periods of their active working lives. Table Nº 1 shows the results of the exercise carried out for total replacement rates (of the first and final pension, in net and gross terms), showing the relationship that exists between the years of contribution payments and their frequency.

GRAPH N° 3



SOURCE: PRODUCED BY THE AUTHOR FROM THE AFP INTEGRA DATABASE.
NOTE: N° OF PENSIONERS INCLUDED = 21,532.

TABLE N° 1

TOTAL REPLACEMENT RATE

Years of Contribution	Frequency	RR First Pension		RR Final Pension	
		Net Wage	Gross Wage	Net Wage	Gross Wage
0	360	37.56%	25.31%	33.54%	22.60%
1	789	35.31%	23.96%	26.93%	18.27%
2	1028	37.32%	25.16%	29.96%	20.20%
3	1212	34.36%	22.36%	27.14%	17.66%
4	1353	42.90%	29.24%	34.62%	23.59%
5	1574	47.05%	32.30%	34.56%	23.72%
6	1568	41.00%	27.19%	30.74%	20.38%
7	1445	53.67%	37.52%	39.17%	27.39%
8	1583	49.94%	34.57%	37.04%	25.63%
9	1541	51.30%	35.48%	38.77%	26.81%
10	1567	53.74%	37.39%	43.96%	30.59%
11	1318	52.51%	36.45%	44.91%	31.18%
12	1220	55.18%	38.13%	49.64%	34.31%
13	951	58.64%	41.18%	53.55%	37.61%
14	840	55.45%	37.82%	51.60%	35.19%
15	755	56.13%	38.67%	51.16%	35.24%
16	706	58.57%	40.63%	54.39%	37.74%
17	609	56.68%	37.85%	54.51%	36.40%
18	406	58.90%	40.61%	56.79%	39.15%
19	293	62.44%	42.17%	61.81%	41.74%
20	114	64.18%	43.92%	63.39%	43.58%
Total	**21232**	**49.18%**	**33.62%**	**40.91%**	**27.96%**

SOURCE: PRODUCED BY THE AUTHOR FROM THE AFP INTEGRA DATABASE.
NOTE: N° OF PENSIONERS INCLUDED = 21,532.

As an AFP industry, we can help to provide a partial solution to the problems of coverage. There is clearly a limited role for the AFPs in enrolling new people in the private pension system, but there is plenty of space for improvements that can be carried out with members who are already in the system. It is true that this issue is being looked at more closely in Peru today than it was before, when there was no tendering for new members, because obviously the paths to growth have in some ways been closed. However, we are convinced that it is possible to do an important job as an industry to improve contribution frequency and this must happen on two fronts. First it must happen with people who stop contributing because they are working independently (and perhaps informally), where information and the creation of awareness are key factors; here there is a lot to be done. Secondly, it must happen with the whole issue of collection, because the explanation for many of these people who have not registered contributions may, in some cases, be that the employer has retained the contribution but not paid it. On these two fronts there is very important work to be done, and as an industry this does indeed concern us. No serious, successful business can be unaware today of the situations and interests of its customers, and the AFPs are no exception: they constitute a market that seeks to be sustainable and this obviously means capturing the interest of the members.

With regard to the importance of the role of information, I want to underline the fact that in the course of my career I have been very much involved in the subject of investments. I have not the slightest doubt that the investment alternative offered today by a private pension fund is one of the best to be found in a country such as those in the Latin American region, for many reasons. First, the pension funds have a level of diversification that other investment alternatives will have great difficulty in replicating. Secondly, they have a very strict level of regulation, where the likelihood of fraud occurring is practically nil. Thirdly, they have highly professional investment teams. And fourthly, they are within the reach of anyone. So, as a product, the private pension funds are extremely strong.

I also have a further discrepancy with the question of private pension funds' being considered pro-cyclical investments, precisely because one of those funds' main advantages is that they present predictable flows, so one knows more or less how much is available for investment each month. Income is entered in the funds even in the moments of most acute crisis, which is not true in the case of mutual funds, where there is greater pressure to make withdrawals when there are periods of financial stress. It is precisely in these difficult environments that the pension funds can make use of interesting investment opportunities, and that is actually anti-cyclical.

PART V

CORPORATE GOVERNANCE, TRANSPARENCY AND RELATIONSHIPS WITH MEMBERS AND PENSIONERS

CORPORATE GOVERNANCE AND THE ROLE OF PENSION FUNDS[1]

DANIEL BLUME[2]

1 *This article is based on a presentation in his personal capacity and does not necessarily represent the views of the OECD or its individual members.*

2 *Daniel Blume is Senior Policy Analyst in the Corporate Affairs Division of the Organisation for Economic Co-operation and Development (OECD), and has a master's degree in public policy from Duke University, USA (1991). He is responsible for OECD corporate governance work with non-member countries (with specific responsibilities for Latin America). He has worked at the OECD since 1994, including as an adviser on economic development issues in the cabinet of the Secretary General, and previously on public governance and management issues. Currently he manages the Latin American Roundtable on Corporate Governance, the Latin American Network on Corporate Governance of State-Owned Enterprises, and contributes to the Latin American Companies Circle. He also carried out corporate governance reviews involving Chile and Estonia, and will be responsible for reviews of Colombia and Latvia as part of their accession to the OECD against the OECD Principles of Corporate Governance and OECD Guidelines on Corporate Governance of State-Owned Enterprises. He has led additional corporate governance country reviews of France, Israel, Norway, South Korea and the Netherlands.*

This brief article is focused on the role and influence of pension funds on the Corporate Governance (CG) of the companies they invest in. This is a very important topic because if pension funds can influence CG for the better in capital markets, the capital markets will prosper and economic growth will result.

CG has been a particular preoccupation of the Organisation for Economic Co-operation and Development (OECD) because one of its findings is that good CG leads to better-functioning capital markets, which are better for attracting investment and for the performance of companies as well. The OECD has been working for the last 10 years to try to promote CG improvements throughout the world and particularly in Latin America through the OECD´s Latin American Corporate Governance Roundtable. This Roundtable has found that pension funds have played a leading role in increasing the attention given to CG in the region. Yet, how far pension funds should be expected or required to go is a subject of much current debate.

The article is organized as follows. First, the OECD Principles of CG recommendations for institutional investors (IIs) will be addressed. The second part will focus on the work of the Latin American Corporate Governance Roundtable and the key recommendations derived from its proposals. Finally, the document concludes with some considerations for the future.

I. OECD Principles of Corporate Governance recommendations for institutional investors

The OECD CG Principles are the globally accepted standard for corporate governance, and include recommendations for IIs on this topic. These principles are currently under review to be updated, and make the following recommendations for IIs.

First, there is Principle II.F: “The exercise of ownership rights by all shareholders, including institutional investors (IIs), should be facilitated”:

- II.F.1: "IIs acting in a fiduciary capacity should disclose their overall corporate governance and voting policies with respect to their investments, including the procedures that they have in place for deciding on the use of their voting rights".
- II.F.2: "IIs acting in a fiduciary capacity should disclose how they manage material conflicts of interest that may affect the exercise of key ownership rights regarding their investments".
- II.G: "IIs should be allowed to consult with each other on issues concerning their basic shareholder rights subject to exceptions to prevent abuse".

What's new since the OECD Principles were last revised?

These principles were first adopted in 1999 and updated in 2004. Currently at OECD we are in the process of looking at and rethinking them. There has been a lot of experience in the last 10 years, including the financial crisis, to recognize that IIs have not played the CG role that OECD has encouraged.

There are a lot of challenges involved. In preparing to revise and update these principles this year, we have taken a good look at the CG and IIs landscape, and we see that a lot has changed. If we look at the capital markets 50 years ago, physical persons (individuals), held almost all of the shares in the US (84% of the shares were held by individuals). Today, they hold less than 40%. In the UK, the portion of public equity held by physical persons has decreased from 54% to only 11% over the last 50 years. So, it is a different world now, where IIs play the key role among shareholders in the framework for CG and, particularly, in terms of minority shareholder interests.

However, what constitutes the nature of IIs has become increasingly complex. It is no longer dominated by the traditional IIs: the pension funds, the investment funds and the insurance companies. Now we have many different types of alternative IIs, such as sovereign wealth funds, private equity, hedge funds, exchange-traded funds, independent asset managers and asset management corporations. Within each category they have different business models and strategies, which tend to drive IIs behaviour more than legal or regulatory requirements. Many of them do not find it in their self-interest to be actively engaged in the CG of the companies that they invest in.

For policymakers, this creates a dilemma. There remains this strong collective and public policy interest in encouraging IIs to vote and to promote good CG of the companies that they invest in, yet at an individual level incentives are lacking, which makes this one of the key CG challenges for the future viability of capital markets.

What we have seen in that environment is that policymakers in countries sometimes will require or strongly encourage through codes, such as the UK Stewardship Code[3] to get IIs to vote, but lacking the incentives, sometimes this vote just becomes a rubber stamp. In fact, in a survey that the OECD commissioned of the Manifest company, they surveyed 16,000 annual general meeting resolutions and found that the opposition votes only amounted to 3.5%, so in 96.5% of the cases they are just voting for what the management has put up in the first place. The only opposition tends to come in relation to remuneration, occasionally, and in relation to board elections, but generally they approve things and rely more and more on proxy advisory services, which can be a kind of one-size-fits-all solution where the proxy advisory services say: "*This is our model. This is how you should vote*," and may not take into account the individual circumstances of the companies.

The model that OECD is seeking to promote is difficult to make work. In that model, there is a current reluctance when updating the principles of CG, to avoid going too far in imposing requirements to vote or actions, because it may not turn out the way we want. It may just result in actions to comply with the legalistic requirement without really doing it based on a business case. This reluctance to impose requirements to mandate consideration of CG in investment decisions or voting stems from a fear that they may have unintended consequences.

Should pension funds be considered differently?

Many argue that pension funds play a special role because, in many cases, they manage compulsory savings, so they have a duty to serve the public interest and to exercise vigilance in protecting the future benefits of retirees.

In Latin America, in particular, with low liquidity in the markets and controlling shareholders who control most of the companies, pension funds have a long-term stake in the market and this gives them even stronger reasons to consider CG practices to improve company value over the longer term.

In some countries such as Chile, Colombia and Peru, where there are a small number of large funds, the structure and size may facilitate effective influence on corporate governance, because they are large enough to have the capacity to exercise this role and influence. If they succeed in positively influencing the growth and viability of local capital markets, beneficiaries will benefit.

3 *The UK Stewardship Code aims to enhance the quality of engagement between asset managers and companies to help improve long-term risk-adjusted returns to shareholders. The Code also describes steps asset owners can take to protect and enhance the value that accrues to the ultimate beneficiary. More details on this Code can be seen here: https://www.frc.org.uk/Our-Work/Codes-Standards/Corporate-governance/UK-Stewardship-Code.aspx*

II. The Latin American Roundtable on Corporate Governance

One of the main priorities of the Latin American Roundtable on CG, which meets once a year and brings together regulators, policymakers, stock markets, investors and companies to debate public policy issues, has been to try to advance on the issue of pension funds playing a role and influencing the CG of the companies that they invest in. At OECD we developed a report[4] . The participant countries of Latin America were able to go a little bit further than the OECD as a whole, because of the special setting and the special role that pension funds can play in this matter.

This report sets out a number of different recommendations, which can be summarized into five basic categories.

1. CG in investment decisions

The first key recommendation is the role of IIs in investment decisions in distinguishing better-governed companies for investment purposes. The report recommended that legislators and regulators should enact measures that enable or encourage IIs to efficiently include governance analysis in their investment appraisal process (e.g. by investing higher amounts in well-governed companies or limiting their investments in companies that don't meet governance standards).

Colombia is a good example of this, where it requires its pension funds to take CG into account in its investment decisions, and Peru also has requirements for pension funds to invest in companies with good governance practices.

This does not necessarily make sense everywhere. It makes sense in countries with a small number of large pension funds. It is harder to impose that kind of requirement in countries such as in Mexico and Brazil, which have quite a diversity of pension funds. Some of the larger ones can play this role, but some of the smaller ones may not be able to be effective in doing so and may not have large enough shares to actually influence the companies in which they invest.

4 *"2011 Strengthening Latin American Corporate Governance: The Role of Institutional Investor". Available in English and Spanish, at: http://www.oecd.org/daf/ca/latinamericanroundtableoncorporategovernance.htm*
Other OECD publications include: "The Role of Institutional Investors in Promoting Corporate Governance" (2011) and "Institutional Investors as Owners – Who are they and what do they do?" (2013).

2. Formulating and disclosing CG policies

The second key recommendation of the Roundtable was on formulating and disclosing CG policies. This recommendation says that IIs should formulate CG policies, including what they consider in their investment decisions, and communicate these to the market. This may take the form of publicly disclosed governance codes or guidelines concerning the expectations they have of their clients. It is an even stronger signal to the market if all pension funds have such codes, agree on the same code or have similar codes that they all support.

Pension funds in Brazil, Chile and Peru have issued such codes. In Brazil, it was not as a general code but as individual codes of particular pension funds. Colombia references the national code in its decisions and now is in the process of updating its code. Peru has just updated its code, which is also important, because these can become quickly outdated as regulations change. As they become irrelevant, markets will pay less attention to them, so it is quite important to keep these codes up-to-date.

3. Voting

A third area of recommendations is on voting. The OECD Principles of CG do not prescribe an optimal degree of investor activism but suggest that "many investors are likely to conclude that positive financial returns and growth can be obtained by undertaking a reasonable amount of analysis and by using their voting rights."

Chile, Peru and Colombia (and Israel) have instituted such requirements for pension fund shares above certain thresholds. It is not a coincidence that Israel joins these Latin American countries, because they have a similar structure of dominant majority controlling shareholders and concern that the minority shareholders may not have their rights respected if the minority shareholders are not active, so they try to facilitate that by pushing pension funds to play an active role.

The main benefit of these requirements has been that it has raised the profile of the importance of corporate governance in these countries and issuer responsiveness to minority shareholder requests for information. We have talked to pension funds and the companies in these countries and, at least in the case of Latin America, they say that before these requirements were in place, there was very little attention given to CG. So it is a way of raising awareness in the markets that seems to have some success.

It is important to include provisions to deal with conflicts of interest, so that pension funds do not vote in such cases. If we required everyone to vote (even when they have a conflict), that is not productive, so there should be exceptions to make sure that they do not vote in such cases.

The legal framework should provide for sufficient and timely information to facilitate electronic voting and to also facilitate informed voting. Even if pension funds are not required to vote, IIs should develop and disclose their policies and procedures for using their voting rights.

4. Board composition and remuneration

The fourth area of recommendations is on board composition and remuneration. IIs should seek to influence the composition of boards to include independent and non-executive directors, including through nomination of candidates where legally allowed. The Brazilian and Chilean legal frameworks seem to do the most to facilitate election of board members by minority shareholders in the region. Peruvian and Chilean pension funds have used “head-hunter” firms to identify good independent candidates as well.

IIs should also seek to ensure that executive compensation is linked to managers’ performance and that their incentives are aligned with those of shareholders.

5. Internal corporate governance

The fifth area of recommendation is on internal corporate governance. Obviously, this is essential. IIs should be required to follow advanced CG standards on issues such as[5] :

- Accountability of fund managers to their beneficiaries;
- Proper Board/Trustee oversight of management;
- Mechanisms for dealing with and disclosing how they manage conflicts of interest;
- Aligning fee structures in favor of quality and the interests of beneficiaries, rather than “churning” to generate higher fee revenues;

5 *Please review the “OECD Guidelines for Pension Fund Governance”, which provide more details of on what OECD recommend in this area. Available at: http://www.oecd.org/pensions/private-pensions/34799965.pdf*

III. Considerations for the future

The Latin American Roundtable on CG has been serving and will continue to serve as a platform for promoting implementation of the recommendations indicated. We have already had several sessions where we have had reports from Brazil, Colombia and Peru on actions and further plans for implementation. The next version of the OECD Principles of Corporate Governance will need to consider the ongoing debate on how far the legal and regulatory framework should go in trying to impose or encourage IIs to promote CG and exercise their rights. It will remain important to recognize the diversity of models for IIs business strategies, and not to impose one-size-fits-all requirements.

CORPORATE GOVERNANCE, TRANSPARENCY AND RELATIONSHIPS WITH MEMBERS AND PENSIONERS

PANEL OF COMMENTARY AND ANALYSIS.
MANUEL ANTONIO MÉNDEZ DEL RÍO PIOVICH. Corporate governance: from theory to practice.
GIOVANNA PRIALÉ. The private pension system: social responsibility and financial education.
MARIANO ÁLVAREZ. Corporate governance, transparency and relationships with members and pensioners.

CORPORATE GOVERNANCE: FROM THEORY TO PRACTICE

MANUEL ANTONIO MÉNDEZ DEL RÍO PIOVICH[1]

1 *Manuel Antonio Méndez del Río Piovich obtained a Licentiate "cum laude" in Business Administration from the University of Boston, and has various postgraduate degrees from the Universidad Autónoma de Madrid, the Business Institute and Wharton, and has lectured on Finance and Strategy at several prestigious Spanish universities. He was founder and is President of the Fundación Microfinanzas BBVA, a not-for-profit institution specialising in economic and social development that is sustainable and inclusive for the most underprivileged people. He is President of the Banco de las Microfinanzas Bancamía, in Colombia, President of Financiera Confianza S.A.A. in Peru; President of the Corporación para las Microfinanzas in Puerto Rico, President of Microserfin in Panama, and President of the Banco de Ahorro y Crédito Adopem in the Dominican Republic. He is also a member of the Board of Directors of Banco BBVA Continental in Peru. He was formerly Managing Director of the Grupo BBVA, in charge of Strategic and Risk Analysis at worldwide level, and member of the Board of Directors of the Grupo Banco Bilbao Vizcaya Argentaria. He was also a member of the "Steering Committee" of the Institute for International Finance (IIF) and has occupied positions of high responsibility in Grupo Santander, Bank of America, Renta-4, Federación de Cajas de Castilla y León, CECA and Swiss Life.*

The aim of this article, entitled "Corporate governance: from theory to practice" is to share my experience in the world of good corporate governance, not only as a member of different boards of directors in a variety of companies but also as the person responsible for putting these good corporate governance practices into effect in eight financial institutions. To do this, I shall first of all concentrate on a few brief examples to give some background on corporate governance scandals, which have shown that the therapies of the past and present are proving insufficient. Afterwards I shall present an alternative view of corporate governance, different from the proposals that are already known; following that, I shall refer to what I have been able to see in my own experience, and what I call the 7 deadly sins that matter most in bad corporate governance; later I shall concentrate very briefly on the initiatives that the Fundación Microfinanzas BBVA is developing in the area of corporate governance and, last of all, I shall end with a suggestion for the sector.

Background

If we go back a few years in time, we find a mound of terrible episodes of bad corporate governance in both the United States and Europe. I imagine that we all remember the crisis of the WorldCom Company, with 185,000 million dollars destroyed for the shareholders; or Enron, with 155,000 million dollars destroyed; or Andersen, or Parmalat; the intervention of banks, such as Banesto, or companies, such as Vivendi. In other words, we can recall great financial scandals that caused bankruptcies, liquidation or a massive reorganisation, with direct losses for their shareholders and the other stakeholders.

These great, catastrophic financial scandals occurred despite the existence of an impressive array of good corporate governance codes, such as: the Cadbury Report, the Olivencia Code, the Principles of the Organization for Economic Cooperation and Development (OECD), the Sarbanes-Oxley Law (SOx) in the United States, the Aldama Report in Spain, among many others from different countries: a whole mound of episodes showing that past and present therapies are proving insufficient. In 2007 the world financial crisis blew up, a situation that still persists today and from which Europe is suffering the most dramatic consequences. According to the forecasts of many economists, it will take another five years to return to normal.

That crisis could be called the "Armageddon" of the corporate governance crises, characterised by the failure to apply corporate governance practices effectively in the structuring of incentives payments, risk management, the composition and classification of the Board, the risk-rating institutions, accounting standards and supervision and regulation.

Faced with this scenario, numerous new codes of corporate governance were implemented from 2007 onwards, such as that of the Latin American Federation of Banks (FELEBAN), the Peruvian Association of Banks (ASBANC), a new code from the OECD, another from the Inter-American Development Bank (IDB), that of the Andean Development Corporation (CAF) or of the National Stock Market Commission (CNMV) of Spain, among many others.

Codes of corporate governance have been evolving, but in view of the episodes that have occurred both in the past and in the present, these have not been totally effective. In fact, corporate governance is the second main risk for the micro-finance industry, after debt overhang, according to the 2012 edition of the Banana Skins Report.

According to that report, bad corporate governance is the main problem of the micro-finance sector, but paradoxically, as the report shows, the practitioners – in other words, those who have to govern the institutions – do not perceive it as such, which is very serious.

Corporate governance: an alternative view

Usually, when a question is asked about the definition of good corporate governance, the answer tends to be the following: "…it is the set of good practices and regulations that we give ourselves in order to regulate the board and governing body..". And when we are asked "why" it is appropriate to have good corporate governance, the answer tends to be more diffuse: "it's better to have it than not to have it…", "… well, yes, the truth is that it is expensive to have it, but it creates value….".

This situation of non-definition about *why* it is important to have good corporate governance leads by default to its non-existence. This is a serious situation if we bear in mind that, if there is no why, there is no reason, and if there is no reason there is no goal, and if there is no goal there are no metrics. And the problem is that if there are no metrics, corporate governance cannot be measured, and is therefore unmanageable.

When we move in a world in which the main thing is to extract maximum value for the shareholder, in the absence of restrictions, everything that has to do with corporate governance means more control, more expense, more procedures, more processes, all of them mitigating against financial performance and return. So people usually move on the basis of their appetite for risk. However, when the restrictions of good governance are introduced, principles that state that not everything is valid just because it is legal, then the optimum operates more normally.

And so then, it is necessary to ask the question: Why do problems of corporate governance occur?

I will now allow myself to look from a slightly different view, from a memory of my childhood. It has to do with an old problem of economics, the so-called agency problem between the principal and the agent, the conflict of interest, asymmetry of information and moral risk.

When I was little, my mother sent me one day to fetch some meat she had ordered at the market; my mother was the principal and I was the agent. And it so happened that just as I was about to go inside the market, I saw that there was a dog for sale for exactly the same amount of money as the cost of the meat; that was when the asymmetry of information occurred: I had information that my mother lacked. For the same price, I could buy a dog. It would be much better than the meat that we would be eating the following day in any case and would then disappear. I resolved that conflict of interest, between my own interests and those of my principal, in a somewhat unethical manner. I bought the dog, which turned out to be a female, and she lived with us for 13 years. This is the origin of all bad corporate governance.

The conflict of interest does not always resolve itself to the detriment of the company; if it always did so, it would be much easier to regulate. There are times when the conflict of interest resolves itself to the company's advantage.

In the face of situations like these, what structures or mechanisms/procedures do we have to regulate asymmetry of information?

In a society in which information is absolutely available for everyone, where social networks can bring down different governments (the Arabian spring, the "indignant" movement…); in a world where firms go bankrupt because of information, what can we do to regulate asymmetry of information? What are we doing as institutions in this direction?

I am going to state a very clear example: the general shareholders' meeting. Everyone knows that the general shareholders' meeting is representative, so it is responsible for property, strategy, objectives … absolutely everything that is important. The chairman of the board opens the meeting and passes the ball to the executive chairman or managing director. And the managing director starts to talk, and explains that, even though the world is in a very bad way, even though the environment is very complicated, even though the competition is terrible and even though the regulators are breathing down its neck, the company has been doing quite well. That is a model of most general meetings. All the information is *ex post.* How can one evaluate the effectiveness of the strategy? How does the mission fit the vision, the economic targets and the financial goals? What is the deviation from the mission and vision if that information is not being included? The rendering of accounts that is offered is *post mortem.* We, in a world where information is perfectly easy to come by, do very little to avoid asymmetry of information. In fact, it looks as if we are looking for that asymmetry. And the same thing happens when we ask ourselves about conflicts of interest. Which sorts of corporate governance specifically regulate conflicts of interest? How do we do it? Do we have structures? Do we have procedures to regulate them? Or do we simply look for a general principle that says: ".. be good and kind, do not behave badly…"? The principle of "*comply or explain*" appears frequently, but it is not developed or made specific.

There are key elements that must be present in good corporate governance. There must be structures of the type that work with asymmetry of information, with conflicts of interest, with ethical conduct, and also with a clear distribution and balance of power.

It is increasingly evident in financial and industrial concerns that there is steady growth of power for the one who has information, which is basically the executive world, occasionally supported by the directors' world. It is also obvious that that information, that imbalance of power, means that the employees, customers and general shareholders' meetings end up being less informed about what is really happening and what really matters. The issue is the balance of power, the controls and, effectively, the convergence of incentives.

I believe that we have to put a lot of emphasis on this. What is the point of corporate governance? It is necessary for survival. If you think of a company that aims to remain in business over a long period and not merely present good results for a quarter or a year, then you realise that it needs structures to guarantee its continuity. And that means risks, audits, compliance, and above all, good corporate governance and codes of conduct.

The 7 deadly sins of corporate governance

Now I am going to share my thoughts on what I have been able to see: what I call "the seven deadly sins" of bad corporate governance.

Perhaps the first of all is avarice, *free-riding*, which means that agents receive the benefits for their shares without bearing their cost; a very common situation in institutions with a widely-scattered share base. A clear example was that of the people who let loose the greatest world crisis since the recession in the 1920s (Lehman Brothers, City, AIG, and others): before bankrupting the world's financial system, they took away USD 18,400 million of compensation in bonds, which looks like an example of appalling corporate governance.

The second of the sins is lust. In order for lust to exist there must be abuse of a position of dominance or power. It may be employees versus customers, directors versus employees, or regulators versus employees. Within the concept of lust in relation to employees we find, for example, the case of France Telecom. What was the pressure put on employees by directors that led to over 25 people committing suicide in France Telecom? And as for the dominant position, JP Morgan: that position of 100 billion dollars in credit default swaps caused the loss of 6,000 million dollars in the company, with a fine of 920 million dollars: a clear abuse of a dominant position, something akin to lust.

The third sin is that of pride, which means overvaluing oneself and despising others. These are complacent people who confuse "permanent identity" with "current state". An example of this behaviour was the Executive Committee of Lehman Brothers, which consisted of just two members: John D. Macombre (president) and Richard S. Fuld Jr. (CEO and Chairman of the Board). They apparently felt themselves to be more than sufficient.

The fourth sin is sloth, which consists of looking the other way and avoiding effort. Lehman Brothers began the financial crisis in which we are all still immersed. The risk committee of Lehman Brothers, which also consisted of two people, met just twice a year in the moments preceding the crisis. It is worth asking oneself, where was the FED (the United States Federal Reserve System), where were the supervisors, where was regulation in those moments? They were undoubtedly not engaged in fulfilling their responsibilities.

A fifth sin is envy, characterised by the significant correlation between the work climate and the company's performance, and also by the effect of "competitive tailgating". Examples of this are: talent-leaking, leakage of critical information, espionage, etc.; or the case of stock options, which produced a race for growth and benefits among the principal executives in the financial crisis, resulting in practices at odds with prudence.

The sixth, anger, is the sin that leads, for example, to over-reaction following a severe crisis, and generally involves taking excessive action to cover possible new crises, with weak cost-benefit assessment of the new schemes. A clear example of this is the birth of the Sarbanes-Oxley Law in 2002; or the additional (special) contributions to the Deposits Guarantee Fund in Spain.

And finally, the seventh deadly sin in corporate governance is gluttony. One example: Percy Barnevik was president and CEO of Asea Brown Boveri; he was also president of Skanska, president of Investor AB, president of AstraZeneca, and also director of Dupont and General Motors, none of these bodies being especially related with the others. Percy Barnevik paid himself compensation of 148 million Swiss francs when he retired from Asea Brown Boveri, and shortly afterwards the company acknowledged multi-million losses that brought it to the brink of bankruptcy.

Fundación Microfinanzas BBVA – actions for good corporate governance

The Fundación Microfinanzas BBVA is a not-for-profit organisation, the aim of which is to promote economic and social development which is sustainable and inclusive for less fortunate people, through Responsible Finance for productive activities, its speciality and methodology.

Since its creation in 2007, the Fundación has delivered productive loans worth a total of over 6,058 million dollars to 4.4 million people with low incomes, substantially improving their welfare and that of their families.

For Fundación Microfinanzas BBVA, corporate governance is an essential element, since in the course of our activity we attend people who are extremely vulnerable. We currently work with one and a half million clients, of whom 85% are poor or vulnerable, with average incomes of 4 dollars a day, and over half have no education or only primary education. In other words, the moral risk attached to attending these people is enormous.

Furthermore, we carry out our work with eight microfinance institutions in seven Latin American countries (Financiera Confianza, in Peru; Banco de las Microfinanzas Bancamía, in Colombia; Banco Adopem, in the Dominican Republic; Fondo Esperanza and Emprende, in Chile; Contigo, in Argentina; Microserfin, in Panama, and Microfinanzas PR, in Puerto Rico), with different regulatory environments and behaviour patterns, forming a micro-financial group. This is a group for which the existence and requirement of good corporate governance are vital with a view to ensuring its continuity.

The reinforcement of corporate governance is essential for any institution, and that is why the Fundación has philanthropically drawn up a "Code of good corporate governance for microfinance institutions" which we have delivered to the institutions free of charge, in addition to a "Guide for applying practical principles of good governance", two documents that are referents in the sector. Together with this, the Fundación has held workshops and seminars to disseminate the importance of good governance, in addition to imparting information to 300 board-members and the directors of over 100 financial institutions using the case-study method, in order to understand what good and bad corporate governance really are.

A proposal for rating good corporate governance

Without any doubt, the dissemination of the importance of good corporate governance is essential, but that means being able to evaluate and rate it. At this point in time, the risk-rating firms include a review of good corporate governance policies in their overall rating process, but they count the bad corporate governance practices without doing the same for the good ones. Standard & Poor's, Moody's, Fitch, DBRS and the other risk-rating agencies around the world take good corporate governance into account, but it is wrapped up in a set of standards that are attempting in principle to diagnose the probability of bankruptcy.

For that reason, in Fundación Microfinanzas BBVA we think it would be a good idea to carry out a simple rating among ourselves to evaluate corporate governance: a simple rating that will allow us to find out whether institutions are governed well or badly, above and beyond their accountability in debt payment and other variables, by binary questions, such as:

1. Is the executive president the same as the chairman of the board?
Yes; 1 – No: 0
2. Are more than a third of the board members independent in your company?
Yes; 1 – No: 0
3. Do you have an audit committee or a compliance committee?
Yes; 1 – No: 0
4. Do you have a wages committee with a majority of independent members?
Yes; 1 – No: 0
5. Is the chairman of the wages committee independent?
Yes; 1 – No: 0
…..Etc.

Conclusions

After the episodes of bad corporate governance that have occurred in the past, and are still happening in the present, it is time to calibrate the rating and move from the world of eminence to the world of evidence in order to find out who has good or bad corporate governance. We are convinced that with a rating like that, as simple and uncomplicated as the one we suggest, Lehman Brothers would not have passed the “tribunal” of the code of good corporate governance, and would have received a bad grade in *Corporate Governance.*

We find ourselves in a world governed by massive codes, put together by eminences in the field, but there is so much evidence of the things that go wrong, so much practical, measurable evidence. Why do we not base ourselves on that? If we did, we could make a lot of progress. My proposal consists of working together, and Fundación Microfinanzas BBVA is open to all those institutions that wish to be involved, so that we can develop a simple, easy, understandable system that will allow us to establish a good corporate governance rating, to facilitate the governance of the institutions and their continuation as “on-going business concerns”.

Thank you very much.

THE PRIVATE PENSION SYSTEM: SOCIAL RESPONSIBILITY AND FINANCIAL EDUCATION

GIOVANNA PRIALÉ[1]

1 *Giovanna Prialé has a licentiate in Economics from the Universidad del Pacífico (UP), Peru, and also completed studies in the "Master of Arts in Economics" program offered jointly by Illades and Georgetown University, U.S.A. She is currently director of Gerens Economía y Finanzas in Peru, an institution through which she works as an international consultant and speaker on the design and implementation of regulation and financial inclusion strategies. She is also currently a lecturer at the UP and contributes a column in El Comercio newspaper. She has held different posts in the public sector, in the Congress of the Republic, in the Superintendence of Banking, Insurance and AFPs (SBS) and in the Ministry of Labour. She has carried out various research projects in her special fields, including "Financial Inclusion Indicators for Developing Countries" 2011; the First Survey on Financial Culture in Peru 2011 (ENFIN 2011) and "Financial Inclusion and Consumer Protection in Peru – the branchless banking business" (2010).*

In this short article I shall be touching on the subject of corporate governance, but linking it very closely with the users, in other words, the members of the private pension system, many of whom we find it very difficult to reach because we do not understand their needs or the language we should use to speak to them.

What are the members and pensioners saying about the AFPs?

I am giving a list below of what members and pensioners are saying about the Pension Fund Administrators (AFP). It is a summary of a few questions, many of which we hear day after day when we go to the Congress, or when some journalist interviews us, or when someone wants to question the bases of the private pension system.

i) Why do I have to pay an AFP to manage my money, if I could put it into some other institution which will maybe charge me nothing, or charge me much less for managing my resources?
ii) If the money that is in the AFP is mine, why can't I have access to it if I lose my job, want to buy a house or cannot afford to pay my son's university fees?
iii) Why do I have to enrol in an AFP, if I am the one responsible for my old age and who will therefore enjoy or suffer the consequences of the decisions I take?
iv) Why do they calculate the "retirement pension" using an actuarial table that assumes I will "live to the age of 110"?
v) Why can my "pension in dollars" not be updated? What I am receiving now is not enough to live on.

What is expected of the AFPs?

We have been hearing the above questions for a long time. I have had the enormous privilege of working in the Superintendence of Banking, Insurance and AFPs (SBS), and the opportunity to work long days on the design of the private pension system, and these are questions that we must not fail to answer. The user really wants us to answer. Maybe the answer will not be what he wants to hear, but it is like a visit to the doctor. If I go to the doctor, it is because I want him to tell me what is the matter with me, whether or not it is what I would like to hear. If we put the problems to ourselves in this way, we may have more clarity and be able to make a short list of five aspects explaining what is really expected of an AFP:

i) That the savings for a retirement pension will match the member's expectations. Obviously, the expectations of a boy of 13, when he begins to think of saving for his retirement, are different from the expectations of a person aged 50, who is right in the middle of the transition period.
ii) That the AFP will work alongside the member to build up his/her pension fund and accompany him/her throughout his/her working life. This is a very important issue, because often the member does not feel that the AFP is present in that way, or that it is accompanying him throughout the period of building up his fund for the moment of retirement.
iii) That they (the AFPs) will be concerned to provide the member with high-quality service, because without members there is no AFP. That is a key issue: the member wants to know that his vote and opinion are taken into account.
iv) That they will assume their commitment to serve the member with social responsibility, and that this change of attitude will involve a real change in the paradigm.
v) That all the workers in the AFPs (from the CEO to the security staff) will be committed to their work.

Although it may sound repetitive, it is worth emphasising that the fundamental commitment of the AFP must be to provide the member with high-quality service throughout the 30 or 35 years that the contractual relationship lasts, and that it should accompany the user in order to form his retirement pension. This clearly assumes a change in the model, aimed at understanding the fact that the whole of this service must be directed towards commitment to serve the member. Perhaps this sounds very theoretical, but it can be achieved, and it assumes a change of attitude which is exactly what financial education and behavioural finance are aiming at.

What is expected as a country (Peru)?

As a country we certainly expect to advance together in rectifying the imperfections of the private pension system, with all the social actors involved: the government, the AFPs, the members and those who have retired.

There is also the expectation that the AFP system will stop being "tinkered with" all the time. This is done reactively, but it is unsuccessful because the tinkering does not meet members' needs.

Finally, it is expected that the AFPs will act responsibly in order to make the system sustainable. To achieve this, it is necessary to use channels of hiring, collection and payment that make it possible to reduce costs, while offering competitive products that convince the worker that it is to his advantage to pay for his pension instead of spending the money on buying a television to watch the World Cup, for example.

Learning to listen

I want to suggest that we need to learn to listen, which presupposes dedicating some time to the member. How can “a product” be developed that meets the users’ needs? We have probably said that the pension product is “canned”, because in the end it involves the retirement pension, and the disability and survivorship pensions. But listening to the members is, basically, finding out how, in this product segment, it is possible to develop one that is *ad hoc* to their needs. Maybe a person has an extra fund and can save for the voluntary pension without a social security element. This makes it necessary to listen to the person’s needs.

It is not a question of marketing studies or market research to find out the best qualities of the AFP, so that the member will trust it. It is rather a question of sitting down to find out what is happening with pensioners today. Are they satisfied with the service? Is the money that they are receiving as a pension sufficient? What other means do they have for getting together that 100% income that they require to meet their needs on retirement? Because we are seeing that people are living longer and we also know that their medical expenses will probably increase in those extra years of life.

I therefore invite you to join me in rethinking the way in which we listen to the member and the pensioner. If the member does not feel satisfied with the service that we are providing, what can be expected of the private pension system? Obviously, the product must meet the needs of that particular member or pensioner, and we must sit down and listen to him, dedicating time in order to find out what things the AFP can do today that will really contribute to his well-being.

Behavioural finance and financial education

I have had the opportunity to take part in several seminars dealing with the matter of financial education, in Colombia, Peru and other countries in the region. Financial education per se does not solve all the problems, though it is a useful tool on which the AFPs can lean in order to give the member confidence. What we hope to achieve through financial education is not merely to impart knowledge, but also to change habits, with the final purpose of generating responsible financial behaviour.

There is an abundance of literature on the subject of financial education. If we wanted to make a summary of which financial education programs are likely to succeed, we need to start by recognising that the consumer is indeed rational, but the decisions he takes are sometimes biased by other variables. When a person has a father who is ill in hospital and the wage is not enough to cover that illness because there is no insurance, and the AFP is there with the money that has been accumulated, the member's decision is likely to be biased. He will not take the best financial decision, but it will be the best decision that his conscience tells him to take at that moment.

The most recent research documents state that the most successful financial education programs have the following two essential characteristics:

(i) Alternate use of tools, which may be macro "generic" tools or micro "penetration". A campaign that consists of a notice in the newspaper or an advertising spot is not enough, because if the aim is to bring about a change in attitude, the AFP must first show that it is consistent and behave credibly. That assumes that the AFP will follow the member up all along the way. The AFP can launch an advertising spot or information poster, but it must go further: create a chat to reach a young audience; create text messages to appear on the mobile phone; remind people how the pension fund must be managed before getting to age 65: for example, television campaigns and focus work with workers approaching retirement in a mining company.
(ii) Attending to the specific needs of the target groups. For example, suggesting financial education for young people who are still at school today and will probably make use of their financial decisions in 15 or 20 years' time is different from working with people who are members today, who probably have periods when they go in and out of the labour market and who need the AFP to accompany them. Another example: people who are unemployed do not want to lose their fund or the coverage of the disability and survivorship insurance, so there is a lot of work in which the AFPs can make a contribution.

There is not one single desirable model of financial behaviour – it depends on each person and each household. Financial education presupposes personalised monitoring, and it is possible to work for this by identifying profiles of the public, while always taking into account the fact that finances or financial goals must be realistic. Finances can help to generate wealth and well-being if they have clear goals, and they cannot be detached from the overall view of the person, including his anxieties, fears and contradictions. Furthermore, finances must not be used to fill gaps.

Financial education must take behavioural finances as its starting point: the ways in which we take decisions depending on our "idiosyncrasy" and "our ways of seeing the world". Financial education can contribute to the change in attitudes and patterns of behaviour, but it will not solve other imperfections in the financial markets. If financial education is to be effective, it is necessary to accompany the process with a change in the rules of the game at institutional level.

The State can head up the financial education policy, but the private sector has a role of social responsibility that it must fulfil in order to achieve competitive markets that are sustainable in the long term.

CORPORATE GOVERNANCE, TRANSPARENCY AND RELATIONSHIPS WITH MEMBERS AND PENSIONERS

MARIANO ÁLVAREZ[1]

1 *Mariano Álvarez de la Torre has a degree in Engineering/ Economics from the Universidad Nacional de Ingeniería, Peru, and has a Master's from the University of Boston, U.S.A. For the past year, he has been Managing Director of AFP Habitat in Peru. Prior to that, he was Investment Manager of the AFPs in the Santander Group in Peru for 9 years. He also formed part of the initial team of the Superintendence of Banking, Insurance and AFPs (SBS) in 1993. On the other hand, he was CFO of the Ripley Group in Peru for 6 years. He also worked for 9 years at the Central Reserve Bank of Peru, and at Citibank and Banco Santander.*

In this brief article I shall be referring to the issue of corporate governance, not in depth, but from the point of view of the Peruvian AFPs.

The adoption of codes of good corporate governance

What is the point of good corporate governance? On the one hand, I believe we all know that it increases the value of the company. There is evidence, and studies made by renowned international consultants that demonstrate that the value of the company increases; that the investor, whether institutional or otherwise, is prepared to pay a higher price for companies that have applied corporate governance correctly. So, put simply, good corporate governance generates money; it generates sustainable value for the company and that is reflected in the markets. In fact, this is why investment managers analyse the corporate governance behaviour of companies to see whether or not they can be admitted to the portfolio.

On the other hand, the AFPs represent the interest of minority shareholders in the companies. As AFPs, we have two responsibilities as institutional investors: first, to apply good corporate governance practices, because we are a fiduciary agent handling long-term mandatory savings, and also because this produces value within our own company. In this sense, I want to comment on the proposal put forward by Manuel Antonio Méndez. In Peru we do measure corporate governance. The OECD principles are issued by the Superintendence of the Stock Market (SMV) and every year all companies have to be measured in a public questionnaire and say how well or badly we are doing. The Lima Stock Exchange (BVL), on the basis of this, holds a kind of annual prize-giving for all the companies that are applying corporate governance well. The BVL has just signed an agreement with Ernst &Young to improve the evaluation of this prize-giving. At the level of institutional investors, we take this as input for investment decisions, and all the AFPs do the same. We also take part to some extent on the boards of the companies through the election of independent directors. We choose an independent director with a head-hunter, and he/she is given a mandate to help in good corporate governance.

So, although there may be room for improvement, a rating does exist and this is applied by all the AFPs internally in order to look at the companies in which we invest. There is space for improvements, because processes move on and we should have more companies applying good corporate governance practices. Especially in the case of our group, Habitat, we apply practices of corporate governance zealously, both in the Peruvian AFP (recently incorporated) and that of Chile (which is already over 32 years old). Our company in Chile, Habitat, is renowned for being very strong in the application of corporate governance and in the defence of minority shareholders' interests. There have been several moves in Chile against the members, which have been defended by the AFPs and led by AFP Habitat. In fact, the second edition of our book on corporate governance has been launched just recently in Santiago, because we believe that this is one way of adding value in the industry in a sustained manner.

Nature of the information provided for the member

What is the nature of the information that we must give the member? We can discuss in detail the things that we should and should not provide for him/her, but I believe that the basic principle that must govern us as pension fund administrators lies in recognising that the member is boss. We work for the member. The member is the owner of the funds, and he/she should therefore have access to all the information. There should therefore be no limit to the information that we can give the member. We publish the company's financial statements; we publish how we are doing in terms of corporate governance and the main statistics which are on the pages of the OECD and SBS. Therefore, as AFPs, we try to be as transparent as possible.

The problem that arises with regard to handling the information is that members have different levels of interest and preparation. So, if members are given the detailed portfolio with the price variance of the past month, some may be interested, but other not, and others may even be confused by it. The equivalent of giving too much information is not giving any at all. For example, when the daily, weekly and monthly yield indicators are published, plus those for 12 months, 24 months or 36 months, what happens is that we are all leaders in terms of yield, because we all come out well according to some form of measurement. But what happens with the member? The member says: "*I don't understand. You're lying to me*". And the AFP says: "*I'm not lying to you. I'm giving you all the information".* The problem is that the AFP is giving members so much information that in the end it doesn't mean anything to them and it makes it impossible for them to decide. So, all things considered, I believe that members should be entitled to receive all the information because they are the owners, but this information must be communicated to them in a clear, simple form, and at different levels: a basic level, that any interested person can understand, and more complex levels, to avoid the danger of giving too much information and causing confusion.

The use of service quality indicators

The member, as customer and owner of the funds, should mainly receive good service, good yield and a fair price (fee).

In the Peruvian case, the available information about fees and yields is on the SBS web page and is quite accessible. What does not exist at present is the service quality indicator. I think that the initiative of having a service quality indicator, such as exists in Chile, is a very good one, because it allows the member to compare, with a single indicator, the different alternatives that are out there on the market. That is good because it is going to produce competition among all the AFPs and at the end of the day all competition is good for the member. The problem that arises is the typical dilemma involved in defining the benchmark. When one defines a benchmark, one ends up defining the management of the companies that have to apply it.

In the specific point of the service and quality indicator that exists in Chile, there is a series of very good indicators, but we need to be careful when transferring that experience to other countries, because, for example, we might be encouraging biases. Imagine the case of measuring service, for example. Fine, but do we measure it in a face-to-face or virtual form? The world is changing. For members aged 20 or 25, the world is far more virtual than face-to-face. So, what do we do? Do we measure face-to-face service and leave out the virtual side? Do we give more weight to one or the other? Do we do it by age-group? There are many things that have to be understood and there are different types of member, especially at this point in time, when we have to cope with the fact that people are changing rapidly due to the quantity of information available. There are already other ways of communicating, other ways of acquiring information, through the new technologies that are advancing every day. We therefore have to be careful that the service quality index takes these different types of behaviour into account, and take care with what we are mixing and comparing. There are completely different companies: companies that have been in the market for 20 years and companies that have just started up, like Habitat in Peru. So, this seems a very good idea, but we must be careful about what we include in the benchmark. The AFPs are prepared to talk this over with the various Superintendences.

Mechanisms for advising members

I believe that we have a great advantage in having on-going contact with members through the virtual channels, and we have to make a strong start on the subject of pension education. Despite the efforts on the part of the system, the AFPs and the regulators to provide education, there is still ignorance on basic matters, such as what an AFP is, why paying contributions is necessary, where the resources are invested, among other issues. And this happens because the pension is a very long-term future asset. If one asks a person about his/her AFP at age 25, on average he/she will say that he/she will not start thinking about retirement until he/she gets to 50.

The AFPs should take advantage of the possibility of using all the available channels, whether virtual, face-to-face, written (which are the most traditional) to reach members and give them all the information. But once again, the information must be clear and simple so that all members can understand it. From there, if the person wishes, he/she can go on to the next levels of information, with facts that are a little more complex.

PART VI

COEXISTENCE OF ALTERNATIVE CONTRIBUTORY PENSION SYSTEMS

EQUITABLE AND SUSTAINABLE PUBLIC PENSIONS: CHALLENGES AND EXPERIENCE

BENEDICT CLEMENTS[1] [2]

1 *Benedict Clements is chief of the Expenditure Policy Division in the Fiscal Affairs Department of the International Monetary Fund (IMF). He has held this position since November 2009. The division takes the lead on the IMF's analysis of age-related issues, with a special focus on pensions and public health spending. Prior to taking this position, Clements was a division chief in the Western Hemisphere Department of the IMF, working primarily on Brazil and Colombia. He has published extensively on public finance issues and has worked with IMF teams on a number of studies. He has worked in the IMF since 1991.*

2 *This article represents the views of the author and should not be attributed to the IMF, its Executive Board, or its management.*

The main purpose of this brief article is to provide an overview on some of the challenges that countries with large public pension systems face, and some potential solutions.

The discussion covers both sustainability and equity challenges. Population aging implies that pension reforms are needed to keep public pension spending from rising in the future. At the same time, for pension reforms to be durable, they must be perceived as fair and equitable.

Much of what is stated in this article is drawn from a recent book on pension systems[3] edited by staff of the IMF's Fiscal Affairs Department.

This article is organized as follows. First, the fiscal context for pension reform, in both advanced and emerging market economies, will be discussed. Second, some of the key fiscal sustainability challenges of pension systems will be addressed. Third, equity challenges are described. Fourth, the article looks at options for addressing these sustainability and equity challenges. And lastly, the document concludes with a brief summary.

I. The fiscal context for pension reform

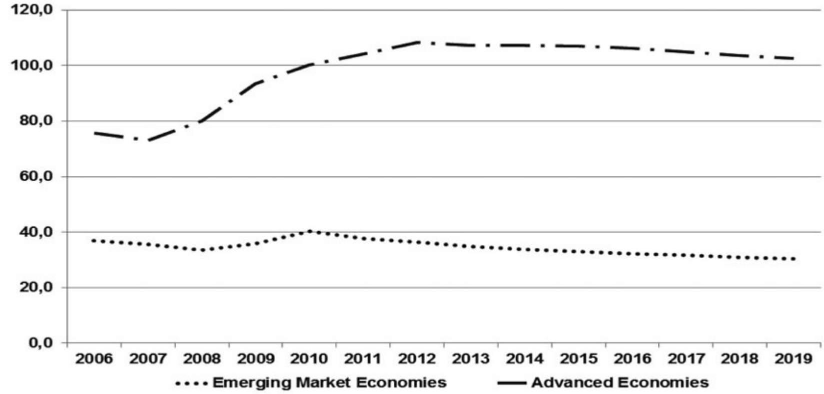
Public debt levels remain high in advanced economies. Graph Nº 1 shows the public debt levels for the advanced and emerging market economies, on a weighted average basis. It can be seen that before the financial crisis, debt levels of the advanced economies were lower than 80% of GDP. After the crisis, debt levels rose substantially. As the projections through 2019 indicate, debt levels are expected to remain high and above safe levels in advanced countries. In this context, there is little room for pension spending increases. Containing pension spending increases is thus an essential element for long-term fiscal adjustment strategies to help bring debt levels down to more prudent levels.

3 *"Equitable and Sustainable Pensions: Challenges and Experience", IMF, 2014. Available on Internet: http://www.imfbookstore.org/ProdDetails.asp?ID=DESPSEA*

In the emerging economies, debt levels are, on average, substantially lower than in advanced economies. They did rise slightly during the global crisis, but since then, they have been on a downward path. On average, emerging market economies have more fiscal space than in advanced economies, but with substantial variation from country to country (see Graph Nº 2). In Jordan, Egypt, Hungary and Brazil, for example, public debt levels are above a comfortable range (higher than 60% of the GDP). Chile and Peru, on the other hand, have more comfortable levels of debt (less than 20% of the GDP). For countries with high levels of debt, there is little fiscal space to expand pensions, and strategies to contain pension spending growth in the long run may be necessary.

GRAPH N° 1

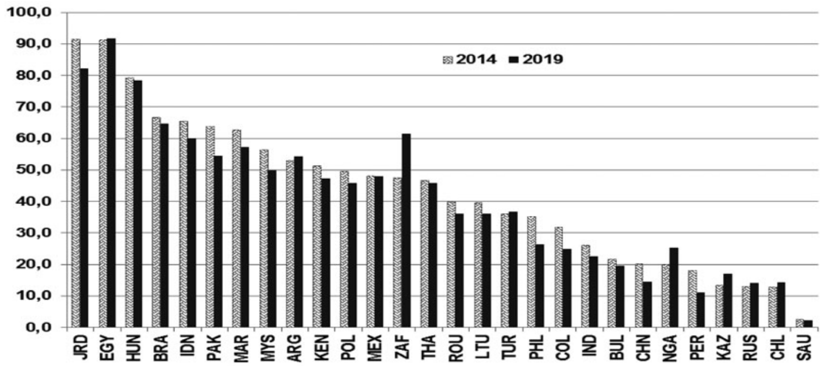
GENERAL GOVERNMENT GROSS DEBT: EMERGING MARKET ECONOMIES AND ADVANCED ECONOMIES
(2006 – 2019, % OF GDP)



SOURCE: IMF FISCAL MONITOR (APRIL 2014). FIGURES REFER TO WEIGHTED AVERAGES.

GRAPH N° 2

GENERAL GOVERNMENT GROSS DEBT: EMERGING MARKET ECONOMIES
(2014 VS. 2019, % OF GDP)



SOURCE: IMF FISCAL MONITOR (APRIL 2014). FIGURES REFER TO WEIGHTED AVERAGES.

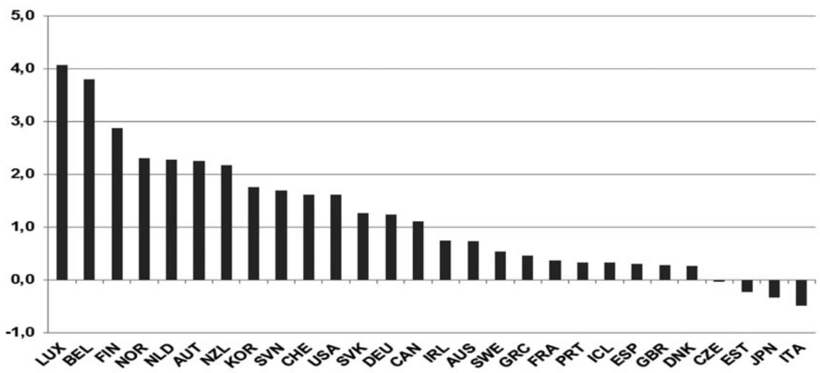
II. Key sustainability challenge: rising pension spending

Advanced economies

Public pension spending is projected to rise in advanced economies in the next 15 years (see Graph Nº 3), based on current plans and reforms that countries have already undertaken. There is a wide range with respect to expected increases in spending. In countries such as Belgium, Finland, Norway, and the Netherlands, pension spending is projected to go up more than 2 percentage points of GDP. In Japan or Italy, pension spending is expected to decline.

GRAPH N° 3

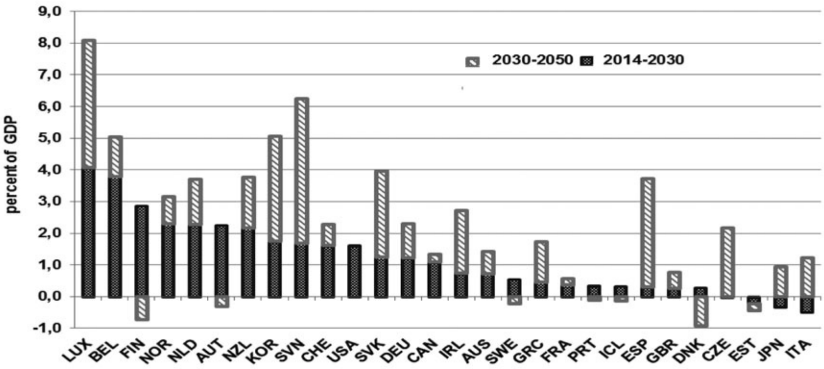
CHANGE IN PUBLIC PENSION SPENDING: ADVANCED ECONOMIES
(2014 – 2030, % OF GDP)



SOURCE: IMF FISCAL MONITOR (APRIL 2014).

GRAPH N° 4

CHANGE IN PUBLIC PENSION SPENDING: ADVANCED ECONOMIES
(2014-2030 AND 2030-2050, % OF GDP)



SOURCE: IMF FISCAL MONITOR (APRIL 2014).

If we look over the longer term, for example over years 2030-2050, projected spending increases are even higher (see Graph Nº 4).

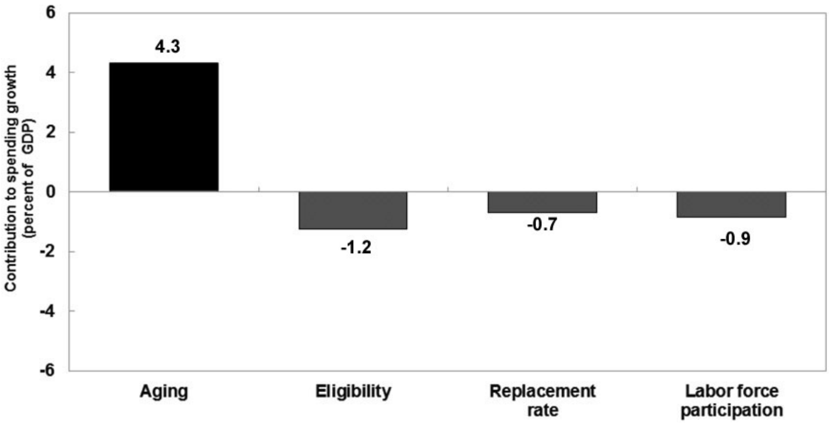
What are the drivers of this increase in pension spending? The drivers are population aging, eligibility (the share of the population that is eligible for a pension), replacement rates for pensions (the average pension as a share of the average wage) and labor force participation (higher labor force participation tends to reduce pension spending).

From Graph Nº 5 we can see that, in the absence of reforms, demographic changes (increases in longevity) up to 2030 would have increased public pension spending by 4.3 percentage points of GDP in the advanced economies between 2010 and 2030. Aging is the biggest driver of spending growth.

Countries have undertaken reforms that will help offset the effects of aging. First, retirement ages have gone up. This is why changes in eligibility have helped dampen pension spending increases in advanced economies (up to 2030, this factor will reduce public pension spending by 1.2 percentage points of GDP). Second, replacement rates of pensions have also fallen, implying that pensions are becoming less generous. This is expected to reduce pension spending as well (by 0.7 percentage points of GDP). Lastly, labor force participation is expected to increase, and this will also help to reduce pension spending (by 0.9 percentage points of GDP). If implemented as planned, all these reforms will lower average public pension spending in 2030 by 2.8 percentage points of GDP in advanced economies. This helps offset (but not totally) the impact of aging.

GRAPH N° 5

DRIVERS OF THE PROJECTED EVOLUTION OF PUBLIC PENSION SPENDING IN ADVANCED ECONOMIES (2010-2030, % OF GDP)



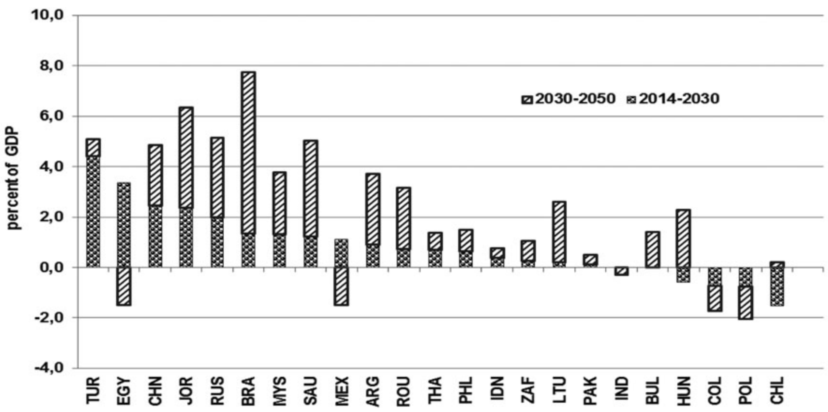
SOURCE: EQUITABLE AND SUSTAINABLE PENSIONS: CHALLENGES AND EXPERIENCE (2014), IMF.

Emerging market economies

Public pension spending will also rise in many emerging economies, where increases in old-age dependency ratios are projected to be even more dramatic than in advanced economies, particularly after 2030. If we look at those emerging economies (see Graph Nº 6), we find pension spending rising in many countries over the period 2014-2030 and even further over the longer term (2030-2050). As we can see, however, in some countries that have introduced private pension schemes (for example in Colombia and Mexico), pension spending will decline as a share of GDP over the longer term (2030-2050) as their pay-as-you-go public systems are phased out.

GRAPH N° 6

CHANGE IN PUBLIC PENSION SPENDING: EMERGING ECONOMIES
(2014-2030 AND 2030-2050, % OF GDP)

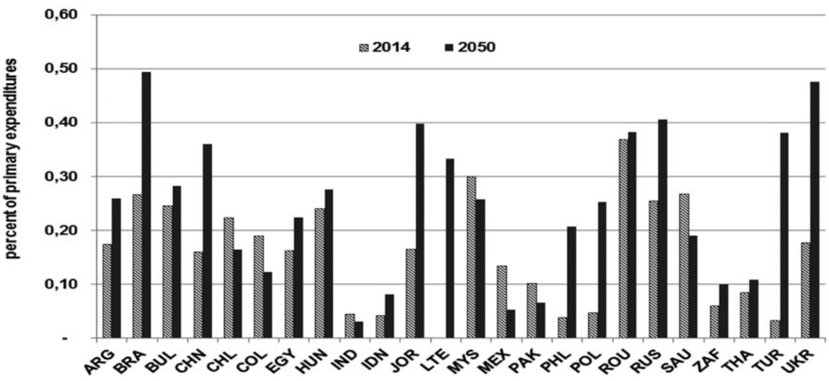


SOURCE: IMF FISCAL MONITOR (APRIL 2014).

One of the concerns in emerging economies is that pensions absorb a high share of government spending (see Graph Nº 7), even where their level (as a share of GDP) is not large. In this context, public pension spending can have an adverse effect on economic growth by crowding out other important public expenditures (such as public investment).

GRAPH N° 7

PUBLIC PENSIONS IN EMERGING ECONOMIES
(2014 VS. 2050, % OF PRIMARY EXPENDITURES)



SOURCE: IMF STAFF ESTIMATES. ESTIMATES ASSUME THAT PRIMARY EXPENDITURES REMAIN CONSTANT AS A SHARE GDP.

What is the main driver of increases in public pension spending in emerging economies? As in the advanced economies, it is aging. Without reforms, aging would have increased public pension spending by 3.7 percentage points of GDP in emerging Europe and by 2.1 percentage point of GDP in other emerging economies (see Graph Nº 8 and Nº 9, respectively) between 2010-30. Reforms that have helped to dampen spending and the effect of aging, as in the case of advanced economies. These reforms will lower average public pension spending in 2030 by 3.7 percentage points and 1 percentage point of GDP, in emerging Europe and in other emerging countries, respectively.

Threats to fiscal sustainability

The figures discussed thus far are baseline projections. However, there are some factors that could make outcomes worse and threaten fiscal sustainability. First, regarding aging: (a) life expectancy has increased faster than expected in the past, and this trend could be repeated in the future; (b) labor participation rates could remain low and rise less than projected;[4] and (c) fertility rates could be lower than expected.

Second, regarding benefit levels, if they do not decline as expected, spending could also be higher.

Third, there are transition costs and contingent liabilities. There are many countries that still have high legacy costs from the transition from their pay-as-you-go pension systems to fully-funded private pension systems. If these legacy costs remain high, there could be a risk of continued fiscal problems and an increased probability that governments will divert contributions from the private pension system back to the public system. The same risk could arise if private pension systems underperform relative to expectations—in this case, governments may also come under pressure to bring back some of the contributions to the public pension system.

Fourth, the difficulty in increasing contribution revenues is another threat, in the context of rising labor market informality. In many countries, there is little space to raise pension contributions, because they are already high, and raising them further could have adverse effects on incentives to participate in the formal labor market.

III. Key equity challenges for pension systems

What are some of the key equity challenges facing public pension systems today? There at least four challenges:

The first is to maintain the redistributive and anti-poverty role of old-age pensions in a fiscally sustainable manner. Many countries are gradually reducing replacement rates as part of their pension reforms. If not done carefully, this could increase old-age poverty.

Figure Nº 1 shows the three types of at-risk-of-poverty rates available at Eurostat: (i) the poverty rate before pensions and other social transfers; (ii) the rate including pensions but without other social transfers; and (iii) the rate after pensions and

4 *For further examination of these issues, please see more details in B. Clements, F. Eich, and S. Gupta, eds., Equitable and Sustainable Pensions: Challenges and Experience (IMF, 2014).*

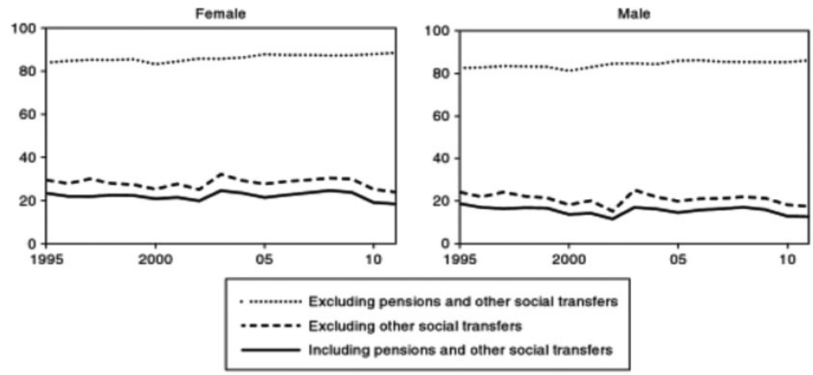
other social transfers. In this case, pensions are defined as the sum of disability pensions, early-retirement benefits resulting from reduced capacity to work, old-age pensions, early old-age pensions, partial pensions, survivors´ pensions, and early-retirement benefits received for labor market reasons. “Other social transfers” refer to non-pension income support, which may or may not be targeted to the elderly.

The poverty rate among the elderly in the sample of countries covered by Figure Nº 1 is more than 85% in 2011, when pensions and other social transfers are not included, indicating that work income and income from private savings are low for most of the elderly. Pension income substantially reduces elderly poverty, to about 20%; other social transfers further lower elderly poverty to about 15%.

Graph Nº 8 shows the change in the replacement rate over the years 2010-2030 and what is predicted to happen to old-age poverty rates on the basis of this decline in replacement rates. The figure suggests that declining replacement rates will lead to an increase in old-age poverty rates.

FIGURE N° 1

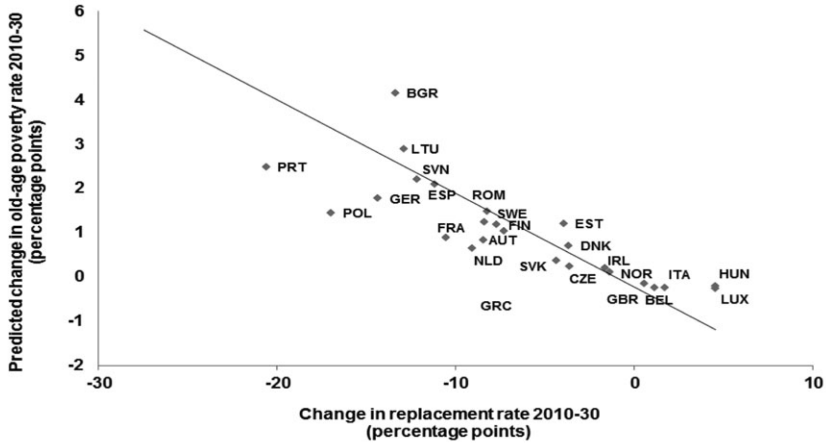
AT-RISK-OF-POVERTY RATE BEFORE AND AFTER SOCIAL TRANSFERS IN ADVANCED ECONOMIES (%)



SOURCE: SHANG (EQUITABLE AND SUSTAINABLE PENSIONS: CHALLENGES AND EXPERIENCE, 2014, IMF).

GRAPH N° 8

PROJECTED CHANGES IN PENSION REPLACEMENT RATES AND AT-RISK-POVERTY RATES OF THE ELDERLY, (2010–2030, PERCENTAGE POINTS)



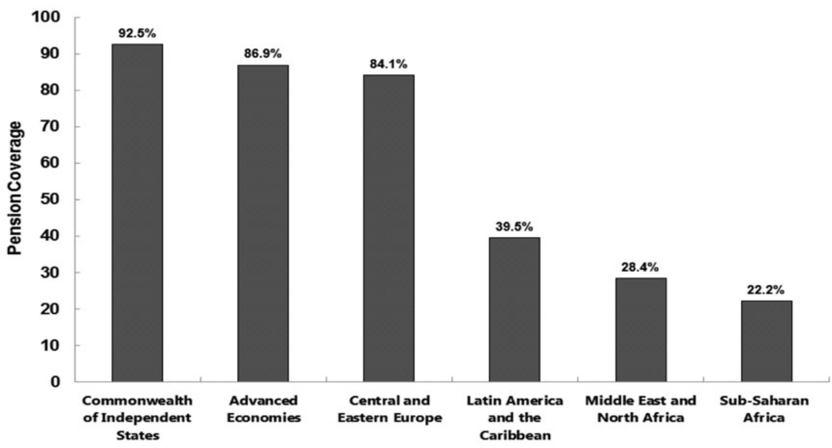
SOURCE: "THE CHALLENGE OF PUBLIC PENSION REFORM IN ADVANCED AND EMERGING ECONOMIES," IMF OCCASIONAL PAPER 275 (2012).

The second equity challenge is expanding pension coverage. As we can see from Graph Nº 9, the Commonwealth of Independent States[5], advanced economies, and Central and Eastern Europe countries have high pension coverage rates. However, in Latin America and the Caribbean and other developing regions, pension coverage rates are quite low.

5 *The Commonwealth of Independent States (CIS) includes countries from the Former Soviet Union.*

GRAPH N° 9

EFFECTIVE PENSION COVERAGE RATIOS BY REGION, LATEST AVAILABLE YEAR (OLD-AGE PENSION BENEFICIARIES AS % OF POPULATION ABOVE STATUTORY PENSIONABLE AGE)

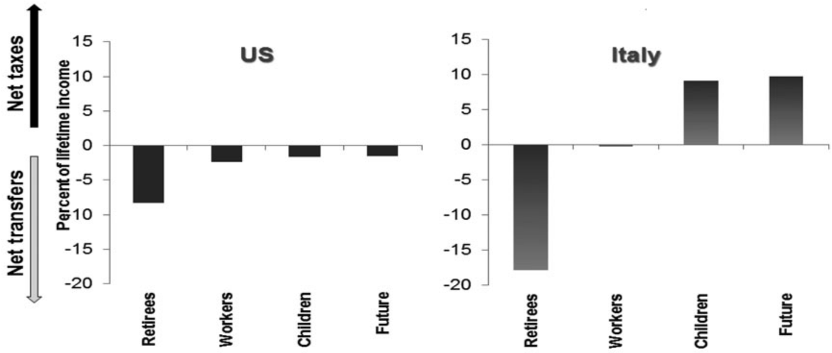


SOURCE: ILO.

The third equity challenge is coming up with a pension system that is fair in terms of what different generations receive (intergenerational equity). Some recent work at the IMF, expanding on generational accounting approaches, examines more closely what kind of deal pension systems gave to different generations. Figure Nº 2 shows the net taxes or net transfers received by different generations. If people are actually putting in more (in terms of contributions) than they are getting back in pension benefits, their net taxation is positive. For example, in Italy, the generosity of the system has been greatly reduced with recent reforms, and for current workers, the system imposes a net tax. This is not the case for current retirees in Italy, who receive a net transfer. In the United States as well, current retirees are getting much more generous benefits than current workers.

FIGURE N° 2

NET TAXES PAID (OR TRANSFERS RECEIVED) BY PAST, PRESENT, AND FUTURE PARTICIPANTS
(% OF LIFETIME INCOME)



SOURCE: CLEMENTS, EICH, AND GUPTA (2014).

Fourth, there are a number of equity issues, even for those within the same generation (intragenerational fairness). The intragenerational redistribution within the pension system can be assessed from a number of different angles - according to gender, geographic differences (urban vs. rural population), education, life expectancy, and income.

Pension systems, in some cases, attempt to address inequities in the labor market (for example, lack of opportunity for some groups that leads to low earnings and, as a consequence, low pension contributions and benefits). The way countries address this equity challenge varies.

IV. Options to address sustainability and equity challenges

The following describes the options that countries can take to address their sustainability and equity challenges.

1. Options to address sustainability challenges

a) Increasing retirement ages

From the standpoint of sustainability, there are a number of advantages to increasing the retirement ages, especially in light of the large increases in life expectancy experienced in recent decades. What are the instruments to implement this?

- First, the statutory retirement age can be increased. In addition, the retirement ages of men and women can be unified, and automatic increases in retirement ages can be implemented as life expectancy goes up. Implementing such an automatic mechanism can help depoliticize pension policy.

- Second, minimum retirement ages can be increased. There should also be actuarial corrections that raise benefits in line with extra years of contribution. This can make it worthwhile for workers to continue working.

The impact of having higher retirement ages, from a fiscal standpoint, is that it slows the inflow of new pensioners and shortens retirement periods. This does not generate substantial fiscal savings in the short term, but in the long term it can be quite important. Longer working careers can raise lifetime contributions to the system and raise pension benefits. In addition, longer working careers have a positive effect on labor supply and can fuel economic growth.

It is often noted that this kind of reform is regressive, because the poor do not live as long as the middle and upper classes. To offset this, adjustments in other aspects of pension policy (such as those affecting benefit levels) would be needed to maintain the desired progressivity of the system.

b) Reducing benefits

Another way to reduce pension spending is to reduce benefits. One option is to have benefits reduced across the board for all pensioners. Some countries have automatic decreases that are in line with changes in life expectancy, so instead of having the automatic increase in retirement ages, there can be an automatic reduction in benefits to make sure that the system is financially in good shape. Another option is to reduce the special tax treatment that may be given to pensions. Another way to reduce benefits is to change how pensions are indexed; indexation to the CPI, instead of wages, can yield savings in some countries. If the reduction in pensions is across-the-board, however, this may raise poverty and adversely affect intra-generational equity.

In some instances, it can be more attractive to have a targeted reduction in benefits. In this context, the benefits from higher earners can be clawed back. Of course, the benefit accrual rates can be reduced as well. In the case of some recent fiscal adjustment efforts, countries have been cutting back on pensions for those in upper-income groups, such as in Greece.

c) Expanding the role of the private sector

With replacement rates declining, the private sector will have to have a larger role in providing for old-age protection. Increasing the role of private pensions could be a natural way to help achieve this. In this context, some preconditions need to be present.

First, there should be supportive fiscal and macroeconomic policies. The transition to a private pension system entails a loss of contributions for the public sector. To avoid increase in budget deficits, there should be improvements in non-pension balances. Unfortunately, many economies, in their transition to private systems, did not follow this course of action. One country that did an upfront payment of its transition costs is Chile. If a country does not pay these costs up front, national savings will not necessarily rise with the introduction of a private pension system, and there will be no beneficial effects on growth.

In private pension systems, it is also important to limit choice, considering the low levels of financial literacy of pension contributors and myopia. Countries should limit their government guarantees of returns from these systems as well to reduce their fiscal risks associated with private pension schemes. Paying transition costs up front helps reduce the risk of fiscal crises and the chance that pension reforms will be reversed.

d) Increasing contributions

Another way to deal with the pressures on public pension finances is to increase contributions. In this regard, the alternatives are the following:

- To implement universally higher contribution rates
- To increase the cap on incomes subject to contributions
- To lower the floor for incomes subject to contributions
- To make dependant benefits contributory
- To reduce matching government contributions
- To have a more efficient collection system

Those alternatives can lead to a better fiscal position by raising revenues. Of course, higher contribution rates may have adverse effects on labor markets and inter-generational fairness, so they have to be looked at carefully.

2. Options to address equity challenges

a. Expanding coverage

Contributory schemes

First, legal barriers and disincentives to participate for informal, part-time and migrant workers, and homemakers can be reduced.

Second, for those workers with high labor elasticity (young and old workers), contribution rates can be reduced.

Third, post-retirement employment can be facilitated by allowing workers to retain some of their pensions while working.

Fourth, re-training and flexible work arrangements can be implemented to help improve the labor participation of older workers.

Fifth, improving administration, registration, and compliance can increase contributions and coverage.

Non-contributory schemes (social pensions)

Expanding social pensions has been a good way to expand coverage. Even advanced countries have introduced this type of pension.

With social pensions, countries are probably better off means-testing them. Means-testing this kind of benefits can help keep the fiscal cost low and retain the critical role of pensions in reducing old-age poverty.

b. **Intra-generational equity.** There are two main policies to be implemented for addressing intra-generational equity issues:

b.1) Eliminating occupational privileges and limitations

Many public pension schemes, and especially those covering civil servants, are more generous than those for the public as a whole. Countries could thus consider unifying fragmented schemes with uniform rules to eliminate civil service schemes' preferred status.

b.2) Improving women's capacity to accrue adequate pensions

Outside the pension system, it is necessary to have equal treatment in the labor market, to make it easier to allow women to continue to work. Flexible work and part-time arrangements are important, as well as contributory child care benefits.

Within the pension system, countries may have to think about giving pension credit for child care and care of elderly parents. Some countries have also considered higher survivor benefits to help achieve greater gender equity.

c. **Inter-generational equity.** There are two main policies to be implemented for addressing inter-generational equity issues:

c.1) Reducing benefits to current generation of pensioners

In terms of making pension systems fair across generations, countries can:

i) <u>Reduce benefits to the current generation of pensioners.</u> One way to do this is to claw-back some of these benefits with nominal reductions or taxes. What is attractive about this is that, in effect, it helps give countries immediate fiscal savings, and also helps to deal with the issue that current retirees have gotten a better deal than future retirees. It is important to make sure that the tax treatment of pensions is consistent with the tax treatment of other incomes (in some countries, pensions are subject to lower taxation than other incomes).

ii) <u>Implement automatic adjustment rules.</u> These rules include those that automatically change benefits in terms of changes in life expectancy. Moving to Notional Defined Contribution (NDC) systems or point systems also are ways of bringing an automatic adjustment to pension benefits in the face of increased life expectancy.

d. **Adequacy and administration.** There are two main policies to be implemented for addressing adequacy and administration issues:

d.1) Improving transparency and quality of pension governance. This can be done by having:

i) Better control of funding levels
ii) Stronger observance of fiduciary duties in investment decision-making
iii) Robust regulatory/supervisory capacity

d.2) Providing adequate pension benefits. This can be reached by:

i) Promoting at least partial annuitization
ii) Implementing regular benefit indexation
iii) Regularly adjusting the ceiling on income liable to contributions
iv) Matching contributions for low earners
v) Implementing a guaranteed rate of return or full career minimum pensions
vi) Promoting voluntary private pension savings

V. Summary

Rising public pension spending is an important fiscal challenge for both advanced and emerging economies. In this context, more reforms are needed to help curtail the growth of spending, which will be pushed upwards in coming decades because of population aging.

While countries have a number of options to improve the fiscal sustainability of their pension systems, there are a number of advantages to using higher retirement ages—rather than cuts to benefits—to curtail the growth of spending. These advantages include the positive effects of higher retirement ages on pension spending and its effects on labor supply and economic growth.

On equity issues, countries face an array of complex issues in designing their pension systems. Countries will vary in terms of what equity issues they consider most important. Having said this, low pension coverage remains one of the main equity challenges, most notably in emerging economies. Expanding non-contributory and means-tested social pensions is an attractive option to deal with this challenge while containing pension spending to levels consistent with fiscal sustainability.

CO-EXISTENCE, COMPLEMENTARITY AND COMPETITION BETWEEN ALTERNATIVE SYSTEMS

JOANNE SEGARS[1]

1 *Joanne Segars has a degree in economics from John Moores University, Liverpool, UK, and a Master of Arts degree in industrial relations from the University of Warwick. She became CEO of the National Association of Pension Funds (NAPF) in 2006, having joined the organisation in 2005 as Director of Policy. She was Head of Pensions and Savings at the Association of British Insurers (ABI) from 2001 to 2005. Joanne is also a founding governor and Council member of the Pensions Policy Institute. In 2007 she was elected as a Director of the European Federation for Retirement Provision (EFRP) and in November 2012 was elected Chair of PensionsEurope (formerly EFRP).*

This brief article addresses the European perspective on some of the main pension issues that countries face today.

Pensions Europe at a Glance

PensionsEurope is the leading voice of workplace pensions in Europe. Its role is to develop a good European Union (EU) framework that promotes workplace pensions in Europe and achieves good member outcomes. This organisation works closely with the EU institutions and relevant stakeholders and is the only European association that focuses exclusively on pensions.

PensionsEurope currently has 23 Members in 16 EU Member States and 4 other non-EU countries[2] and together they provide pensions for about 77 million European citizens and own assets of around € 3.700 billion. Pension systems in EU Member States are very different, but there is a common mission, securing a sustainable workplace pension system, that brings them together.

Within PensionsEurope, the Central & Eastern European Countries (CEEC) Forum has been established to discuss issues common to pension systems in that region.

PensionsEurope has had to be very resilient in its approach over the last few years, as the EU attempts to impose common standards and rules across countries. PensionsEurope has been very clear that the rules and regulations applying to pension systems are a matter for national governments. However, all countries can learn from the common issues and pressures, and that is why the instances for sharing those experiences are so important.

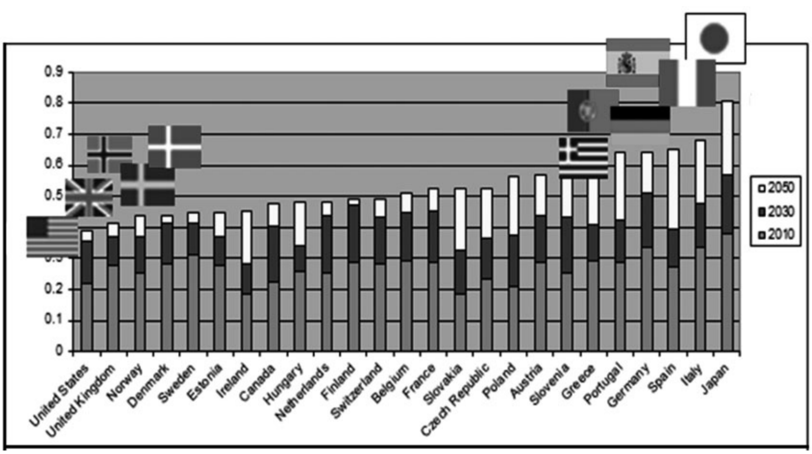
2 *The member countries of PensionsEurope are the following: (i) Austria; (ii) Belgium; (iii) Croatia; (iv) Finland; (v) France (2 member associations); (vi) Germany; (vii) Guernsey; (viii) Hungary; (ix) Iceland; (x) Ireland; (xi) Italy; (xii) Luxembourg; (xiii) Netherlands; (xiv) Norway; (xv) Portugal; (xvi) Romania; (xvii) Spain (2 member associations); (xviii) Sweden (2 member associations); (xix) Switzerland; and (xx) United Kingdom.*

Old-age dependency ratios

Among the common themes and pressures, the demographic pressures that all European countries are facing are a key. The pace of change may be different, but the story is really the same: there will be fewer people of working age to support aging populations. Data from the United Nations (UN) shows us that, indeed, for the EU as a whole, there are currently 4 people of working age to support every pensioner. But by 2050, there will only be 2 people of working age to support every pensioner (see Graph Nº 1).

GRAPH N° 1

PROJECTED OLD-AGE DEPENDENCY RATIO: 2010 – 2050
(PEOPLE AGED 60 AND OVER / PROJECTED PEOPLE AGED 20-59)



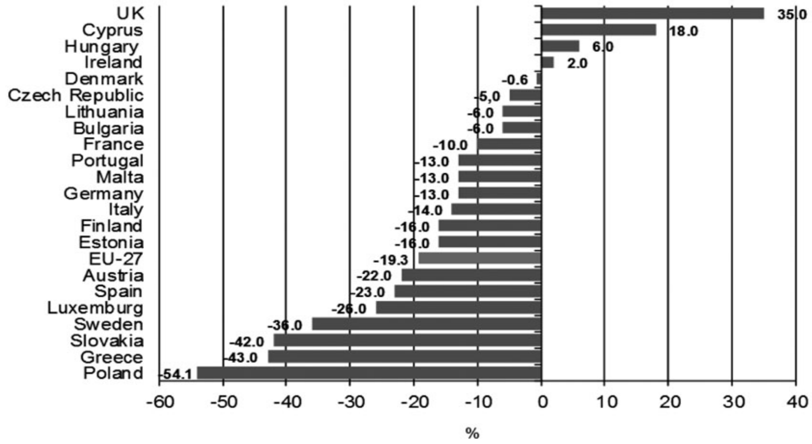
SOURCE: EUROSTAT.

Bigger role for funded pensions

Given those pressures, it seems clear to PensionsEurope that there will inevitably be a bigger role for funded workplace pensions (second pillar), because that is where the bulk provision will come from in the EU, at least. We can see from Graph Nº 2 that governments across the EU are in retreat when it comes to providing pensions directly from the First Pillar (pay-as-you-go systems). For example, the first pillar will fall by more than 50% between 2010 and 2060 in Poland, and more than 40% in Greece and Slovakia, and across the EU as a whole, the fall will be 19%.

GRAPH N° 2

REDUCTIONS IN THE FIRST PILLAR PENSIONS (PAY-AS-YOU-GO SYSTEMS) TILL 2060 (COMPARED TO 2010)

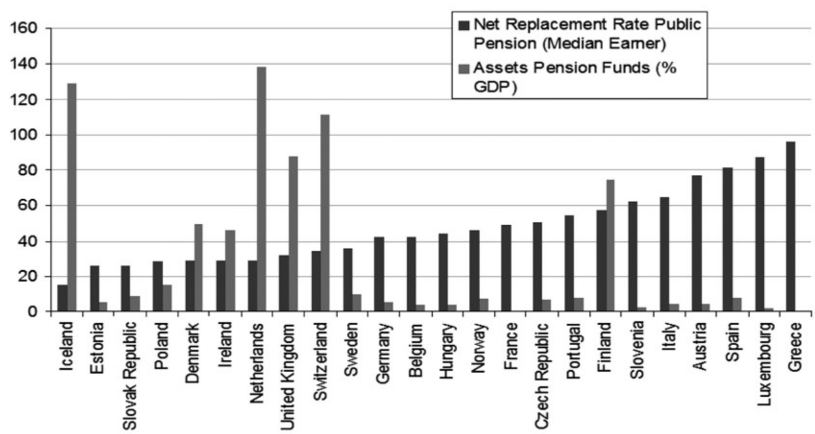


SOURCE: EUROPEAN COMMISSION (2012).

As you can see, there are some outliers. For example, in the UK the government is introducing a more generous state pension system contrary to everything we have been experiencing. But the UK is starting from a very low base, one of the lowest state pensions across the Organisation for Economic Co-operation and Development (OECD).

If the First Pillar is in retreat, the Second Pillar has to take up the slack. In Graph Nº 3 we can see the inverse relationship between replacement rates for a median earner from public pension funds and assets in funded pension systems. Put simply, the more assets there are in funded pensions, the less generous the state pension is. Iceland, not a member of the EU, but nonetheless a member of PensionsEurope, has the lowest replacement rates for pay-as-you-go pensions and the highest assets under management as a percentage of GDP from funded pension systems. An outlier is Finland, which has a high level of funded assets from private pensions but also high replacement rates from public pension system.

GRAPH N° 3
LINK BETWEEN FIRST PILLAR AND SECOND PILLAR



SOURCE: OECD (2012).

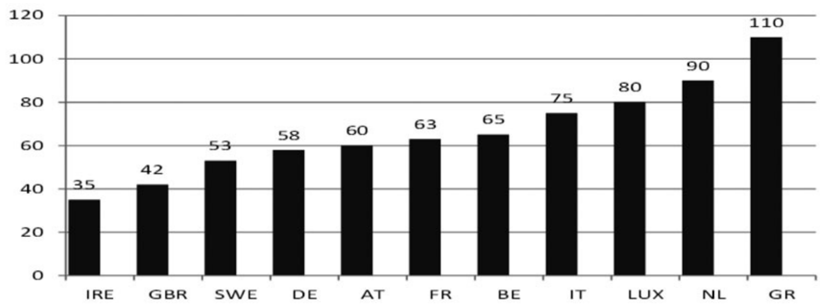
Challenges: adequacy and coverage

So the first pillar is in retreat and the second pillar has to work harder. A number of problems must be faced in the EU in developing good workplace pensions. The first is pension adequacy. Graph Nº 4 shows that, for example, if a person is a pensioner in Ireland or in the UK, he/she is going to face very low replacement rates (indeed, less than 45%). Indeed, for very many workers across the EU, replacement rates are much less than the 66% (generally known as the level of replacement rate that somebody on median earnings needs to survive comfortably in retirement). Adequacy is one very significant issue.

The second issue is coverage, and that is a very significant problem for PensionsEurope. Despite what Benedict Clements said about coverage levels in developed economies versus developing economies, across the EU as a whole, 60% of workers have no access whatsoever to workplace pensions. It should be added that the legislation which the EU is currently trying to impose on EU workplace pensions, will do nothing to address this very significant problem. If we do not address this issue of coverage across the EU, then many of its citizens will face a very bleak retirement indeed.

GRAPH Nº 4

REPLACEMENT RATES FROM PUBLIC PENSIONS
(% OF OLD-AGE PENSIONS IN WORK INCOME)



SOURCE: OECD (2012).

In the UK, the government has just introduced a new system called "auto-enrolment", where workers must be automatically put into a pension scheme, but with the right to opt out, thus using the power of inertia. It has been extremely successful. Since this system was introduced in October 2012 (18 months ago), 3 million more people are now saving in a workplace pension than were saving in 2012, so it has been a very successful policy. There is a further six million people left to auto-enroll, so we still have to see how that works through. But coverage is a very significant issue and it is one that we are focusing on in PensionsEurope.

The third issue is the shape of workplace pension provision, and that takes us back again to the question of demography. Longer life expectancy has put significant pressures on Defined Benefit (DB) provision, so what we see across the EU has been a significant shift from DB to Defined Contribution (DC) provision. In the UK, 80% of DB pension schemes are now closed to new employees. In Sweden, a country with traditionally very strong DB provision, around 50% of schemes are now DC schemes. That, of course, brings new challenges around costs, charges, governance and transparency and the quality of CD provision.

The fourth issue is a very serious one for us in Europe: the action by national governments in response to the financial crisis, which is putting pension schemes under threat. This has occurred notably in the Eastern European countries, where we have seen (for example in Poland and in Hungary) the effect of nationalization of growing funded private pension programs. That is something which we in PensionsEurope oppose very strongly and we have called upon the EC and the European Commission to address.

What will the future look like?

What will the future of pensions across the EU look like? I think that, for DB pension schemes, the message is clear. DB schemes will continue to be under pressure. They will also continue to be under continued regulatory pressure as the financial crisis works its way through. The question, then, is: are we going to reinvent DB provision, so that we have more risk-sharing in schemes, so that all the risks do not sit with the employer but are shared more with the employees? That is one question which we are looking at and where the Dutch pension system is leading the way. For DC provision, which will be the future for most provision in Europe, the issues are the following: coverage, adequacy, member communication and member protection.

Regarding the coexistence of pay-as-you-go systems and funded pension provision, I think that the trend is also quite clear: pay-as-you-go and funded pension provision will continue to coexist, but in very different ratios from before, with a higher degree of pension provision coming from funded pensions in the Second Pillar, but also in the Third Pillar (voluntary schemes), and much less in the First Pillar (State provision), mainly providing subsistence levels of coverage.

PRIVATE PENSION PLANS AND THEIR INTERACTION WITH SAVINGS SCHEMES BASED ON INDIVIDUAL ACCOUNTS: EXPERIENCES IN MEXICO AND THE WORLD[1]

CARLOS NORIEGA AND GABRIEL DARÍO RAMÍREZ[2]

1 *This document forms part of the series of papers on the Savings for Retirement System AMA 2014 – IV, published by the Mexican Association of Retirement Fund Administrators (AMAFORE).*

2 *Carlos Noriega has a degree in Economics from the Autonomous Technical Institute of Mexico (ITAM) and a Doctorate in Economics from the University of Rochester, New York. He is the current Executive President of the Mexican Association of Retirement Fund Administrators (AMAFORE), as of August 2013, having been involved in the Savings for Retirement sector (SAR) since its creation in 1992. He began his professional career in the public sector. At the Department of Finance and Public Credit of Mexico he worked as General Director of Financial Planning, Coordinator of Advisors to the Head and Deputy Head of the Department. At the Institute of the National Workers' Housing Fund (INFONAVIT) he occupied the post of Deputy Director-General. At the Bank of Mexico he was Economic Research Manager. Since 2000, he has been an independent advisor on matters related with social security, public finance and the savings and popular credit sector. He was a partner at the Grupo de Economistas y Associados (GEA) office. In the academic area, he has taught at the ITAM, Universidad Anáhuac and the National Autonomous University of Mexico (UNAM).*

Gabriel Darío Ramírez has a Master's Degree in Economics from the Economic Research and Teaching Centre (CIDE), Mexico and is in charge of the Economic Research Department at AMAFORE. He has held various posts in technical areas of both private initiatives and the public sector, in the National Banking and Securities Commission (CNBV) on matters of Risk Management, Financial Research and Economics. He has co-authored a variety of publications on the subject of pensions, social security and savings at The World Bank and in economics magazines in Mexico.

Abstract

The following paper offers descriptions of the general characteristics of Private Pension Plans in the United States, Europe, Chile, Colombia and Mexico. It also seeks to identify the degree of complementarity or competition that may exist between the Private Pension Plans and the savings schemes based on Individual Accounts, influencing the saving and participation decisions of workers, employers and the government in Mexico. In order to test the above, a simple inter-temporal model is put forward to define choices of leisure, consumption and voluntary saving in the schemes of Individual Accounts and Private Plans. The results suggest that, in the face of fiscal incentives or increases in the rate of return on savings, impatience to consume and preference for leisure cause the resources originating from the Individual Accounts Scheme to be crowded out by resources from the Private Plan, so reducing the final pension, while individuals with relatively low levels of impatience and less preference for leisure will allow the resources from the two schemes to complement one another, in order to achieve a larger pension. The model, the results and certain indirect evidence make it possible to design a strategy to raise the amount of the pension using the momentum of the Private Pension Plans.

Introduction

In Mexico, a Private Pension System is a voluntary scheme put in place by the boss or resulting from a collective contract, which seeks to provide a pension for the workers hired by the institution that designed the plan. Article 27 of the Law of Social Security (LSS) describes the mechanisms that enable companies to set up private Retirement Savings Schemes for their workers provided that they comply with the stipulations of the regulatory authorities. According to the latest figures from the National Commission of the Savings for Retirement System (CONSAR), there are 1,976 plans in Mexico, set up by 1,766 firms, managing accumulated savings of 459,069 million pesos, which represents 2.9% of the GDP. The private pension schemes emerge as an additional option for building up workers' capital/net worth in Mexico. However, there is lack of clarity about the degree of complementarity or competition between the savings held in the private schemes and the contributory scheme of Individual Accounts that operates in the country. Their interactions depend on the regulatory structure, the market and the savings patterns of the agents involved.

When we analyse a private pension scheme in Mexico, it is worth putting it into perspective by considering the three agents who are typically involved in the construction of retirement savings in the country: Workers, Employers and the State. Of these, the role played by the State is important because it has different mechanisms for aligning the incentives of companies and workers in order to constitute private pension schemes, in the same way as it provides the tools necessary to make the private schemes complementary to the contributory systems. However, it is also possible to cause distortions that result in parallel schemes, in competition for voluntary savings or reduction in agents' involvement in the savings system in general. In the case of the employers and workers, their decision may depend to a large extent on cultural or idiosyncratic factors, the levels of financial education that they may have and the incentives that they receive in their decision-making process.

The question being researched in this study is: To what extent do the private pension schemes and Contributory Pension Schemes complement or compete with each other? Meanwhile, the public policy position is: Which economic policy variables can and should be used by the State to encourage saving for pensions and, specifically, to persuade people to save in the Private Pension Plans?

In Mexico's case we shall base our study on these two aspects by means of an evaluation of the various options that can be taken by the agents involved (workers, employers and the government) in order to produce conditions that maximise the rates of coverage and the amount of contributions and improve the replacement rates that they offer for individuals' pensions in the country.

The document will be presented as follows: the first section will discuss the general characteristics of the private pension schemes and how they are regulated in Mexico, Latin America and Europe. The second section will analyse the characteristics of the private pension schemes in Mexico and how they have evolved since their rules were put in place in the year 2006. The third section provides a model of inter-temporal optimisation that makes it possible to identify how they allot their time for the active working life and the life in retirement, in addition to seeing how consumption reacts in the active working stage and how savings are channelled via the Private Plans or in the Individual Accounts in order to achieve a given level of consumption in the retirement stage. In that context, we will provide an answer concerning the conditions that align incentives or give rise to distortions, which contribute to the competition or complementarity of the two savings schemes. Finally, conclusions will be presented, pointing out the characteristics of the instruments that must be used in a public policy aimed at raising the amount of pensions and, specifically, how this can be achieved via Private Pension Plans.

1. Characteristics of the Private Pension Systems: Operational Capacity and Regulation

The creation of the Private Pension Plans' database began in Mexico in the year 2006, with the aim of finding out their main characteristics in terms of coverage, contribution structure, requirements and benefits. In 2007 CONSAR issued circular 17-1[3] which lays down the minimum conditions under which private schemes must operate in order to carry legal and operational conviction. In broad terms, those precautionary measures can be summed up in the following items:

1. Formal application is to be made to the Authority for recognition and approval, all programs that are not duly registered excluding benefit for the employer.
2. A pension plan is to be drawn up, this to contain definitions of the terms used, the benefits structure, date of installation and form of payment, plus the conditions of the plan, both general and specific.
3. A technical report is to be produced, that underpins the plan's liabilities and costs.
4. An actuarial valuation and opinion is to be issued by a certified actuary, with the aim of ascertaining the plan's financial stability.

In a broad sense, the rules for setting up private pension plans in Mexico are flexible: the firm introduces them voluntarily and the CONSAR does no more than check the minimum requirements, in order to avoid creating a disincentive through strict regulation. It is a striking fact that the regulation for Private Plans omits rulings on aspects that are regulated in the contributory individual accounts scheme:

1. Precautionary measures for the investment scheme.
2. Conditions for benefit portability.

In the case of the investment scheme, in terms of the degree of specialisation in managing resources there are wide disparities between the schemes, and this produces inefficiencies concerning the possibilities of attractive returns for those plans that have simpler administration. As regards the portability conditions, the lack of mutual recognition between the different plans prevents greater mobility in the labour market. It is important to mention that a scheme based on Individual

3 *Published in the Official Gazette on 29th July 2007.*

Accounts resolved both the points mentioned above as part of the reforms of the Savings for Retirement System (SAR) in 1997, meaning that its extension to the Private Plans constitutes a lag in regulation that needs to be remedied in the short term.

With regard to international experience, the Organisation for Economic Co-operation and Development (OECD) issued a series of recommendations and good practices for the funding and benefit structure of private pension schemes in the year 2007. This sets out about four key points of administration and management[4] which are summarised below:

1. **The investment process for Private Plans.** The plans' investment process must be based on instruments managed by authorised participants in the financial market and with mechanisms to mitigate the scheme's insolvency risk.
2. **Measurement of the private scheme's liabilities.** Legal provisions must be set up, clearly stating how the liabilities that stem from the financial commitments or obligations acquired by the scheme are determined. The legal provisions insist on appropriate calculation methods, which must include actuarial techniques and amortization rules that are consistent with standard actuarial models, such as the use of mortality tables and appropriate estimates of the retirement and early retirement patterns found in the scheme.
3. **The scheme's investment rules.** The scheme must at all times maintain the "equivalence principle", in other words, the present value of the scheme's flow of payments must be equal to the value of the funds constituted to face up to them.
4. **Capital depletion of the scheme when called upon to face the payment of current pensions.** There must be clear rules as to how the plan's assets are to be allocated and who is to accept liability for insufficient funding in the case of the plan's termination.

One finds in the literature that, in the case of private pension plans, different countries in North America, Europe and Latin America have put actions in train to reinforce the Third Pillar of Savings for Retirement, in such a way that these schemes are complementary to the contributory schemes of the Second Pillar.

The United States

In the case of the United States, private pensions constitute the main source when it comes to generating pensions for its workers. In this case the pensions of the Second Pillar are confined to public-sector workers in Government service, both

4 *OECD (2007), "OECD Guidelines of funding and benefit security in occupational pension plans".*

those corresponding to the Federal Government (*Federal Employees Retirement System* – FERS) and those employed by individual States. Individuals have the possibility of taking out plans under the *Individual Retirement Account* (IRA) option. The regulation of private pensions is the responsibility of the *Department of Labor* and has its legal basis in the regulation entitled *Employee Retirement Income Security Act* (ERISA).

The private pension schemes are characterised as being Defined Benefit (DB), Defined Contribution (DC) and mixed. Historically, the DB plans have operated most widely in the country, but recent years have seen a gradual increase in DC pensions, one of the most notable of them being the 401(k) plan.

According to the ERISA regulations, a pension plan must meet the following requirements[5] in order to provide tax benefits for its members:

1. The scheme must be in good financial standing and must run its operations in accordance with the rules under which it was set up.
2. It must take specific actions to guarantee the benefits already granted to the pensioners at all times.
3. The benefit must be provided in the form of a Life Annuity, including the option to generate a widowhood pension.
4. There can be no discrimination of the plan's beneficiaries on the basis of income levels.
5. The plan must have insurance provided by the *Pension Benefit Guaranty Corporation* (PBGC), the body responsible for executing insurance policies in the event of the plan's becoming bankrupt.

The plans that qualify to grant tax benefits have the following features:

1. The returns on the plans are tax-exempt.
2. The employers' contributions are tax-deductible in the Defined Benefit and Defined Contribution plans, provided that maximum contribution limits are maintained.
3. Workers' contributions are tax-free. However, the final pension benefit is taxable income[6] .

5 *However, there are exceptions such as the 403(b) type pensions available for non-profit organisations, public education institutions, hospital organisations in cooperatives, etc. which are not obliged to have Qualified status in order to receive tax benefits.*

6 *There are plans in which the worker can choose to return his/her contributions, subject to taxes on the Roth plans.*

European Union Countries

In 2012 the European Union published its White Paper[7] containing a detailed analysis of its strategy for the sustainability of the pension schemes in the member countries, with particular emphasis on establishing good practice guidelines that coincide with the real situation of each country and the structure of funding and benefits that they are dealing with. According to that document, the role that can be played by the private pension schemes is in the Third Pillar, and it also suggests producing tax incentives for companies to encourage the growth of these schemes, while on the other hand providing workers with more information for designing their retirement. The actions on which the European Union is currently working concentrate on the following points:

1. Providing workers with better information for choosing a private pension plan.
2. Creating initiatives to protect the benefits of the private schemes in the case of bankruptcy scenarios.
3. Carrying out cost-benefit analyses on the design of tax benefits to encourage the growth of private pension schemes in the region.
4. Ensuring that the private schemes include an effect to reduce the gap between the pension expectations achievable by men and women.
5. Portability of rights from one private scheme to another.
6. Regulatory aspects, investment vehicles and strategies to streamline the possibilities of creating systems in accordance with business needs and reducing barriers for their implementation.

Latin America

Unlike the European Union, where most of the member countries have public DB pension schemes, the vast majority of schemes in the countries of Latin America are based on Individual Accounts, and the authorities are facing the problems of Coverage, poor Contribution Density and low Replacement Rates in the contributory systems. In this sense, the pensions originating from Private Plans can take a lead as a vehicle for increasing the Replacement Rate in the Third Pillar. It should be pointed out that inefficiencies in the contributory systems of public pensions have become increasingly evident since the Chilean reform in 2008, and the measure generally taken by the countries in the region has been to create a non-contributory pension scheme managed by the Government and funded with public money. Most of these are funded with current resources out of their annual budget. In this sense, the participation of the Pension coming from a Private Plan serves to

7 *European Commission (2012), "The White Paper, An Agenda for Adequate, Safe and Sustainable Pensions".*

mitigate the need to set up unfunded non-contributory schemes, which represent a threat to public finances in the long term.

Chile

The 2008 reform of the pension system in Chile introduced the legal definition of the Collective Voluntary Pension Savings Contract (APVC)[8], by which an employer pays contributions to complement the workers' voluntary savings, which are deposited in a financial institution authorised to manage such savings: Pension Fund Administrators (AFPs), Insurance Companies, Banks, Investment Fund Managers, among others.

Among the requirements for operating this contract are the following stipulations:

1. The number of worker beneficiaries cannot be less than 30% of the payroll or 300 workers.
2. Workers are required to remain with the employer for certain periods, which cannot exceed 24 months of services rendered.
3. In the same way, the resources deposited in the authorised financial institutions may have an investment permanence clause, which cannot exceed 12 months under management, always provided that the contractual relationship between worker and employer remains intact.
4. Fee schemes are negotiated between the participants, while there may be differentiated fees set within a single contract.

Colombia

In Colombia there are various mechanisms for setting up private pension plans for which the employer is responsible. These include tax benefits up to a maximum which is fixed in the regulations. The instruments available for constituting the funds of such a plan are through voluntary pension insurance or direct contributions to the Individual Account managed by a Pension Administrator in Colombia.

Article 126-1 of the National Tax Law in Colombia (which refers to the deduction of contributions paid into retirement and disability pension funds and severance funds) mentions that employer's contributions to private pension insurance and voluntary pension funds will receive tax benefits up to a maximum limit of 3,800 UVT[9] per employee.

8 *Applicable as from 1st October 2008, according to Law N° 20,255 in Chile.*

9 *UVT = Unit of Taxable Value, which amounted in 2014 to 27,485 COP (13.44 USD).*

If the employer organises private pension insurance or pension funds that are not monitored by the Financial Superintendence of Colombia, then any voluntary contribution paid by the worker in those schemes will be taken to be exempt income provided that it does not exceed 30% of the income from work or taxable income of the year, up to a maximum amount of 3,800 UVT per worker.

In the event of early withdrawals being made from any of the savings alternatives mentioned above, the financial institution shall make the corresponding tax retentions.

The requirements for obtaining tax benefits from the pension scheme:

1. Voluntary contributions must remain in the plan for a period of at least 10 years, except in cases where the requirements to qualify for a pension are met, due to the old-age, death or disability of the beneficiary.
2. Withdrawal of resources for the purchase of housing is allowed.
3. The returns on the investments of these resources are exempt, unless early withdrawals are made that do not meet the time requirements for remaining in the private plan.

2. The Development of Private Pension Systems in Mexico

The main characteristic of a private pension scheme in Mexico is that it is started up voluntarily by a firm in order to complement the package of Social Security benefits that are provided for workers in the country (pension, medical care, disability and life insurance, housing, etc.). According to figures from the CONSAR, 62% of the private plans have been implemented in the past 10 years, which reveals the interest on the part of private enterprise to press ahead with creating additional benefit schemes for its workers.

Due to the variability of the conditions of the company and the characteristics of the individual and collective contracts signed with its workers, the private schemes present a wide variability in terms of the benefits provided and the requirements for obtaining them. In general, they can be grouped as follows:

1. **Coverage and characteristics of the workers:** Age, income level and characteristics of the contractual relationship (non-union staff and union members), number of workers covered and size of plan.
2. **By type:** Defined Benefit (DB), Defined Contribution (DC) and mixed.
3. **Source of contributions:** Company only, Company and Worker, contribution limits.
4. **Requirements for acquiring rights:** Years of service, Age, Points System.

5. **Method of benefit payment:** Lump sum, annual instalment, programmed payments.
6. **Objective:** With benefits complementary to, or independent of the contributory pension from the Mexican Social Security Institute (IMSS).
7. **Investment scheme:** Characteristics of the Investment Council and the investment instruments used.

The characteristics, in terms of the classifications mentioned above, are described in the following section.

Coverage and Characteristics of the Workers

As regards their level of coverage, the private schemes taken as a whole benefit 1.3 million people, of whom 94% are active, 4% are pensioners and 2% are inactive employees with rights under the plan[10], which points to relatively young schemes where there are few possibilities of actuarial imbalance caused by the ratio of active to non-active workers.

The working population covered by the private schemes has an average weighted age of 35.7 years, showing that the resources are capitalised within the plan for around 29.3 years on average, if we take a retiring age of 65 years. In Figure Nº 1 it is possible to see the distribution of the active workers by age.

On the other hand, a significant feature of the private plans is the level of coverage per type of relationship: while 38% of schemes report covering all their workers, regardless of whether contracts are with non-union staff or union members, 57% of the plans cover only non-union workers. In both cases, the plans, both non-union and union, are candidates for receiving the corresponding tax incentives. Figure Nº 2 shows the distribution of workers per type of contractual relationship.

10 *This refers to workers who no longer have a contractual relationship with the company, but have acquired rights and have not yet met the age requirements for taking advantage of them.*

FIGURE N° 1

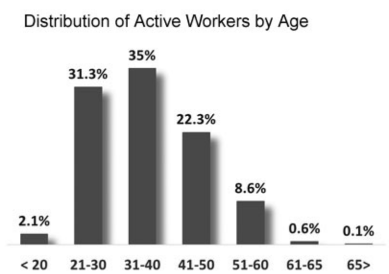
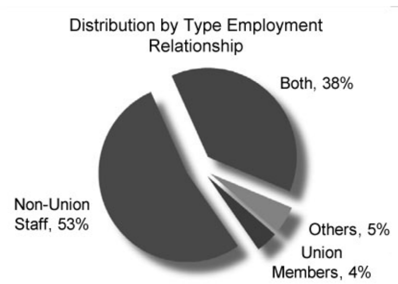


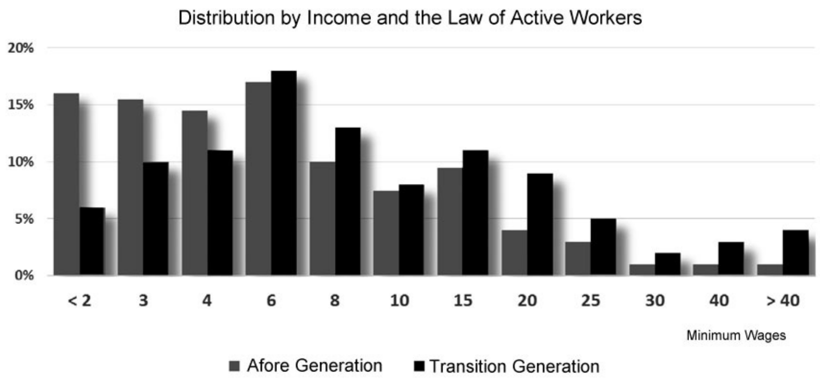
FIGURE N° 2



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

With regard to the income level of the workers covered, there are differences in the coverage structure depending on whether the worker belongs to the Afores generation or the Transition generation. As may be seen in Figure Nº 3, workers of the Afore generation with lower incomes tend to have a greater coverage from a private plan than those belonging to the Transition generation.

FIGURE N °3



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

Two aspects are taken into account with regard to the aim of the benefit: the fact that it is complementary or additional to the pension from the contributory schemes (see Figure Nº 4). When a pension is complementary in nature, the benefits of the private plan seek to provide resources to reach a target replacement rate which depends on the benefit from the Contributory Pension (typically on the pension provided by the IMSS since the target population of this scheme consists of workers of the transition generation in private companies), and by their characteristics, the majority of these plans are of the Defined Benefit type. Currently, most of the private plans grant additional benefits to the contributory pensions, and these are also consistent with a scheme of Defined Contributions.

With regard to the size of the plan (see Figure Nº 5), we find that plans with fewer than 100 worker beneficiaries make up the vast majority in the country, with 45.2%, this also being consistent with the distribution of company sizes. These are followed by schemes for 100 to 500 workers, constituting 33.2% of the total and schemes for companies with over 500 workers with 21.6%. It is important to note that the size of the plan has important repercussions on its costs and on the growth of the fund. In general, bigger plans will be able to take advantage of economies of scale and reduce the administrative costs of that plan compared with small plans. In the same way, the growth of the fund under management will depend on the size of the contributions, which in turn depend on the level of income. The greater the income and number of workers, the greater will be the impetus for growth for the private fund assets under management.

FIGURE N° 4

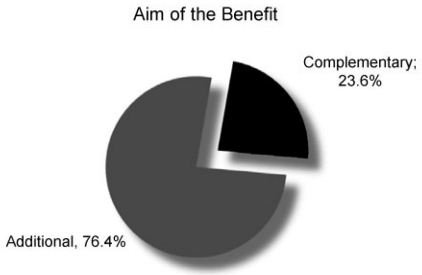
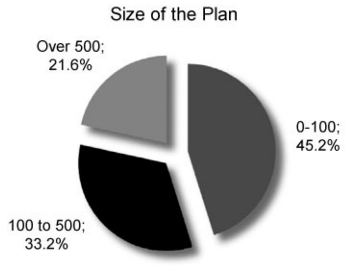


FIGURE N° 5



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

Type of Plan

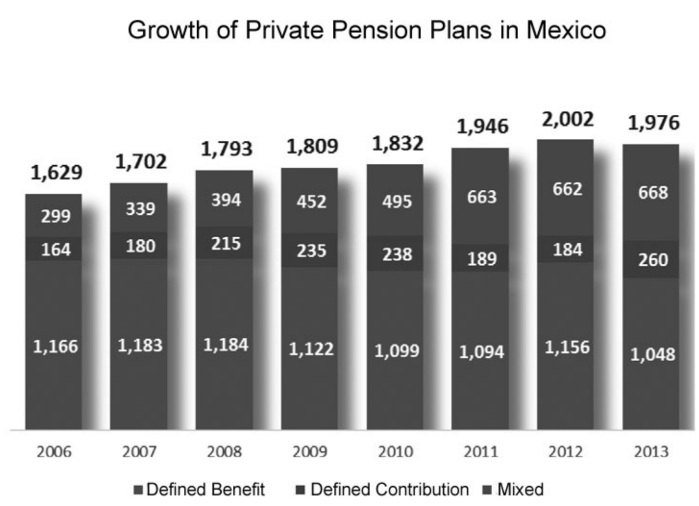
According to the most recent available data on the private schemes, 1,976 private pension plans were reported to be active in the country in 2013, promoted by 1,766 firms (there are firms that offer more than one private plan for their workers) (see Figure Nº 6). As regards the type of plan, we find three types operating in Mexico:

1. **Defined Benefit (DB):** In plans of this type the worker knows in advance the amount of the pension that he/she will receive. A calculation is used for this purpose that takes into account the worker's age, wage level, years of service and retiring age. In plans of this type the costs are usually covered entirely by the firm.
2. **Defined Contribution (DC):** In this plan the contributions to the plan are fixed but a final benefit is not guaranteed, since this will depend on the performance of the investments of the funds that are formed. The final benefit will depend on the amount of the contributions and the returns of the fund in which they are invested. The costs of the plan are usually covered jointly by employers and workers.
3. **Mixed Schemes:** This plan includes features of DB and DC plans, in which a minimum benefit is guaranteed in the future if the worker meets certain contribution requirements, while the final benefit will depend on the investment

instruments used by the plan. The costs of the plan are usually covered jointly by employers and workers.

Basically for historic reasons, private plans tend mainly to be DB in type: according to the following figure, over 50% continue to be private DB schemes. However, in the past three years the new schemes created have been predominantly Mixed or Defined Contribution and there is migration towards them.

FIGURE N° 6



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

Source of the Contributions

On grouping contributions by source (see Figure Nº 7), we find that there are three types: plans in which the contributions are made by the firm, with 65%; plans where contributions come from employers and workers, with 34%; and one where the workers are the only contributors, with 1%. With regard to the plans where the contributions are shared between employers and workers (see Figure N 8), 21% of these plans work under a system of matching contributions, in which the companies pay contributions only if the workers do so.

FIGURE N° 7

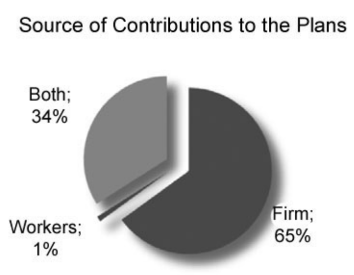
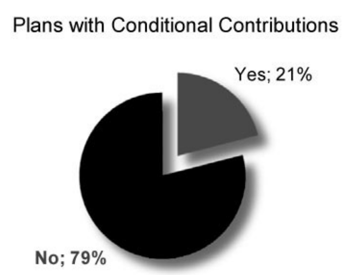


FIGURE N° 8



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

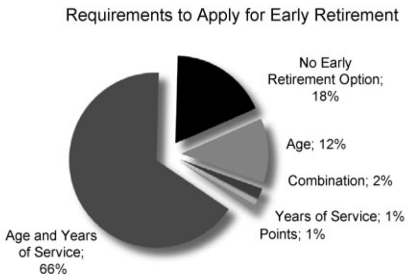
Requirements for Acquiring Rights

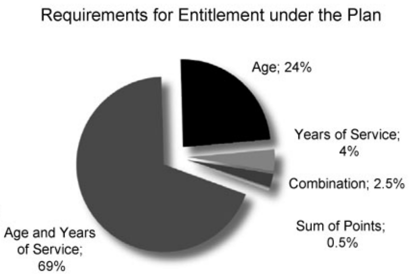
Once the worker decides to leave the labour market, most of the private plans offer early retirement options in addition to the pension benefit, with only 18% not having this possibility (see Figure Nº 9). According to Figure Nº 9, of the 82% of plans that do offer possibilities of early retirement, 66% of plans have age and years of service requirements in order to make use of it, 12% have only an age requirement, while the remaining 4% require points, years of service or a combination of multiple conditions in order to achieve early retirement.

In the case of obtaining full pension benefits (see Figure Nº 10), 69% of the plans ask for age and years of service requirements to be met, followed by 24% asking for age alone, 4% years of service alone, 2.5% a combination of requirements and 0.5% an accumulation of points in order to qualify for the pension.

FIGURE N° 9

FIGURE N° 10



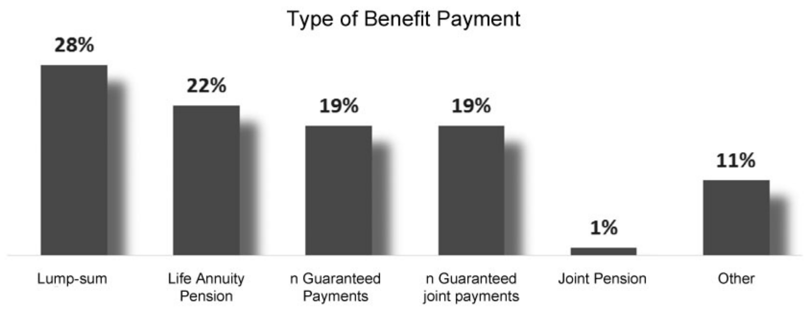


SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

Method of Benefit Payment

There are also different methods for paying the pension benefit, these generally being divided into the following: a lump sum payment of the amount agreed in the plan, the payment of a life annuity that may be “joint” or not (it is said to be “joint” when the benefits are inherited by the spouse when the pensioner dies) and the programming of fixed payments with their joint option. It is relevant to show that the lump-sum payment of benefits in a single instalment is by far the most common among the private schemes, with 28% (see Figure Nº 11), something that should be analysed from the point of view that this method reduces the costs of organising the creation of a life annuity, or programming payments.

FIGURE N° 11



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

In the same way, the life annuity (22%) and guaranteed payments (19%) have a larger share than the schemes with guaranteed joint payments (19%) and joint lifetime pensions (1%), where the joint plans are significantly more expensive because they include the life expectancy of the beneficiary plus that of the spouse, which represents a substantial reduction in the payments of the joint pension, while in the case of the guaranteed payments it represents an insurance policy to the pensioner's credit.

Investment Scheme

One of the features that may make a private pension scheme attractive is the flexibility in the investment scheme, where the actual plan can be self-regulated and stipulate the characteristics of its decision-makers for itself in terms of investment policy, limits and above all the option of not having its decisions circumscribed by regulatory investment limits.

With regard to investment policy, 58% of the plans set up an Investment Committee and in 20% of the plans the employees of the firm itself form that committee (see Figure Nº 12). The existence of different decision-makers concerned in investment matters means that the levels of sophistication in investment strategies are limited by their level of specialisation. This is the reason why we can find a high level of diversity, both in the characteristics of the investment portfolios produced, and in the returns obtained. Such investors include in their decision-making elements such as Asset Allocation (45%), the following of a given market benchmark (28%), and the setting of investment limits (51%). However, it is important to mention that 27% include the taking of discretional decisions in the investment policy, which may increase the volatility of the investment portfolio (see Figure Nº 13).

FIGURE N° 12

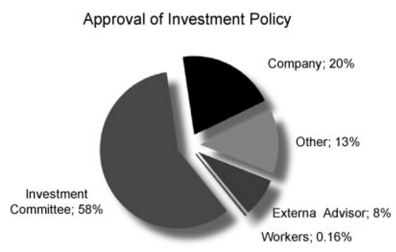
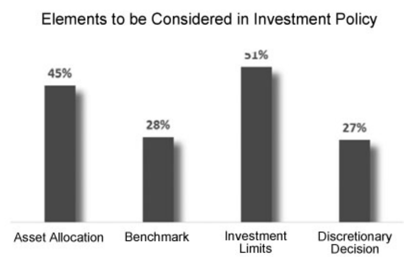


FIGURE N° 13



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

With regard to the instruments for investment, we also find a wide range of possibilities for the private plans, with the main investment channel being through Trust Funds (48% of the total), which can be managed by trustees, using transparent legal mechanisms, with guaranteed non-ownership of the resources under management. In the second place, 35% of the plans carry out their investments through Investment Funds or Financial Intermediation, while 6% use reserves and accounting instruments. It is a relevant fact that only 1% of the plans use the SIEFORES as investment instruments for private plans (see Figure Nº 14).

As far as the information provided to workers is concerned, 64% provide an account statement, while 22% include information about the return of the fund and 20% of the plans report on how the investment portfolio is positioned. 22% of the plans do not give their workers information of any type (see Figure Nº 15).

FIGURE Nº 14

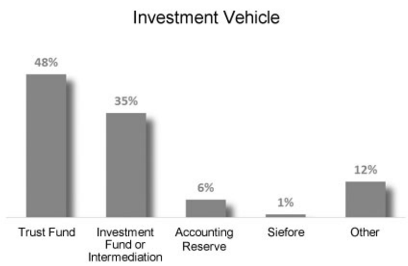
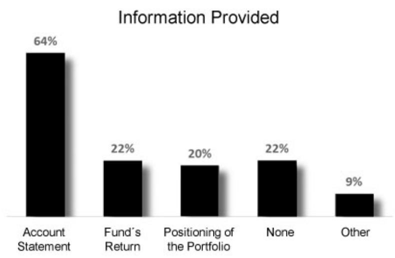


FIGURE Nº 15

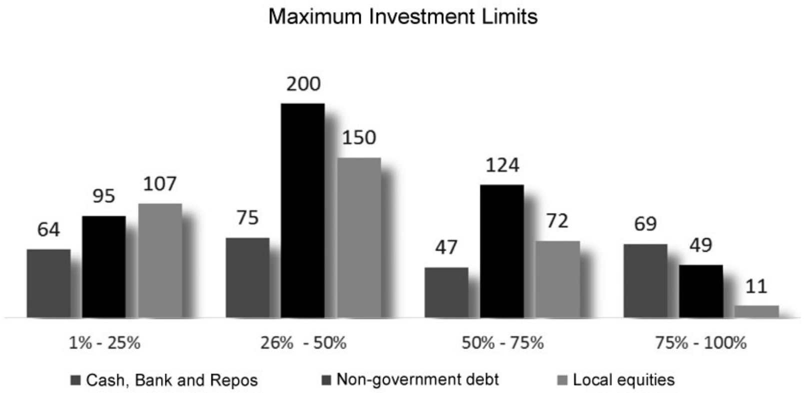


SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

According to the CONSAR, there is a group of private plans that is highly sophisticated as far as their investment scheme and strategy are concerned. 285 plans (14%) invest securities abroad, with investments targeting emerging and developed markets. Meanwhile, 210 plans (10%) have been authorised to invest in foreign currencies, with the U.S. dollar being the preferred choice of investment instrument. Finally, 49 plans (2.5%) invest in derivatives and structured instruments, which have a maximum investment limit.

Generally speaking, the private plans have set investment limits on three groups of securities: Cash, Banks and Repos, Non-Government Debt and Local Equities, in this last case there are no limits on the sovereign debt (see Figure Nº 16).

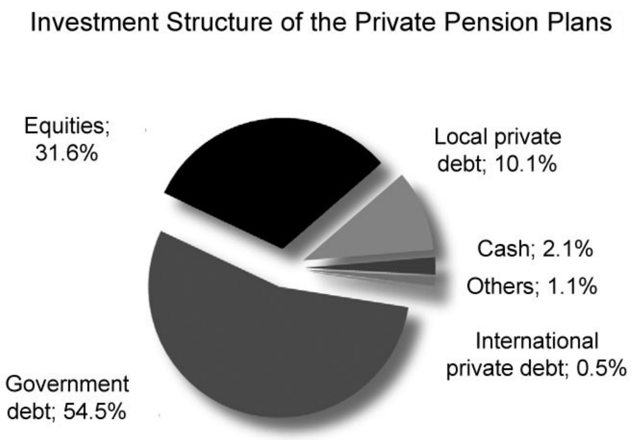
FIGURE N° 16



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

According to Figure Nº 16, the mean value of the maximum investment limit for non-government debt and for local equities is situated in the range between 26% and 50%, while in the case of Cash, Banks and Repos there is a wide scatter with regard to maximum investment limits. Figure Nº 17 shows the current structure of the whole group of private plans. According to the information reported to the authority, 54.5% of the plans' assets are in government debt, followed by 31.6% in equities. On the other hand, the choice in International Private Debt occupies 0.5% of the plans' assets.

FIGURE N° 17



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

Finally, the investment structure, the variability in the degree of professionalization among decision-makers and the self-regulating investment limits of the schemes have direct repercussions on the returns of these funds. According to the statistics, most of the plans reveal the annual return of their portfolios (1,412 plans, 72.5%), where the nominal average is 7.6% and the real return 4.3% (see Figure Nº 18 and Nº 19).

FIGURE N° 18

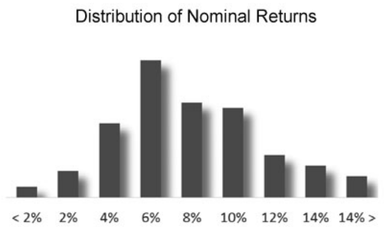
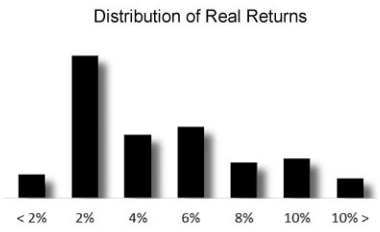


FIGURE N° 19



SOURCE: PRODUCED BY AMAFORE WITH DATA OF THE CONSAR.

3. Interactions between Private and Public Systems

In this section we are going to identify the interactions that exist between the Individual Accounts Schemes (ECI) and the Private Pension Plans (PPP) through the decisions taken by workers, employers and the government, with the aim of discovering the factors that explain the degree of complementarity or competition between the ECI and PPP schemes. The technique used for this purpose will be an adaptation of the standard model of inter-temporal optimisation, with two periods and with no uncertainty. The agents' decisions will be identified in two stages: active working life and retirement.

How the Model is constructed

- **The Decision on Working Life and Retirement:** The life of an individual is divided into two periods, that of active work (W) and that of retirement (L), in such a way that an individual can decide how much of his/her lifetime will be dedicated to these two activities. For calculation purposes, we have ruled out the possibility that the individual might work informally, so he/she will be contributing to an ECI during the period spent working, and we will assume that he/she is doing a job that offers him/her a PPP scheme. In addition we have standardised the total period, so that the allocation of time will be represented by $1= W+L$.
- **Income and its Uses in the Active Working Stage:** In the course of his/her lifetime, the individual will accumulate a disposable income, $\Omega\,(W)$, which will be conditional upon how long he/she decides to remain in active work and additionally, will already be net of the contributions paid into the ECI. He/she

can use that income for spending during his/her active working stage (C_a) or put it into voluntary savings via the ECI (v_c) or via savings in the PPP (v_p).

- **Pension Schemes available to the individual: :** The mechanism for transferring resources in the direction of retirement will be by means of savings schemes. These will generate the pensions from the ECI scheme (P_c) and the pension of the private plan (P_p), both of which depend on the time in which the person was actively working. There is also a voluntary saving mechanism (R_c) in the case of having saved in the individual accounts scheme, and R_p for the private plan. All the savings schemes are affected by the interaction between their real return net of costs, taxes and the tax deductions or credits included in the plan. The only way in which the individual can influence the final amount of the pensions (P_c and P_p) is by a decision to modify the length of time he/she will dedicate to the active working stage.
- **Income and its Uses in the Retirement Stage:** When an individual moves into his/her retirement stage, he/she will receive:

  - o **Contributory pension** $P_c(W, r_c, \pi_c)$, in which the final benefit will depend on how long he/she worked (*W*), on the real return net of costs (r_c) and the tax deductions or credits granted by the State (π_c).
  - o **Private pension** $P_p(W, r_p, \pi_p^w, \pi_p^c)$, in which the final benefit will depend on how long he/she worked (*W*), the return net of costs (r_p) and on tax credits or deductions granted by the State to encourage the worker to take part (π_p^w), or for the firm that offers the private plan (π_p^c).
  - o **Voluntary savings in ECI** represented by $R_c(v_c, r_c, \pi_c)$, which depends on the voluntary savings allocated to the scheme (v_c), the returns (r_c) and the taxes or tax incentives offered by the State (π_c).
  - o **Voluntary savings in PPP,** the amount of which will be determined by $R_p(v_p, r_p, \pi_p^w, \pi_p^c)$, which will depend on the savings (v_p), the rate of return (r_p) and the tax incentives granted by the State to workers and companies (π_p^w and π_p^c).
  - o In addition to the pensions and savings mentioned above, the worker may also receive fixed-amount transfers from the State, from private individuals, etc. which will be represented by S_{nc}.
  - o The individual will be able to make use of all these resources for consumption purposes during his life in retirement (C_r). We assume that the worker will leave no legacies or unused resources.

Deciding on the Model

The individual seeks to maximise the total utility produced by consumption in his/her active working stage (C_a), consumption in his/her retirement stage (C_r) and the duration of life in retirement (*L*). The utility of future consumption will be affected by an impatience rate $\beta \in (0{,}1)$. The more impatient the individual, the more he/she will prefer to consume his/her available resources during the active stage. The utility of the retirement period will be adjusted to match the rate of preference for leisure $\delta \in (0{,}1)$, where a greater preference for retirement time will mean that the worker opts for free time, thereby reducing disposable income and consumption in both the active and retirement stages.

The individual's preferences are represented in the following way:

$$U(C_a, C_r, L) = u(C_a) + \beta u(C_r) + \delta u(L) \tag{1}$$

Where the utility function U is a function of separable additive utility and conforms to the classic assumptions of economic theory (a continuous, distinguishable, growing and strictly concave function in the utility of consumption in the active stage, the retirement stage and the amount of time spent in retirement, in other words $u' > 0$ and $u'' < 0$). Finally, the individual's problem of optimisation is set out as follows:

$$\max_{\{C_a, C_r,\ L, v_c, v_p\}} U(C_a, C_r, L) = u(C_a) + \beta u(C_r) + \delta u(L) \tag{2}$$

Subject to the following restrictions:

$$\Omega(W) = C_a + v_c + v_p \tag{3}$$

$$P_c(W, r_c, \pi_c) + P_p(W, r_p, \pi_p^w, \pi_p^c) + R_c(v_c, r_c, \pi_c) + R_p(v_p, r_p, \pi_p^w, \pi_p^c) + S_{nc} = C_r \tag{4}$$

$$W + L = 1 \tag{5}$$

$$C_a,\ C_r,\ \ L, v_c,\ v_p \geq 0 \tag{6}$$

Due to the strict concavity demanded of the utility function and the fact that the individual's set of choices is a compact set (closed and limited), in addition to having the property of convexity, Weierstrass's theorem allows us to ensure that there is a solution and the quasi concavity of the utility function guarantees that the solution is a unique one.

The above problem is resolved by the Lagrange multipliers method, on the basis of which we can obtain the three Euler Equations that enable relative consumptions to be identified. In this present document, specific forms for the optimum values of $C_a,\ C_r,\ \ L, v_c,\ v_p$ will not be obtained, due to the fact that we do not suggest specific utility functions, since our aim is to be more general. However, we shall obtain the Euler equations for finding out individuals' consumption /saving/ leisure decisions.

The more general properties of the functions $\Omega(W)$. P_c, P_p, R_c and R_p will be determined in Appendix I, in terms of their first derivatives with respect to the variables involved in each one of them.

Appendix II describes the solution by the Lagrange method until Euler Equations are obtained. In order to facilitate the algebra, we also assume that the functions of income and pension accumulation have the following form:

$$\Omega(W) = W \cdot k \qquad \textbf{con } k \geq 0 \tag{7}$$

$$P_c(W, r_c, \pi_c) = W \cdot P_c(r_c, \pi_c) \tag{8}$$

$$P_p(W, r_p, \pi_p^w, \pi_p^c) = W \cdot P_p(r_p, \pi_p) \tag{9}$$

$$R_c(v_c, r_c, \pi_c) = v_c \cdot R_c(r_c, \pi_c) \tag{10}$$

$$R_p(v_p, r_p, \pi_p) = v_p \cdot R_p(r_p, \pi_p) \tag{11}$$

We also omit any other non-contributory transfers, meaning that $S_{nc} = 0$.

Where equations (7) to (11) conform to the characteristics specified in Appendix I, it allows us to resolve the problem of the individual's optimisation and make inferences in the model in a more intuitive manner. The result of the above allows us to obtain the following equations which have to occur in equilibrium:

Rule of relative consumption between consumption in the active stage and consumption in the individual's retirement stage:

$$\frac{u'(C_a)}{u'(C_r)} = \beta R'_{2,c}(r_c, \pi_c) \tag{12}$$

In the second place, the rule of relative consumption between the length of life in retirement L and consumption in the active stage:

$$\frac{u'(L)}{u'(C_a)} = \frac{1}{\delta}\left[k + \frac{1}{R'_{2,c}(r_c,\pi_c)}\left[P'_{1,c}(r_c,\pi_c) + P'_{1,p}(r_p,\pi_p^w,\pi_p^c)\right]\right] \tag{13}$$

Finally, the rule of relative consumption between the length of life in retirement (L) and consumption in the retirement stage (C_r):

$$\frac{u'(L)}{u'(C_r)} = \frac{\beta}{\delta}\left[\, k \cdot R'_{2,c}(r_c,\pi_c) + \left[P'_{1,c}(r_c,\pi_c) + P'_{1,p}\left(r_p,\pi_p^w,\pi_p^c\right)\right]\right] \quad (14)$$

Equations (12), (13) and (14) determine the marginal substitution ratios which should, in equilibrium, be equal to the relative prices. In order to understand the nature of the process of choice of $C_a,\ C_r,\ L$, let us take equation (12):

$$u'(C_a) = \beta R'_{2,c}(r_c,\pi_c)\cdot u'(C_r) \quad (15)$$

Let us assume that $\beta R'_{2,c}(r_c,\pi_c) > 1$, which means that $u'(C_a) > u'(C_r)$. In other words, the marginal utility of consumption in the active stage is greater than in that of retirement, which means that the function of utility in consumption in the retirement stage is greater than in the active stage. For that reason, consumption is greater in the retirement stage. In the opposite case, where $\beta R'_{2,c}(r_c,\pi_c) < 1$, then $u'(C_a) < u'(C_r)$, which means that a unit of consumption in the active stage provides greater utility to the individual than that same unit dedicated to consumption in the retirement stage. For this reason consumption in the active stage is greater. Finally, where $\beta R'_{2,c}(r_c,\pi_c) = 1$, then $u'(C_a) = u'(C_r)$ and the individual will consume the same amount both as an active worker and during retirement, and will therefore look to have $C_a = C_r$.

The above analysis is carried out in a similar way for equations (13) and (14). As can be seen in the results, the Euler Equations depend on variables that are exogenous to the individual's decision, namely the rates of return (in the ECI schemes by the Fund Administrators, in the PPP schemes by the choice of company when hiring one to manage the resources) and the tax incentives that may be provided by the Government, while the factors of impatience and preference for leisure are idiosyncratic qualities of the individual, given by the social environment.

When we are attempting to answer the question as to whether private pension schemes are complementary to, or in competition with the Individual Accounts schemes, equations (12), (13) and (14) help us to understand that this is a multi-factorial phenomenon, due to the fact that any strategy aimed at increasing consumption in the retirement stage of life means in practice increasing the amount of the pension, and the transition mechanism is via savings. In the following section we are going to do some exercises of comparative statics to identify how individuals' choices are modified in the light of changes in returns and the tax incentives granted by the Government.

Comparative Statics: How agents react to changes in factors that are exogenous to the dynamics of savings.

Equations (12), (13) and (14) allow us to identify the combined decisions of three factors. In the first place, the idiosyncratic characteristics of individuals, represented by β and δ, which determine the factors of impatience and preference for leisure, respectively; then by the rates of return offered both by the ECI (r_c), and the return of the PPP (r_p); and finally, the impact of the state's role via taxes or deductions which are reflected in the model by π_c , π_p^w, and π_p^c . Equations (12), (13) and (14) will be analysed below, assuming that they are at a point of equilibrium at the outset. Appendix III contains a detailed discussion of how individuals adjust their consumption decisions L, C_a, C_r in the light of changes in exogenous variables. The following table gives a summary of the interactions obtained in Appendix III as a result of increases in the exogenous variables δ , r_c , r_p , π_c , π_p^w , y π_p^c .

Comparative Statics Analysis Table

INCREASES IN THE EXOGENOUS VARIABLES (ROWS) AND EFFECT ON VARIABLES OF CHOICE (COLUMNS).

	C_a y C_r	L y C_a	L y C_r	v_c	v_p
Caso 1 $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$					
β	$+C_r$		$+C_r$	$v_c = v_c^*$	$v_p = 0$
δ		$+L$	$+L$		
r_c	$+C_r$	$+C_a$	$+C_r$		
r_p		$+C_a$	$+C_r$		
π_c	$+C_a$	$+L$	$+L$		
π_p^w y π_p^c		$+L$	$+L$		
Caso 2 $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$					
β	$+C_r$		$+C_r$	$v_c = 0$	$v_p = v_p^*$
δ		$+L$	$+L$		
r_c		$+C_a$	$+C_r$		
r_p	$+C_r$	$+C_a$	$+C_r$		
π_c		$+L$	$+L$		
π_p^w y π_p^c	$+C_a$	$+L$	$+L$		

SOURCE: PRODUCED BY AMAFORE.

Competition and complementarity of the Individual Accounts Schemes and Private Pension Plans

The Comparative Statics exercise allows us to determine the conditions that are conducive to ***competition*** or complementarity between ECIs and PPPs. Competition will occur by two routes: first, by dedicating less time to contributing to one scheme in favour of the other, and second, where the decision implies transferring voluntary savings resources from one scheme to another.

According to the above table, if, in the situation of equilibrium, it turns out that $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$, then $v_c = v_c^*$ y $v_p = 0$. This means that an increase in taxes by the Government on the ECIs, resulting in inequality being inverted, will produce the result $v_c = 0$ and $v_p = v_p^*$. Therefore, the ***Government has the possibility of directing the way in which individuals channel their voluntary savings resources.***

A generalised increase of Government taxes, in other words increases in π_c, π_p^w, and π_p^c, will have a general effect of increasing the length of the time spent in retirement (*L*) and increasing consumption in the active stage (C_a). ***An increase in taxes or reduction in tax incentives from the Government will reduce individuals' participation in all savings mechanisms, both ECI and PPP, voluntary or mandatory.***

To the extent that taxes cause the individual to transfer more time to retirement, the scheme with higher returns will be reduced more sharply and will have less relative weight in the final pension. In the case where $P_c(W,r_c,\pi_c) > P_p(W,r_p,\pi_p^w,\pi_p^c)$ and there is a reduction in tax incentives, the individual will reasonably choose to spend more time in retirement and the pension from the Private Plan will have greater relative weight in his/her final pension compared with the original situation, meaning that a ***substitution effect*** occurs between the ECI and the PPP that does not increase the individual's final pension. ***With $P_c(W,r_c,\pi_c) > P_p(W,r_p,\pi_p^w,\pi_p^c)$ and a reduction in tax incentives, the PPP scheme replaces the resources lost by the ECI. The final effect is a lower pension and an earlier retirement on the part of the individuals.***

The question that remains to be asked is the following: at what point do the schemes become complementary? This occurs through interaction with idiosyncratic factors β and δ. An increase in rates of return or tax incentives will encourage individuals to choose more time in activity, which will increase the disposable income that can be channelled into consumption in the active stage (C_a) or in the retirement stage (C_r). When $\beta \to 1$, the individual is more patient, so the proportion of consumption in (C_r) is greater than that of C_a. Given that the individuals who spend more time in active life also participate for longer in the savings systems, the resources are complementary.

Where $\delta \to 0$, individuals have less preference for leisure, so increases in returns or tax incentives produce an income effect, part of which will be balanced out by greater consumption C_r meaning that once again the resources from the ECI and PPP will be complementary.

To summarise: an increase in rates of return with individuals whose idiosyncratic factors are such that β is close to 1 or δ close to 0 produce a complementary effect on the schemes, which in turn produce a greater amount of pension.

Finally, rates β and δ also define the effectiveness of incentives from the Government. Where $\beta \to 0$ or $\delta \to 1$, we are talking about a very impatient individual, or one with a strong preference for leisure. In the first case, any increase in rates of return or tax incentives will simply produce increased consumption in the active stage (C_a) to the detriment of consumption in the retirement stage (C_r). In the case where $\delta \to 1$, individuals prefer leisure time, which reduces disposable income, consumption and pensions. In this case, competition occurs once again between the ECIs and PPPs. ***Where $\beta \to 0$ or $\delta \to 1$ incentives to increase savings are ineffective and income is dedicated exclusively either to spending in the active stage (C_a) or time-spending in the retirement stage (L).***

The evidence in Mexico

To conclude, we were looking for evidence that would give us indications of the magnitude of the idiosyncratic rates β and δ in Mexico. In April 2011 the AMAFORE carried out a national survey entitled *"Opinion Studies for the Design and Evaluation of the AMAFORE's Communication Strategy"*, with 2,015 points. This was conducted personally in homes and represented the working population that contributes to the IMSS and is an account-holder of some AFORE in Mexico. Its aims were to identify the current state of Retirement Culture, the value placed by individuals on saving for retirement, and to discover the level of knowledge about the AFORES' Savings for Retirement System. ***A question in this survey dealt with preferences about continuing to work once retiring age is reached, and about 48% of the individuals who answered the survey expressed the desire to continue working.***

In the second quarter of 2012, the CONSAR, together with the National Statistical and Geographical Institute (INEGI), carried out the Working Career Module survey (MOTRAL), as part of the National Occupation and Employment Survey (ENOE), with a sample of 5,225 surveys for a nationally representative population from 18 to 54 years of age with working experience at urban level. The survey aims to provide information about the working careers, safety and social security culture of the population with work experience. In this survey, workers were asked about the age at which they visualise retiring, or stopping work. At least 20.1% of those interviewed stated that they had no desire to stop working and about 5% stated that they would do so, but at an older age than the legal retiring age (65 years). ***However, the data indicates that age is a relevant factor affecting the decision of when to retire. According to the survey, 72.5% of individuals under the age of 27 wish to retire at under 60 years of age, while in the group of individuals over 45 years of age, only 57.2% showed any desire to take early retirement.***

In August 2013, AMAFORE published the data from the National Survey of the Situation Confronting People of Retiring Age (ENAEPER), with 2,111 cases representing the population aged 65 years or over in Mexico that has been, or is currently involved in paid activity. ***According to the data, 41% of individuals stated that they continued working after retiring age in the country (65 years), where differences by socio-economic level were 47% in the lowest, falling to 37% in the highest.***

The results of the above surveys suggest that in Mexico, the preference for leisure (δ) must be relatively small. Indeed, in some individuals who stated the desire to continue in employment for as long as possible implies that δ may be close to 0. It is important to qualify this by saying that these decisions to remain longer in employment after the country's legal retiring age correspond in many cases to need, due to a lack of sufficient resources to provide a pension at retiring age. However, it is important to emphasise that income is not the only variable taken into account for postponing retirement. Additional arguments reinforcing the conjecture that leisure is not highly valued in Mexico are, for example, the fact that, in the ENAEPER, individuals also value the fact of remaining in active work as a symbol of usefulness for society, to reduce levels of depression, keep their independence and not be an economic burden on the family. Additional studies on the valuation of leisure in the country will allow new data to be added in this area.

With regard to the impatience factor (β), the literature rates the Latin American region higher in impatience for consumption than other regions in the world.

The study that comes closest to setting an impatience rate in Mexico is that of Carvalho (2010), in which he analyses the subjective discount rates of rural homes in Mexico, using the beneficiary database of the federal program PROGRESA. ***The study concludes that poor homes in Mexico hold on to very high discount rates, which may be explained by assuming that poor homes have a high impatience rate.***

Chen, et.al. (2005) examines the intercultural variations of how individuals discount the future. ***The authors discover that Western Cultures are relatively less patient and have discount rates that are higher, relatively, than Eastern Cultures.*** Also, Western Cultures set a higher value on present consumption.

In Tóth and Árvai (2001) it states that ***there is a generalised phenomenon of falling rates of saving in the emerging economies of Europe, the United States and Latin America.*** On the other hand, the environment has an impact on the impatience factor. According to Shaddy (2013), the effect of commercial advertising increases the magnitude of the impatience factor among consumers. Among the main conclusions of this research, we find that ***an individual exposed to advertising of consumer goods tends not only to reduce saving, but also to postpone it progressively.***

An empirical analysis of the benefits of Conduct-Based Life Cycle Models is made in Valdés (2014) as an alternative to the assumptions of liquidity squeezes in the conventional Life Cycle models. Among its results it includes a valuation of the impatience rate and liquidity squeezes, where ***the author concludes that people with a higher impatience rate are more prone to fall into liquidity squeezes.*** In this sense, liquidity squeezes act as a barrier to enable individuals to manage switching resources to increase savings and later consumption in the retirement stage.

In general, the literature finds that the Latin American region has high impatience factors, while Carvalho's study (2010) ***allows us to guess that in the case of Mexico there will be high levels of impatience in consumption among individuals in the active stage and, what is more, in the case of individuals with lower incomes the impatience will be even greater, with β being very close to 0.***

If we assume that in Mexico the idiosyncratic factors in which ***β and δ are very close to 0 really occur, the Mexican population is impatient for present consumption and has very little preference for leisure.*** The final effect of complementarity or competition between the ECIs and PPPs will depend on which effect predominates. ***If the individual's impatience effect wins out over the preference for leisure effect, then there will be a substitution effect of the PPP by ECI resources if there are increases in the systems' returns or tax incentives. In the opposite case, if the preference for leisure effect wins out over individuals' impatience, then the schemes will be complementary, since there will be an increase in the total final pension available to the individual.***

Conclusions

The Private Pension Plans, due to their voluntary nature, are strongly influenced by the incentives to form them. For this reason, the tax benefits that the Government can grant to companies act as a fundamental tool for putting these plans in place. As a public policy measure, when it comes to facing up to the problem of how to increase the population's replacement rates and coverage, the Private Plans, which form part of the Third Pillar of savings for retirement, are a viable and more efficient solution compared with the long-term costs of implementing Non-contributory Pensions, which form part of the First Pillar. Non-contributory Pensions carry the latent risk of upsetting the balance of public finance, since such transfers are funded by way of taxes and current expenditure resources, which is not true in the case of Private Plans, because they are made up of resources from workers' and employers' savings. However the implementation of Private Plans in economies with high informality rates, such as those that exist in Latin America, constitutes a challenge to allow the actively working population access to an additional saving scheme in these countries.

According to the experience of the countries analysed in this paper, there is interest on the part of the authorities to encourage the creation of Private Pension Plans, in such a way as to contribute to an increase in replacement rate for the population, regardless of whether the national pension system is one of Defined Benefit (most countries in Europe) or Defined Contribution (countries in Latin America).

The experience reported in Mexico reveals to us that Private Plans cover a little over 10% of the actively working population in formal employment in the country. However, it is important to highlight the effect of contribution on the economy in general, which will become important in the next few years. The resources accumulated in the fund alone represented 2.9% of GDP towards the close of the year 2013. In the present study, we have identified four areas of opportunity for the Private Plans, which will allow them to develop more fully and lead to more participation in them on the part of the general population:

- ***Homologation:*** If Pension Plans can grant similar benefits, using similar operating rules, it will help to raise the worker's awareness of the benefit and reduce costs for the companies.
- ***Taking advantage of economies of scale:*** The management of the funds making up the private pension plan can be transferred to a specialised financial agent, with standard rules of the sector and potential reductions in costs.
- ***Portability:*** The resources accumulated for the private pension are a benefit acquired by the worker that should not be lost when he/she has a change of job. The portability rules will not only avoid friction in labour mobility, but also guarantee the rights acquired by the workers in these plans.

- ***Transparency:*** Clearly expressed information about accumulated capital and its management helps to integrate the private plan in the collective memory, and this allows the worker to familiarise him/herself with the benefit and effort being made by the employer to improve the life of his/her employees.

The last part of the study concentrates on proposing a model that will make it possible to measure the degree of complementarity or competition between the Private Pension Plans (PPP) and the Individual Accounts Schemes (ECI). As was pinpointed in the third section of this paper, the idiosyncratic factors of individuals that denote their impatience factor (β) and their preference for leisure (δ), determine to a major extent the degree of complementarity or competition between the ECIs and PPPs. To the extent that individuals become more patient and have less preference for leisure, the increased wealth produced by tax incentives and better rates of return will be directed into increased savings and participation in the pension schemes, so that the final pension will be greater than that of the initial state of equilibrium. To the extent that individuals become more impatient and have higher preference for leisure, the effects of wealth produced by tax incentives or better rates of return will be channelled into consumption during the active work stage (C_a) or increasing the length of the retirement life stage (*L*), meaning that the final pension will be lower than that of the initial state of equilibrium. In this case the PPP resources crowd out the ECI resources in the composition of the final pension.

A key public policy question is: in this context, how can one bring about an increase in the population's replacement rate? The Government can have recourse to at least three mechanisms. First of all, it can introduce an increase in the rates of contribution to the ECI. Secondly, it can grant tax incentives to encourage voluntary saving in the ECI. And, finally, it can grant tax incentives to encourage voluntary saving in the PPP.

According to the comparative statics scenarios discussed in the third section, in a case in which individuals have relatively low rates of impatience and less preference for leisure (in other words, a β close to 1 and a δ close to 0), the tax incentives in ECI or PPP will produce a greater increase in the final pension, with the two schemes complementing one another. On the contrary, in cases where individuals have relatively high levels of impatience and preference for leisure (in other words, a β close to 0 and a δ close to 1), individuals' choices will assign most of the resources to consumption in the active stage (C_a) and extra time in retirement (L), while the amount earmarked for consumption in the retirement stage (C_r) could be far less than what is needed to live a life of dignity once retired. In this case, a tax incentive would produce an effect that would make the situation even worse, by displacing the resources saved in the ECI by the resources accumulated in the PPP. In this sense, increasing mandatory saving by means of the ECI is a solution that will strengthen the pension level, because individuals are not prepared rationally to save of their own volition. However, the final pension will be lower if we compare it with the pension that could be obtained if the ECI and PPP were complementary.

In Mexico's case, various studies make it possible to surmise that there are idiosyncratic factors (β and δ) in the country ***that are very close to 0, in other words the Mexican population is impatient for present consumption and has very little preference for leisure.*** The final effect of complementarity or competition between the ECIs and PPPs will depend on which effect is uppermost. ***If the effect of individual impatience wins out over the effect of preference for leisure, then there will be a substitution effect of PPP by ECI resources if there are increases in the systems' returns or tax incentives*** (the total pension becomes lower). ***In the opposite case, if the preference for leisure effect wins out over individuals' impatience, then the schemes will be complementary (the two pensions will be added together) and the final pension available to the individual will increase.***

It is important to highlight the fact that, in voluntary saving, the PPPs and ECIs compete in the sense that they are the workers' way of saving. Due to the general nature of the model discussed in this document, we did not focus on special cases, such as the general trend of fixing maximum levels on voluntary savings that can receive tax incentives. However, the answer is that a rational individual can save up to the maximum ceiling in the scheme that produces the highest real returns, and then, if he/she wants to build up even more savings, he/she can channel them into the plan that comes second in terms of returns.

Finally, three lines of research emerge from this study: an evaluation of the taxation mechanisms when paying contributions (active period) or taxes at the point of retirement (retirement period); the inclusion of the variability of the "preference for leisure" factor (δ), where the evidence of the MOTRAL 2012 survey in Mexico suggests that preference for leisure decreases with age; in the case of the labour market, the inclusion of formal and informal employment decisions in the job decisions taken by the workers.

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Appendix I
Properties of the Functions determining the ECI, PPP and voluntary savings pensions.

This section spells out the behaviour of the derivatives from the functions of disposable income , the functions of the ECI pension, the PPP pension and their voluntary savings mechanisms. All the derivatives are presented in relation to the variables: W , v_c ,v_p , r_c , r_p , π_c , π_p^w y π_p^c . In the case of the time spent in the active stage: *W*, it is expressed by its equivalent in terms of retirement time (1 - *L*.)

	L	v_c	v_p	r_c	r_p	π_c	π_p^w	π_p^c
$\Omega(1-L)$	<0							
$P_c(1-L, r_c, \pi_c)$	<0			>0		<0		
$R_c(v_c, r_c, \pi_c)$		>0		>0		<0		
$P_p(1-L, r_p, \pi_p^w, \pi_p^c)$	<0				>0		<0	<0
$R_p(v_p, r_p, \pi_p^w, \pi_p^c)$			>0		>0		<0	<0

SOURCE: PRODUCED BY AMAFORE.

Appendix II
Solution to the problem of individual maximisation

$$\max_{\{C_a, C_r, L, v_c, v_p\}} U(C_a, C_r, L) = u(C_a) + \beta u(C_r) + \delta u(L) \quad \text{(A1)}$$

Subject to:

$$\Omega(W) = C_a + v_c + v_p \quad \text{(A2)}$$

$$P_c(W, r_c, \pi_c) + P_p(W, r_p, \pi_p^w, \pi_p^c) + R_c(v_c, r_c, \pi_c) + R_p(v_p, r_p, \pi_p^w, \pi_p^c) + S_{nc} = C_r \quad \text{(A3)}$$

$$W + L = 1 \quad \text{(A4)}$$

$$C_a, C_r, L, v_c, v_p \geq 0 \quad \text{(A5)}$$

Equation (A4) is used and is dummied out throughout the model to express the problem only in terms of the length of time lived in retirement (L). We constructed the Lagrangian equation:

$$\begin{aligned}\mathcal{L}\{C_a, C_r, L, v_c, v_p, \lambda_1, \lambda_2\} = {} & u(C_a) + \beta u(C_r) + \delta u(L) \\ & + \lambda_1[\Omega(1-L) - C_a - v_c - v_p] \\ & + \lambda_2[P_c(1-L, r_c, \pi_c) + P_p(1-L, r_p, \pi_p^w, \pi_p^c) + S_{nc} - C_r] \quad \text{(A6)}\end{aligned}$$

The first order conditions of the Langrangian equation were obtained:

$$C_a: \quad u'(C_a) - \lambda_1 = 0 \quad \text{(A7)}$$

$$C_r: \quad \beta u'(C_r) - \lambda_2 = 0 \quad \text{(A8)}$$

$$\begin{aligned}L: \quad & \delta u'(L) + \lambda_1 \Omega'(1-L)(-1) + \lambda_2\{P'_{1,c}(1-L, r_c, \pi_c)(-1) \\ & + P'_{1,p}(1-L, r_p, \pi_p^w, \pi_p^c)(-1)\} = 0 \quad \text{(A9)}\end{aligned}$$

$$v_c: \quad -\lambda_1 + \lambda_2 R'_{2,c}(1-L, v_c, r_c, \pi_c) = 0 \quad \text{(A10)}$$

$$\upsilon_p : \quad -\lambda_1 + \lambda_2 R'_{2,p}\left(1 - L, \upsilon_p, r_p, \pi_p^w, \pi_p^c\right) = 0 \tag{A11}$$

$$\lambda_1 : \quad \Omega(1 - L) - C_a - \upsilon_c - \upsilon_p = 0 \tag{A12}$$

$$\lambda_2 : \quad P_c(1 - L, r_c, \pi_c) + P_p\left(1 - L, r_p, \pi_p^w, \pi_p^c\right) + R_c(\upsilon_c, r_c, \pi_c) + R_p\left(\upsilon_p, r_p, \pi_p^w, \pi_p^c\right) + S_{nc} - C_r = 0 \tag{A13}$$

The optimum amounts of consumption over time and the best decision as to how much time to spend in retirement will be sought on the basis of these equations. These will depend exclusively on the exogenous variables of the model:

$$C_a^*(\beta, \delta, r_c, r_p, \pi_c, \pi_p^w, \pi_p^c, S_{nc}) \tag{A14}$$

$$C_r^*(\beta, \delta, r_c, r_p, \pi_c, \pi_p^w, \pi_p^c, S_{nc}) \tag{A15}$$

$$L(\beta, \delta, r_c, r_p, \pi_c, \pi_p^w, \pi_p^c, S_{nc}) \tag{A16}$$

$$\upsilon_c^*(\beta, \delta, r_c, r_p, \pi_c, \pi_p^w, \pi_p^c, S_{nc}) \tag{A17}$$

$$\upsilon_p^*(\beta, \delta, r_c, r_p, \pi_c, \pi_p^w, \pi_p^c, S_{nc}) \tag{A18}$$

It is important to underline whether this problem will have an internal solution, in other words $C_a, C_r, L, \upsilon_c, \upsilon_p > 0$, meaning that equations (A7) to (A13) occur equally. Due to the properties of the utility function, we can guarantee that the solution is internal in C_a, C_r, and L, however, in the choice υ_c and υ_p we are looking at a case where voluntary savings simply predominate.

When an individual takes the decision as to which voluntary savings mechanism to use, he/she takes it in the present moment and will make a simple comparison to see which mechanism will give him /her more savings. In the case where $R_c(\upsilon_c, r_c, \pi_c) > R_p\left(\upsilon_p, r_p, \pi_p^w, \pi_p^c\right)$, then the individual will decide to place all his/her voluntary savings in υ_c and $\upsilon_p = 0$, and in the same way, if $R_c(\upsilon_c, r_c, \pi_c) < R_p\left(\upsilon_p, r_p, \pi_p^w, \pi_p^c\right)$ then $\upsilon_c = 0$ and υ_p will see a concentration of all the voluntary savings resulting from the model. When $R_c(\upsilon_c, r_c, \pi_c) = R_p\left(\upsilon_p, r_p, \pi_p^w, \pi_p^c\right)$ a specific situation arises in which the individual is perfectly prepared to save voluntarily in either of the two mechanisms, without distinction, and for this reason the voluntary savings in the model can be deposited in the two schemes in any proportion.

The quotient of (A7) between (A8) and that of the equations (A10) or (A11) create for us the Euler Equation that relates present consumption in the active working stage and consumption in the retirement stage. Without losing the general picture, we shall use the case in which $R_c(\upsilon_c, r_c, \pi_c) > R_p(\upsilon_p, r_p, \pi_p^w, \pi_p^c)$, where the individual's decision is $\upsilon_c = \upsilon_c^*$ and $\upsilon_p = 0$.

$$\frac{u'(C_a)}{u'(C_r)} = \beta R'_{2,c}(\upsilon_c, r_c, \pi_c) \quad \text{if} \quad R_c(\upsilon_c, r_c, \pi_c) > R_p(\upsilon_p, r_p, \pi_p^w, \pi_p^c)$$
$$\frac{u'(C_a)}{u'(C_r)} = \beta R'_{2,p}(\upsilon_p, r_p, \pi_p^w, \pi_p^c) \quad \text{if} \quad R_c(\upsilon_c, r_c, \pi_c) < R_p(\upsilon_p, r_p, \pi_p^w, \pi_p^c) \qquad \text{(A19)}$$

On substituting the equations (A7), (A8) and (A19) in (A9), in equilibrium, we obtain the Euler Equation for the choice of length of retirement and consumption in the active stage, obtaining the following:

$$\frac{u'(L)}{u'(C_a)} = \frac{1}{\delta}\left[\Omega'(1-L) + \frac{1}{R'_{2,c}(\upsilon_c, r_c, \pi_c)}\left[P'_{1,c}(1-L, r_c, \pi_c) + P'_{1,p}(1-L, r_p, \pi_p^w, \pi_p^c)\right]\right]$$

(A20)

Finally, to find out the Euler Equation that relates the length of retirement and consumption in the retirement stage, equations (A7), (A8), (A19) and (A20) are used to obtain the following expression:

$$\frac{u'(L)}{u'(C_r)} = \frac{\beta}{\delta}\left[\Omega'(1-L) R'_{2,c}(\upsilon_c, r_c, \pi_c) + \left[P'_{1,c}(1-L, r_c, \pi_c) + P'_{1,p}(1-L, r_p, \pi_p^w, \pi_p^c)\right]\right]$$

(A21)

Equations (A19), (A20) and (A21) define the rule of relative consumption that should be maintained in each period. These depend on the impatience factors and preference for leisure δ , and also on the growth rates of income, voluntary savings and ECI and PPP pensions.

In order to make it simpler to interpret the three equations mentioned above, we are going to assume the following functional forms for income and for the savings mechanisms in both ECI and PPP.

$$\Omega(W) = W \cdot k \qquad \text{with} \quad k \geq 0 \tag{A22}$$

$$P_c(W, r_c, \pi_c) = W \cdot P_c(r_c, \pi_c) \tag{A23}$$

$$P_p(W, r_p, \pi_p^w, \pi_p^c) = W \cdot P_p(r_p, \pi_p) \tag{A24}$$

$$R_c(v_c, r_c, \pi_c) = v_c \cdot R_c(r_c, \pi_c) \tag{A25}$$

$$R_p(v_p, r_p, \pi_p) = v_p \cdot R_p(r_p, \pi_p) \tag{A26}$$

These comply with the characteristics specified in Appendix I, and that allows us to solve the individual's optimisation problem and reduce equations (A19), (A20) and (A21) to the following expressions:

$$\frac{u'(C_a)}{u'(C_r)} = \beta R'_{2,c}(r_c, \pi_c) \tag{A27}$$

$$\frac{u'(L)}{u'(C_a)} = \frac{1}{\delta}\left[k + \frac{1}{R'_{2,c}(r_c, \pi_c)} \left[P'_{1,c}(r_c, \pi_c) + P'_{1,p}(r_p, \pi_p^w, \pi_p^c) \right] \right] \tag{A28}$$

$$\frac{u'(L)}{u'(C_r)} = \frac{\beta}{\delta}\left[k \cdot R'_{2,c}(r_c, \pi_c) + \left[P'_{1,c}(r_c, \pi_c) + P'_{1,p}(r_p, \pi_p^w, \pi_p^c) \right] \right] \tag{A29}$$

These will prove useful for carrying out comparative statics.

Appendix III

Comparative statics

Idiosyncratic factors of the individual

An increase in the impatience factor β.

- In the equation (A27), when $\beta \rightarrow 1$ the individual becomes more patient, meaning that the subjective discount rate of the individual gradually becomes lower than that of the market and the individual will transfer units of consumption C_a to consumption C_r in the retirement stage. This occurs in a similar way in equation (A29) meaning that the individual will reduce units of retirement time *L* in order to increase C_r.

An increase in the preference for leisure rate δ.

- In equation (A28), when $\delta \rightarrow 1$ the individual has a stronger preference for leisure, which is found in the left-hand denominator of the equation, giving $u'(L) < u'(C_a)$; where time-consumption in retirement will be greater than consumption in the active stage. Similarly, in equation (A29), the final effect will be an increase in retirement time and a reduction of consumption in the retirement stage C_r.

Market factors

An increase in the rate of return of the Individual Accounts Scheme (ECI).

- If the increase means that $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$ then the individual will decide to dedicate all his/her voluntary savings to the ECI and dedicate $v_p = 0$ voluntary savings to the PPP scheme.
- If $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$, then an increase of r_c produces an increase in consumption C_r in (A27) and (A29) and in (A28) greater consumption of C_a, provided that $P'_{1,c}(r_c,\pi_c) + P'_{1,p}(r_p,\pi_p^w,\pi_p^c) > R'_{2,c}(r_c,\pi_c)$.
- If $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$, then (A27) is unaffected, since version 2 of the solution to the problem is used (see equation A19 in Appendix II). In equation (A28) and (A29) there will be an increase in C_a and C_r respectively.

An increase in the rate of return of the Private Pension Plan (PPP).

- If the increase means that $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$ then the individual will decide to dedicate all his/her voluntary savings to PPP and dedicate $v_c = 0$ voluntary savings to the ECI scheme.
- If $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$, then an increase in r_p produces an increase in consumption C_r in (A27) and (A29) and in (A28) greater consumption of C_a , while $P'_{1,c}(r_c,\pi_c) + P'_{1,p}(r_p,\pi_p^w,\pi_p^c) > R'_{2,p}(v_p,r_p,\pi_p^w,\pi_p^c)$.
- If $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$, then nothing happens in (A27) because version 1 of the solution to the problem is used (see equation A19 in Appendix II). In equations (A28) and (A29) there is an increase in C_a and C_r respectively.

Fiscal Policy

In the case of Fiscal Policy, the Government intervenes by means of three net taxes or deductions: π_c for the ECI, π_p^w and π_p^c for the PPP. In the case of the private plans, there are taxes or deductions that affect both individuals and the company that offers them as such.

Increase in tax π_c of the ECI.

- If $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$, then there is an increase in the allocation of retirement time *L* in (A28) and A (29), always provided that in (A28) $P'_{1,c}(r_c,\pi_c) + P'_{1,p}(r_p,\pi_p^w,\pi_p^c) > R'_{2,c}(r_c,\pi_c)$. In equation (A27) there is an increase in consumption C_a .
- If $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$, nothing happens in (A27) because version 2 of the solution of the Lagrangian equation is used (see equation A19 of Appendix II), in equations (A28) and (A29) there is an increase in the time-consumption in retirement *L*.

Net increase of the sum of taxes π_p^w and π_p^c in the PPP scheme.

- If $R_c(r_c,\pi_c) < R_p(r_p,\pi_p^w,\pi_p^c)$, then there is an increase in the time allocated to retirement *L* in (A28) and (A29), provided that in (A28) $P'_{1,c}(r_c,\pi_c) + P'_{1,p}(r_p,\pi_p^w,\pi_p^c) > R'_{2,c}(r_p,\pi_p^w,\pi_p^c)$. In equation (A27) there is an increase in consumption C_a.
- If $R_c(r_c,\pi_c) > R_p(r_p,\pi_p^w,\pi_p^c)$, nothing happens in (A27) because version 1 of the solution of the Lagrangian equation is used (see equation A19 of Appendix II), in equations (A28) and (A29) there is an increase in the time-consumption in retirement *L*.

CO-EXISTENCE: COMPLEMENTARITY OR ARBITRAGE?

JOHN ASHCROFT[1]

1 *By background, John Ashcroft is an accountant with over 20 years' experience in the UK National Audit Office, latterly leading value for money studies of government regulation. He is an independent consultant on pensions regulation and supervision undertaking work for governmental bodies such as the World Bank, the Organisation for Economic Co-operation and Development (OECD) and the European Union. John was a senior official in the UK Pensions Regulator (and its predecessor body) from 2003 to January 2008, including Head of Strategy during the formative period after the Regulator's creation. He was at the same time President of the International Organisation of Pension Supervisors (IOPS) from its foundation in 2004.*

In the following comments I want to give you a few observations coming out of my experience providing advice on the introduction of risk-based supervision of pensions in various countries.

When introducing risk-based supervision, everyone says: "…*risk-based supervision is a good thing*...". Not so many people fully understand risk-based supervision, and that is one of the issues. Therefore, a key part of my work is ensuring that there is a full understanding of this approach and, particularly, that risk-based supervision must focus on the key risks of the pension system in a given country. Even within the control of the supervisor, those objectives are still relevant.

I am currently involved in a work with the World Bank, developing an outcome-based assessment framework, and we have identified five key ultimate outcomes of the supervision of pension systems: efficiency, sustainability, coverage, adequacy and security. Those are supported by a larger number of key features, which the evidence shows help support the delivery of those outcomes. When looking at the work of supervisors, quite often there is a very strong focus on security, at least for understandable reasons, but perhaps a rather less than necessary focus on the other outcomes, partly because they are less within the control of the supervisor. But the trade-offs between these outcomes are still very relevant. I will try to illustrate some of the trade-offs between security and coverage.

I will start with a story that has some relevance to a system with multiple pillars. Coexistence: is it complementarity or arbitrage? You could call it the clash of the pillars in a multi-pillar system. We were working in one country in Latin America where one of the big issues in discussion with the supervisor was the high level of avoidance of contributions to the funded-pension system. As in many countries, there was a common collection of contributions to the Pillar 1 (the state system) and the Pillar 2 (the funded-pension system). These contributions, taken together and added on various other social contributions, come to over 30% of salary, which provides a strong incentive for people to avoid making the contributions if they do not consider them to be worthwhile. We were discussing various reasons why, in this country, 50% of workers were having no contributions made for them. At the end of our discussion, our interpreter (working in the less formal private sector of the economy) came up and said:"…*Well, I do not make contributions to the pension system. No one I know who works in the private sector makes contributions to that system; we know that the Pillar 1 is financially unsustainable, and the contributions to Pillar 2 are too small to give us an adequate pension. Anyway, if we contribute to Pillar 2, we also have to contribute to the Pillar 1. So instead we prefer to buy a pension product on the market…".*

The interesting thing about these pension products is that they are not regulated or supervised as part of the formal pension regulations. So there is an informal Pillar 3 that has the big advantage, in terms of competition, that does not have to bear any of the regulation and supervision of the formal Pillar 1 and Pillar 2. So there is a regulatory arbitrage in that direction.

There is also a regulatory arbitrage from the Pillar 1. First, this Pillar 1 is crowding-out any space for increasing the Pillar 2, so that it can deliver an adequate pension. Second, the promises made in the Pillar 1 probably are not regulated, and in reality are over-promises that cannot be funded sustainably in the long term, and that is bringing discredit on the pension system and is again working as an arbitrage against the Pillar 2.

If the system as a whole needs to be sustainable, the 3 pillars need to be brought into balance, and there is a question to be asked. The regulatory supervisory scheme for Pension Fund Administrators (AFPs) is very strong, and in many ways is an excellent system. Being a consultant, I can always see improvements, so it is a strong system. But what is the point of building such a strong private fully-funded pension system when it is being arbitraged by other parts of the pension system which do not have that strength?

My other example comes from the UK, with some interesting lessons for the pension systems operating in Latin America and Eastern Europe. Joanne Segars already mentioned the introduction of auto-enrolment, which is designed to reverse the long-term decline in pension coverage. Before it was introduced, occupational pension coverage had dropped to below 50% of the working population. The traditional approach of employers providing pension benefits that employees valued had been in decline. Employers were making offerings that were perceived as being of less value, and so the government determined to reverse this problem by phasing in auto-enrolment. This approach has been immensely successfuly. There are already over 3 million new affiliates currently, and the phasing in timetable has another three years to run. Although people can opt out, currently only around 10% are opting out. I would say that one reason for the success has been that the traditional employer link has not been broken, so the choice of a pension fund is not made generally by the individual affiliate, but by the employer, which greatly reduces the scope for marketing abuses, and does provide in many cases a more intelligent procurement of the pension products by employers who have more market power.

We have seen some interesting things in terms of efficiency. The research underpinning the drivers of desirable pension outcomes that I referred to earlier shows that the big drivers of efficiency are scale, governance and charges. The introduction of auto-enrolment has actually had beneficial effects on all of those. We have seen, instead of a large number of relatively small pension funds, a great concentration in the market, as around 10 providers have been focusing on the market for employers who do not already have pension funds, or who do not want their newly enrolled employees to go into an existing pension fund. That is helping to deliver greater efficiency.

We have seen improvements in governance, interestingly driven in a large part by the establishment of a government-sponsored pension fund (National Employment Savings Trust, NEST), intended to drive good practices in the market as well as providing a default for any employer who cannot find any other provider. NEST, unlike any other provider, must take any employer who comes to them. This Trust has introduced an innovative investment approach, with target-date default funds with objectives aligned to the objectives of members - this is being increasingly emulated across the market. We have also seen providers coming from the insurance sector with a different regulatory regime to the traditional trust-based pension funds, introducing more independent governance arrangements, in the form of master trust arrangements.

Also, we have seen a reduction in the charges levied by the pension funds targeting the new auto-enrolment market - to around 50-75 basis points annual management charge. NEST was set up with the intention of aiming charges for around or below 50 basis points, and the whole market seems to have moved towards this goal. The interesting thing, is that those improvements have been achieved without any centralization of collections or administration, without any imposition of centralized benchmark portfolios, but by more subtle approaches which have steered the market. This seems to be a much safer approach than seeking to impose efficiency through centralized arrangements and intervention in the management of pension funds, because the political risk entailed by Government intervention has recently proved itself to be one of the biggest risks to the funded-pension system.

COEXISTENCE OF ALTERNATIVE CONTRIBUTORY PENSION SYSTEMS

DIEGO VALERO[1]

1 *Diego Valero has a Doctorate in Economics and Actuarial Studies from the University of Barcelona, Spain. He has a Diploma in Higher Corporate Management from the IESE Business School, Spain. He is also Honorary President of the 2008 MBA and Executive MBA class from the ICADE Business School, Spain. He is currently a lecturer at the University of Barcelona, where he has taught classes on actuarial statistics and the economics of social security, in addition to having directed the Master's in Social Security course at that university. In addition to his teaching career, he has wide experience in the business world. He is co-founder and president of Novaster, a leading pension consultancy firm in Spain and Latin America, providing advice on pensions, investments and risks. He has been Executive Vice-President of the Pension Fund Administrator 'Camino', in the Dominican Republic, and also a member of various advisory and editorial councils. He was President of the Spanish Pension Consultants Organisation (OCOPEN). He has written several books and over a hundred articles, and has appeared on repeated occasions before the Parliamentary Commission of the Toledo Pact for the reform of pensions in Spain. He translated the books of Peter Diamond (Nobel Prize for Economics 2010) and Nicholas Barr "La reforma necesaria. El futuro de las pensiones". His latest published work is "Planes de Pensiones en Latinoamérica: Una aplicación a la República Dominicana".*

Complementarity of pension systems in Europe

Before beginning with my comments and views on the coexistence of alternative contributory pension systems, I should like to underline at least three basic ideas. First, the success or difficulty experienced by a pension system depends not so much on the instrument through which it is put in place, but rather on the demographic and economic bases on which that pension system has been developed. Secondly, looking at pension systems from a holistic point of view, social security saving in the context of companies (or the so-called complementary pension plans) is called to play an important part. And thirdly, we still have a problem concerning the drawdown processes or payment of benefits and this is unresolved, as far as I can see.

Pension systems in Europe have been running for many years and they were set up under basic suppositions that are very different from those of today. At the end of the 19th century, what has come to be called the first social security system in the world was created in Germany and the age of retirement suggested at that time was 65 years. Now, 130 years later, that age generally remains the same. And things have changed. It is therefore fundamentally important to carry out an on-going analysis of whether those basic suppositions are still useful and suitable for the purposes that society has set itself. It makes no difference whether the system is based on pay-as-you-go or individual accounts. In systems with individual accounts the problem appears in the substitution rate, in whether the system is sufficient. In the pay-as-you-go systems, the problem emerges on the side of sustainability, because of the fiscal deficits that are being produced. The problems therefore do not arise from the instrument, but from the design.

Fully-funded and pay-as-you-go systems are simply two ways of doing things, and their management can be public or private (see Table Nº 1), but I want to insist that the problem does not lie in the instrument. The problem arises because of the way society has evolved in all its aspects, which implies the need to have dynamic (not static) equations in the pension systems so that their key parameters can be modified accordingly.

TABLE N° 1

MANAGEMENT VS FUNDING	CAPITALISATION	PAY-AS-YOU-GO
PUBLIC MANAGEMENT	RESERVE FUNDS SECOND PILLAR IN SOME COUNTRIES (SWEDEN, UK)	BASIC SYSTEMS IN WESTERN EUROPE AND USA
PRIVATE MANAGEMENT	BASIC SYSTEMS IN LATIN AMERICA, EASTERN EUROPE AND ASIA COMPLEMENTARY SYSTEMS IN EUROPE AND USA	SOME FRENCH SCHEMES

SOURCE: THE AUTHOR.

In Europe, the so-called notional defined contribution systems are also being developed, evolving from the traditional pay-as-you-go systems. There are also reserve funds in the world that are pure capitalisation. In some countries, such as Canada, they work impressively well, but in others they do not function so smoothly. Apart from the systems listed above, there is also the necessary channel of complementation through the social security savings systems (corporate or individual).

Pensions in Europe

In Europe there is a series of circumstances that I wish to point to, some of which are undoubtedly beginning to be duplicated already in Latin America, especially those concerned with demographic evolution. Experts in demographics say that the ageing of the population is a sign of progress and economic development. Ageing in itself is not a problem; on the contrary we are all happy to be able to live longer. What is a problem is that the pension systems are not responding to that ageing.

Traditionally, what we have had in Europe are parametric reforms to the pay-as-you-go systems, and progress is being made on adjusting the age of retirement. Many countries have already moved beyond 65 years or are in process of doing so, but there is still much room for improvement. There is great concern to achieve fiscal sustainability for those systems, which is being managed on the basis of cutting back benefits and introducing what are called "sustainability factors". However, there is little concern about whether those systems are suitable and sufficient, in other words, whether they are really useful for the final goal, which is that every person can retire with a pension that allows him or her to continue living with dignity.

Voluntary social security saving in companies (corporate APV) and the development of complementary systems

European experience in complementary and voluntary pension systems is a very long one. In some cases those systems have been running for over a century. They already have plenty of life and experience. The support of these systems, which must of necessity be complementary to the public systems and not a substitute for them, is vital, due to the impetus and relief that they can give to the basic public pension systems. These systems undoubtedly constitute one of the elements that can help us achieve a global pension system that makes it possible to live out the future with a certain amount of peace of mind.

The States' interest in the development of complementary systems lies fundamentally in:

(i) Making it easier for global pensions to come up to expectations.
(ii) Encouraging saving among workers with lower wages.
(iii) Stepping up saving in the economy.
(iv) Creating a source of fiscal income when the population pyramid turns upside-down.

Most of the countries in the Organisation for Economic Co-operation and Development (OECD) have promoted and developed complementary pension systems, to such an extent that these currently represent 75.5% of the GDP.

It is worth emphasising that two-thirds of the OECD countries have public pensions of less than 60% and the other third is reforming its systems. In that context, all the international recommendations suggest fostering the development of corporate pension saving.

How can pension coverage be increased through corporate APV? This question has met with a variety of responses in international experience, of which mainly three are of key importance. The first consists in making those systems compulsory, because in that way they obviously develop. Countries that have applied this approach include Norway, Denmark, Germany, the Netherlands and Italy.

The second approach is based on what is known as "soft compulsion" (pseudo-compulsory systems), found in the United States, Italy, Ireland, Sweden and New Zealand, for example, and recently in the United Kingdom, using the auto-enrolment system. This is formulated in such a way that the systems are not compulsory for the worker, but the company is obliged to offer them, and the workers decide whether or not to be included in them.

The third approach to development lies in giving financial and tax incentives. Obviously those incentives have to be solid if they are to achieve their objective. In Spain, for example, these incentives have not worked, because they have not been sufficient to achieve a real expansion of the complementary pension systems.

There are very interesting international references based on these three approaches, as far as the development of the complementary systems is concerned. There are systems that have applied the lessons of behavioural economics, such as New Zealand's system of saving for pensions (*Kiwisaver*) or the British NEST system (*National Employment Savings Trust*). There are also systems of direct incentives for those people who have no ability to save (in Germany, for instance), where the State makes payments and contributions directly, either into the individual account itself, or by means of direct financial incentives. As I already remarked, this can be through compulsory savings, as might be in the case of Sweden (in the public system) or Norway (in the complementary system). Finally, the boost that should be given to developing small and medium-sized companies is very important, with very interesting experiences in Canada and the United States.

Options for development

To summarise the characteristics that I believe these systems must have in order to achieve their best development, the trend should be towards systems that are efficient, simple and cheap. I believe that the pseudo-compulsory and auto-enrolment systems have a long history and may be a very positive element for on-going analysis in countries that wish to incorporate them into their social security systems.

Another important issue lies in the development of draw-down processes. So far, people in Latin America are quite used to having two ways of receiving pensions: through life annuities or programmed withdrawals. However, other formulae do exist. Life annuities are really very unattractive. A lot of work needs to be done on that and on other possibilities, such as deferred incomes and variable life annuities. Above all, more work must be done on the asset side: what the world is lacking are assets that can adequately match or fit the liabilities that are going to exist as from the age of 65, 67 or 70, by guaranteeing appropriate interest rates.

Finally, free individual pension saving, which would appear to be what is known in Europe as the "third pillar", implies additional savings for those people who are capable of saving more. These products should have tax incentives, with enough information and advisory services to allow people to take appropriate decisions.
But the key to voluntary pension saving, in my opinion, lies in extending it to the corporate area, and to do this, work must be done on all the aspects that I have

mentioned briefly, and on many others that will make it possible for companies to offer pension plans to their workers as part of the contractual relationship. Globally, in the world today, they are still at a very early stage of development, but countries that have consolidated these practices see how their pensioners reach levels of retirement pension that enable them to live out their old age with dignity.

PART VII

CONCLUSIONS AND RECOMMENDATIONS

PANEL OF COMMENTARY AND ANALYSIS.
Conductor:
LUIS VALDIVIESO.

Panelists:
ANDRES CASTRO.
GUILLERMO ORTIZ.
MICHEL CANTA.

CONCLUSIONS AND RECOMMENDATIONS

LUIS VALDIVIESO[1] ANDRES CASTRO[2]
GUILLERMO ORTIZ[3] MICHEL CANTA[4]

1 *Luis Valdivieso has a Doctorate in Economics (1977) and a Master's in Economics (1975) from the University of Boston (USA) and a first degree (1971) from the Universidad Católica del Perú. He has more than 35 years' experience in design and implementation of economic policy and finance both local and international, financial planning, project funding, and economic and academic research. Since 2012 he has been President of the Association of Private Pension Fund Administrators (AAFP) of Peru and Vice-President of the International Federation of Private Pension Fund Administrators (FIAP). He has chaired the boards of several financial institutions, both local and international, including the accumulated reserve fund of the public pension fund in Peru and the Corporación Andina de Fomento (CAF), and he was a member of the Governing Body of the World Bank and the Inter-American Development Bank (IDB). At the International Monetary Fund (IMF), where he worked from 1980 to 2008, he participated actively in the design, negotiation and follow-up of various economic programs.*

2 *Andrés Castro has a degree in Civil Engineering from the Universidad de Chile. He began his career at the Banco de Santiago and was an advisor at the United Nations. He held a variety of posts within the Grupo Santander for 18 years. He was Director of Pensions and Insurance for the Southern Cone in the Grupo Santander and was appointed Overall Director for Latin America of that same group in the year 2006. At the end of 2007 he took over as CEO of ING Chile and later took on that responsibility in Uruguay. At the end of 2011, when ING Group's assets were sold to Grupo SURA, he was appointed Executive President of SURA Asset Management Latin America, a holding which includes pension, insurance and mutual fund companies in six countries in the region, where it manages over USD 113 billion in assets and has over 16 million customers.*

1. Introduction by Luis Valdivieso

Given below are comments and views from three panellists, two of them related with the finance and pension industry, and the other belonging to the regulation area. These comments will enable us to gain an overall view of the main conclusions and recommendations that emerge from all the lectures given earlier.

First to present his views is Michel Canta, Deputy Superintendent of AFPs and Insurance in Peru. After that, Andrés Castro, Executive President of SURA Asset Management Latin America, will give us his opinion. And finally we will receive the contribution of Guillermo Ortiz, Chairman of the Board of Directors at Banorte Financial Group, Mexico.

3 *Guillermo Ortiz has a degree in Economics from the Universidad Nacional Autónoma de México and a Master's and Doctorate in Economics from the University of Stanford, U.S.A. He is currently Chairman of the Board of Directors of Grupo Financiero Banorte, Mexico. He is also a member of the Group of Thirty, the Council of the Center for Financial Stability, at the SWIFT Institute and the Globalization and Monetary Policy Institute of the Federal Reserve of Dallas, U.S.A. and has occupied other very important positions in several institutions, such as Governor of the Bank of Mexico between 1998 and 2009 and Secretary of Finance and Public Credit between 1994 and 1997.*

4 *Michel Canta has a Doctorate in Economics from McGill University in Montreal, Canada, where he also previously obtained his Master's in Economic Policy. He currently works as Deputy Superintendent of AFPs and Insurance at the Superintendence of Banking, Insurance and AFPs (SBS) in Peru, an institution where he had worked for over 14 years as Head of the Economic Research Department. He has fulfilled the role of President and Director of the National Commission for the Supervision of Businesses and Securities (CONASEV) in Peru, having a wide knowledge of the standards, policies and procedures that govern both the financial system and the Peruvian capital market. He has also been external consultant of the International Monetary Fund (IMF) and the World Bank on issues of banking supervision for certain Superintendences in the Latin American and Caribbean Region, combining his professional activities with teaching at the Universidad del Pacífico and the Universidad Católica del Perú..*

There have been important challenges for the pension systems in the region. In the case of Peru, there has been a lot of questioning lately of both the global architecture of the pension system and the industrial organisation of the Private Pension System (SPP). There has also been definite questioning of the paradigm of financial education in the whole Latin American region, as in other parts of the world. I believe it is very important to cover these issues in the comments and conclusions

A series of specific measures has also been taken to improve the operation and strengthen the foundations of the private pension systems, a core issue that has been debated in this and other forums.

We have looked at various issues in the area of social security coverage. In that sense, the architecture of the pension system is being questioned by the Inter-American Development Bank (IDB) although efforts have been made in various countries to improve this problem area.

As regards risks, we have seen how important it is to adapt to the worker's life cycle, a challenge offered to us by the need to choose an appropriate benchmark for measuring the way pension fund investments perform.

In matters of efficiency, competition and administration costs, there has been further questioning of the industry's organisation, some people alluding to the Swedish model of blind accounts and the centralisation of operating processes. That model is presented as a challenge and a way of increasing efficiency in the pension systems.

We have also seen the gradually growing importance - and in the case of Chile, the imminent relevance - of concentrating on the replacement rates that the pension systems will generate. Certainly, it has become increasingly obvious that the expectation (whether due to persuasion or a simple mistake) of wanting to obtain a replacement rate that is higher than the pension system can generate, has turned out to be one of the key challenges for current discussion.

A further point analysed is the importance for the private pension funds of investing the pension resources in companies that have good corporate governance practices, this being a point that will become increasingly relevant in the decisions taken by institutional investors of this type, both for the good management of the investments and the fiduciary mandate imposed by the law, and for the image given to the member.

Finally, we have seen the importance of analysing and being aware of the pension programs that are running parallel to the private individually-funded systems.

The tendency emerging from Europe is to maintain a pay-as-you-go pension system, which is undoubtedly going to require massive financial resources to support a system that is, *de facto*, unsustainable. That tendency is certainly going to open the way for a private pension system and we have looked at different alternatives.

II. Section of questions, answers and comments

Given the wealth of information and experiences revealed here, and the alternatives and solutions suggested, some generic questions have been put to the panellists, as shown below.

1. ***Luis Valdivieso: What are the main challenges posed by the problems that have been described? What is the right approach for confronting those challenges?***

Answers:

Michel Canta

As Luis Valdivieso rightly points out, many challenges and insights have been brought to our attention. I would mainly pick out a couple of challenges that have stuck in my mind, and there are various thorny problems and points among them. The first is the challenge of pension coverage, in other words, the challenge of reaching a position in which more people are covered by the pension systems. But that challenge is conditional on a framework of pension system credibility, which takes us back to the importance of ensuring that those systems achieve greater credibility in terms of their relationship with the member, regardless of whether they are public or private. And the second challenge is therefore that of pension education, of how to find a friendly way to reduce the distance between the pension systems and the member.

With the experience that we have had in Peru, which is relatively recent in the Private Pension System (SPP), it often looks as if its positive results have been over-dimensioned. When retirement comes round, people see that the pensions they receive are not necessarily the pensions that they think they were promised them in an individually-funded system. However, there is a series of factors that have to do mainly with pension coverage and contribution density, which mean that pensions do not come up to people's expectations.

How can we enable people to have access to worthwhile pensions? How can we communicate the real situation to people? How can we make people's pension expectations fair? For a pension result to be *perceived* as worthwhile, it is necessary to tell workers four things: in the first place, that being covered by a pension system is an advantage; coverage is an important matter that cannot be left aside. In the second place, it is necessary to have a continuous contribution rate, so there must be supervision of those who deduct contributions but do not pay them in, to ensure that the contributed funds do reach the individual funding accounts. In the third place, they need to know that there is a financial or investment risk involved in investing the pension funds, which (like the yield) has to be measured in the long term; and in the fourth place, the management of their funds is in the hands of professionals who have a serious duty as trustees, who are concerned to give them an appropriate service and offer them the best possible alternatives when they reach retirement.

By way of an anecdote, I can tell you that in Peru, recently, there has been discussion about basic things, such as whether people are living more or living less. But we have already realised that people are living more. We all know that the trend is for people to live longer every year. So if we do not have adequate coverage and contribution rate, we are not going to be able to cope with that longevity risk in the future. People therefore need to understand that they will live longer, and will have to contribute in order to have an appropriate fund for an appropriate coverage. Therefore, joining a pension system is an important decision that must not be taken lightly.

I mention coverage, because generally our systems, especially in Peru, have been based on coverage by decree. In 2013 we had a debate on extending coverage by decree, in other words, attempting to draw independent workers or workers in micro and small businesses into the market. But it may be necessary to make that compulsory, because in an economy where informality is at high levels, achieving coverage by auto-enrolment is somewhat complicated. On average, people are always going to prefer having their money in the short term rather than saving for the long term, because they do not see the benefits of saving at long term and believe they have more benefits in the short term. However, this policy of coverage expansion has to be designed according to the real situation of the countries and their labour markets, to make it attractive, so that it complements the state´s decision to oblige more people to be protected when they retire.

All the messages have therefore to be put across in a simple and didactic manner, so that people understand the benefits that the system offers, and the fact that it is good to have pension coverage, that it is fitting to have insurance for the future because of longevity risk, in order to be able to enjoy a more contented old age with appropriate income.

Guillermo Ortiz

I shall begin by telling a story.

In 1997, when I was in the Mexican Treasury Department as Treasury Minister, we had just gone through the 1995 crisis. The pensions issue was something that had always interested me enormously. At the beginning of 1990 I visited Chile several times to look at the AFPs and in 1997 the then President of the Republic, Ernesto Zedillo, decided to bring in a pension system with defined contributions in Mexico. After going over the matter several times and having been to Singapore as well, the proposal that I put to former President Zedillo was to make a system of the Singapore type: just one single Retirement Fund Administrator (AFORE) to manage pensions. And he said "… *right then, put the idea into practice*…". So I thought then that the only institution capable of managing a single pension system in a country like Mexico was the Central Bank of Mexico. My predecessor, Miguel Mancera, told me that it was quite impossible; that the Bank of Mexico could not get itself involved in such a business, and with good reason. Imagine the political issues involved. So we decided to launch a pension system similar to the Chilean one. Now the costs involved in starting that system up were astronomic: in the first years, well over half the returns were dedicated to funding the start-up costs of the individually-funded system.

I tell this story because the conclusion reached by Professor Diego Valero is quite true: the instrument is not what really matters. What really matters are the bases on which the system is built.

In the case of our countries in Latin America, although a system like that of Singapore would probably have been more efficient from the conceptual point of view, for Mexico at least it was a system that was politically non-viable. Who was going to manage this Singapore-style system? How were they going to manage it? It would, let us say, have been very appetising political booty.

As regards the issue of pension coverage, I believe it is a crucial issue. I agree that in the case of Latin America, precisely because of the characteristics of society, making enrolment mandatory is almost indispensable. In the Mexican case, the pension program managed by the AFORES is the largest, and the one that has the highest degree of development, but there are still very considerable numbers of independent workers who have regular incomes but are not enrolled formally in the system. And in the Mexican case, the enrolment of this group of workers would mean the entry of around 4 million new members.

As far as financial education is concerned, I believe it is fundamental, but there I am more sceptical. All the efforts that have been made in Mexico, at least in the area of financial education, have had very limited success. And that is also true in other countries. It is not only a question of the pension issue. Even in developed countries, when attempts have been made to include subjects of financial education in the formal education curriculum, in the end there is very little difference in the ratings of those that have taught formal financial education courses and those that have not. In the case of Mexico and other countries in the Latin American region, this is a cultural issue that we will have to struggle with for years. To be able to make people really aware of the importance of all these matters is a long-term task.

Andrés Castro

I have seen two types of challenge. One of them has to do with industrial risk. Presentations were already being given about industry challenges at FIAP meetings five or ten years also, and they still exist today, even though the industry has advanced a great deal.

I can tell a story that has to do with these industrial risks. As a company, we have just placed a bond in the United States and European markets. Since it was a bond, and bond-holders normally concentrate on risks, we had to refer to these and run over them. In the view of these analysts and investors, the summary of the risks that came up in those conversations showed them to be in line with what has been mentioned. The industry has made good progress in terms of the risks of efficiency, the challenges concerning the return achieved by the savings that are invested, and the challenges of productive competition. I believe that perhaps the area with most shortcomings is productive competition, because when we ask about the dynamics of the relationships between members, workers and clients and the industry, the clear conclusion is that we are still in a very basic state.

Apart from the industrial risks, I can see another issue which is perhaps more relevant and involves a higher risk. It is the challenge of looking beyond the defined contribution system, beyond the AFP system, and seeing the problem of pensions. Obviously, the countries in Latin America have a reality that will have to be faced by any system that is implemented. The first characteristic of that reality is informality. Informality is inherent to the countries' economic development. If one looks at formality rates in Latin America, they are around 40%-50% on average, lower than in developed countries where they reach 90%. Perhaps it is unrealistic to think of building pensions with defined-contribution systems for situations such as ours in terms of formality. It seems to me that looking beyond the defined-contribution systems in the region enables us to be more in tune with those facing this social risk, where we have to know how to put forward solutions from the point of view of public pension policy for all workers. This is an extremely important issue, because we might simply stay within the dynamics of the industry, but clearly we are part of a scheme that has to work. Today we have to deal with informality of 40% and we must find a solution to this problem, perhaps by means of a first basic solidarity pillar. The AFP system itself will most certainly continue to be the major provider of pension solutions through a third voluntary pillar. That is our reality today, but we are going to be moving on, because we hope that our countries will continue to grow. Probably, in 20 or 30 years' time, we are going to have *per capita* income like that of the developed countries. And certainly we shall eventually become formal countries. So today we have a great opportunity to influence that public pension policy, and move on, learning from the situation in the European countries, which are facing huge challenges of fiscal sustainability for their pension systems.

We need to do more about the risk of how to participate in public policy and therefore in the fundamental sustainability of our industry and of the social security system as a whole. This is a major mandate for the future, in the sense that we have to learn from experiences but at the same time set our own definitions. Just as the ILO defines a target replacement rate, so we should define one or more replacement rates for the pension systems in Latin America. We have to be capable of establishing a common language for our systems.

2. ***Luis Valdivieso: "We have seen that interest-rates have been falling worldwide, and this has quite an adverse effect on the industry. What is your view on what is happening in the international financial world for the medium term? How could this affect the pension systems?***

Guillermo Ortiz

We are in a period without historical precedents. Not even during the great depression did we have, let us say, a period of 6 years in which the reference interest rate of the most important central banks in the world was close to zero.

When the financial crisis blew up in 2007/2008, where a situation like that of the great depression in the 1930s occurred again, the governments of various countries had recourse to a greater level of public debt in order to halt the steep fall in private demand. That response was probably the best, but it brought collateral consequences. So we are now in completely unknown territory.

What does the above mean for the future? It means that we do not know what the new "normal" is going to be. I am going to give you a very concrete example. In the United States, the historic reference rate of the Federal Reserve System (FED) has been around 4% nominal. This rate obviously depends on the growth potential of the economy, among other parameters. What is the new "normal"? Nobody knows.

What we do know is that the United States is the country that is getting back to normal most quickly, and is the country where the interest rates will probably rise before those of other countries. In Europe we are facing a long cooling period, with a relatively high probability that interest rates will remain low for a long period of time. In Japan they are in a trap where, although they have been successful in terms of the depreciation of the yen, there is an issue with inflation of assets which has resulted in their apparently coming out of deflation, without having emphasised the fundamental problem, which is the ageing of the population.

In this environment, it is extremely complicated to make forecasts for the future. What we can state with a high degree of probability is that the nominal and real yields in the international capital markets, and consequently the performance of investments for the future, will be lower than those we have seen previously. This obviously has direct negative implications for one of the basic variables affecting the performance of the individually-funded pension systems, in other words, the expected yields of the pension funds' investments.

3. ***Luis Valdivieso: "We have talked about the importance of having deep capital markets for appropriate risk management. In Peru, a truly extraordinary effort is being made at present to change the regulatory framework of the AFPs' investments, but even if that framework is modified, the fact is that our capital market is not very deep, and we also have restrictions on our exposure to the outside world. What can be done to make more progress on this issue? What do you see as an alternative way out? Is opening up more to the outside world the only option that remains to us to avoid creating a bubble? What actions would you suggest?***

Michel Canta

It is quite true that the financial and capital market are lacking in depth in the countries of the region, and particularly in Peru. They are markets without the ability to generate instruments quickly, or to generate traditional investment alternatives (say, bonds or shares). This is so, because there is stiff competition with other funding alternatives that are cheaper to issue. For example, in the case of bonds there is fierce competition with bank credit. An economy such as the Peruvian one is based very much on bank credit or funding.

Since there is great competition with bank credit, the bond´s ease of substitution and costs of issuance mean that they are less dynamic. So, is there any way of broadening investment alternatives? There is no option for broadening the markets by way of simple capital or debt instruments, unless we integrate the correct markets to make them complementary. This was the aim of signing our inclusion with the Latin American Integrated Market (MILA). By this means, we achieve a much more integrated Latin American market with other economies that are quite similar to our own, but have varying degrees of specialisation. For example, the Peruvian economy is based largely on mining, while the Chilean economy has many commercial instruments and the Colombian economy, many public instruments. And so this integration produces a much broader kind of market, where both the AFPs and other institutional investors can obtain other investment alternatives.

One way, therefore, is to integrate the markets with similar economies, and for that we have the Pacific Alliance project, with Mexico and possibly also with Panama. The other way is also to develop instruments that are very well-developed at international level, such as the instruments of the alternative markets, which concern private equity, hedge funds, infrastructure and real-estate funds, among others, mainly because, with instruments of this type, there is a real possibility of obtaining higher yields than can be generated today by a much more traditional instrument. In the case of Peru, for example, there is an enormous deficit in infrastructure: a lack of highways and hydroelectric plants, so the return on long-term investments of this type becomes very attractive for the pension funds.

The fact of beginning to produce capital, both private and public, has multiplying effects on economic growth and is a good investment alternative because of the yields that it offers. What have we been doing in Peru since the changes in the investment regulations? For example, we have broadened the existing investment limits or generated new limits that are much broader, precisely for this segment of new alternative instruments. (They also have risks, of course, that we have to recognise and manage, but their returns are highly attractive).

Guillermo Ortiz

I want to put in a parenthesis about something that I consider extremely important: the subject of the Pacific Alliance, this attempt at commercial and financial integration between Chile, Colombia, Mexico and Peru. I believe it is the first real attempt at Latin American cooperation that has some force.

In the case of Mexico, public-private investment is now going to double from 4% to 8% of GDP, due to the opening of the energy sector. So I simply want to state that this is quite an important opportunity.

Michel Canta

What we have now with the Pacific Alliance is truly a golden opportunity. The other issue in Peru is the possibility of expanding limits abroad, and we are in agreement about that. However much one may expand limits abroad and put them at 100%, there will always be a kind of "home bias". Administrators are always going to prefer their own markets occasionally rather than overseas markets, because they know them better. But the expansion of the limit gives freedom to go in or out and optimise the investment portfolio at any moment in time. It has disadvantages in terms of monetary policy, or the exchange policy, but it could also be an attractive alternative. I believe that I would tend to opt more for market integration and the creation of alternative investment instruments.

4. ***Luis Valdivieso: "The Grupo SURA is one of the groups that is expanding a lot in Latin America. I would like Andrés Castro to comment about this from the point of view of the Group: How can one achieve greater integration of Latin American markets? What factors would facilitate greater integration and diversification? What would have to be done in order to create more integration between the pension systems of the various countries?***

Andrés Castro

I think that in this first part of integration, we are falling behind the entrepreneurs. Entrepreneurs from the various countries began integration some time ago. In that sense, we are following a trend of natural integration which is occurring in the companies of our region. That is due to a very specific reason of wanting to solve the problems of integration facilities. But we are also looking at our own sphere, pensions, and how to foster labour mobility. One of the problems of labour mobility is precisely the portability of pension schemes. This has been treated in the past, but it seems to me to be a very important aspect of this integration. It has already begun and is not going to stop.

On that same line, it seems to me that the matter of integrating pension funds is fundamental, in order to strengthen the capital markets in each of the countries. We see clearly that the pension funds, if they look at companies or investment opportunities in a region or in countries that grow at twice the rate of the general growth in developed countries, the provision of additional instruments is going to be a good opportunity in terms of yield on the investments. I do not want to say that we should not open the markets too, because I believe that investment must be diversified, but with a bias towards the local, and it seems to me, in that sense, that the region is a great investment opportunity for pension funds in general. In that sense, integration is going to produce greater demand and more liquidity in these markets. I find that this is fundamental, and we already have markets with problems. There are markets that are already under pressure from the pension funds. This is not yet the case in Mexico, but in other markets it is already an issue.

On the matter of pension portability, there need to be prior agreements at government level. In countries with similar pension systems, such as Colombia, Chile, Mexico and Peru, portability is easy. But what happens if we begin to include other countries in the integration that have systems that are not entirely similar? That is where there is a tremendous challenge for advancing in pension portability. So perhaps as part of general integration there should be some kind of homologation of pension systems, so that portability is not a problem.

III. Final comments by Luis Valdivieso

In November 2013, the Peruvian AFPs threw a challenge to the government, consisting of two parts: in the first place, that the government should bring out a list of infrastructure projects in which the AFPs could invest voluntarily, with the condition that they should be profitable and have appropriate mechanisms to ensure repayment (at that time, the AFPs could only invest in debt instruments). The government, taking up the challenge, launched a program of authorisation for public-private associations, for which the AFPs are proposing to expand the infrastructure trust fund: trust fund 1, from USD 400 million to USD 650 million, and trust fund 2 of USD 1,000 million, which would enter not only in debt, but also in other instruments once the regulations are approved.

In the second place, we highlighted the fact that there is very great concern about members' low savings. This reflects an undesirable situation in which employers have made deductions from workers' wages and have not deposited the resources in the individual accounts. In nominal value, the debts or delays in payments are approximately 1.5% of the total funds under management. In present value, those delays amount to 20% of the total funds managed by the AFPs.

I am pleased to announce that we have begun serious conversations with the Peruvian government, since it is the main debtor in this respect (representing about half those debts). We already have a first measurement of the exact, legalised debts and we have entered into conversations with the government to find the way to solve this situation. Because it is definitely the member who needs our attention: it is he/she who has lost yield on his/her funds and, whatever the reason for the delay, this must be solved. The proposal will be a very concrete one in terms of reconciling and recognising the debts, with a repayment structure and mechanisms to avoid these debts reappearing in the future.

This proposal is valid for both the government and the private sector, because both have committed the same type of offence. Peru's Deputy-Minister of Labour has also referred to this subject, stating that they are going to improve the mechanisms for supervising pension contributions. That is very important, because it is another of the aspects that also affects contribution density.

CLOSING LECTURE

CLOSING LECTURE

THOMAS SARGENT[1]

1 *Thomas Sargent has a BA in economics from University of California at Berkeley (June 1964) and a PhD from Harvard University (March 1968). Currently he is professor of Economics and Business at New York University. He is one of the founders of the rational expectations model and the freshwater economics movement. He won the 2011 Nobel Prize in Economic Sciences for his pioneering work in macroeconomics over the last forty years. He holds the W.R. Berkley Professorship of Economics and Business at New York University and is the author of many significant books and articles, including the classic economic textbooks, Macroeconomic Theory and Dynamic Economic Theory.*

Guillermo Ortiz is an old friend of mine and I want to start with a story that will explain the motivation for my talk. In 1981, when we were both youngsters, he was working in research at the Bank of Mexico, having graduated from Stanford a few years earlier. He invited me to give lectures at the Bank for a whole week, so I agreed to do that and we became friends. Toward the end of the week, he took me out to Teotihuacan, a mystical place, site of the Temple of the Sun and the Temple of the Moon. For me, it was a religious experience. We walked up to the top of the Temple of the Sun and sat there for a while, talking. I was pretty quiet and finally Guillermo leaned over to me and said, "I want to ask you a personal question." "OK". "I want to ask you if you believe in rational expectations." I thought for a while and then said, "Yes, I do." That question has kind of haunted me—maybe it has haunted him—ever since.

I want to tell you the sense in which I believe in it; where I think that it should be challenged; and the sense in which it underlies many of the discussions that I have been listening to at this conference. I want to tell you what *rational expectations* really means, because the term is actually used very widely, even, implicitly, in the models that it comes down to, to make sense of some of the issues that we have been talking about. Should you have a publicly-funded pay-as-you-go system? Should you have one at all? Should you have a private system? How are they connected and what are the risks? And even, how do you think about it all?

Since these systems all involve dynamics, they involve time and chance and they involve purposeful people who make decisions recognizing that time and chance exist. So I think that questions about teaching and paternalism and financial education are all going to be connected with *rational expectations*, because that concept is all about decision-making in circumstances of uncertainty, and the way we think about it.

I was very much influenced by a famous physicist who made the following ironic comment: "Physics is not about how the world works; it is about what we physicists can say about how the world works." In my view, the things that economics can say are very limited. There are some big, interesting things about how economies work, but so far economists have not known how to say much about them, so I will try not to cross that line.

What is "*rational expectations*" about? It is an extremely heroic "unrealistic assumption", which is used very widely today. To be precise, it is a kind of communism. It is the idea that, when it comes to forecasting, the future may contain things that are influenced by our behavior today and our expectations about the future. Some examples of this are stock prices, exchange rates, returns on bonds, things to do with investment rates… Almost anything you want to predict is influenced by the fact that other people are trying to predict it too, and that in turn is influenced by other people's beliefs. This kind of reasoning applied to a stock price says that basically it is influenced by the beliefs of everybody who is trading it, so if I wanted to make scientific progress on that, I would need to keep track of the beliefs of a whole set of people, all of which might be different.

So the idea of *rational expectations* was to cut through all that multiplicity of possible beliefs and say, "No, we are going to build models. We are going to pretend." That is what building a model is all about: pretending. When we created *rational expectations,* we said, "We are not going to keep track of heterogeneous beliefs, instead we are going to assume that they are all the same. So the government's views about the future are not going to be any different from those of the people involved in the economy. We are going to put them all on the same footing." The next step is to decide which beliefs we should attribute to them, and we then pretend that they are going to have the best beliefs possible, those implied by the model that has this assumption of communism of beliefs built into it. You will notice that this argument is quite circular, like many arguments in economics. Beliefs influence outcomes, but the nature of outcomes is to influence beliefs, so the whole scientific achievement of *rational expectations* is to figure out how to fit all this together. Notice, however, that this is an extremely "heroic" assumption (-that's a nice way of saying "pretending"-), but one that is widely used, and in terms of working models of social security or the best ways to tax, it is basically the only model being used. Leaders in the behavioral finance field would say that its own models (and other types) are still very much in their infancy and are not yet used to build models of entire systems.

Specifically, the models of the dynamics of monetary and fiscal policy and how they relate to social security systems or how they might replace one another, are all based on *rational expectations*. For that reason, they may be limited in terms of their applicability to some of the questions that we have talked about, such as financial education, which is not an item included in these models. One of the most important models in social security analysis, is the Auerbach and Kotlikoff's 1985 book about social security. That is the book that presents the case for privatized social security systems and why they were better than pay-as-you-go systems. The assumptions incorporated in that book say that we can actually make everybody better off by having a "fully-funded" privatized social security system that benefits a pay-as-you-go system, at least at the beginning.

When that study was made, the authors used several key assumptions, one of which was *rational expectations.* If you take that assumption away, who knows what the conclusion might have been? Then they made another set of assumptions about the way that the economy and demography are put together, the way that productivity is evolving through time, and about the productivity of capital goods, which implies something about the relationship between the rate of return on physical capital and the population's growth-rate. Their assumption, based on lots of empirical work, was that the rate of capital, especially private capital, was productive.

There is a new book by Thomas Piketty. The key point of that book is precisely to find out whether capital is productive. Is the rate of return on capital higher than the rate of growth of the labor force? Piketty turns that on its head. He maintains that it is the source of the increase in inequality that we have seen, and he draws policy implications from that. I will just say that many other people disagree with him on this and think that there are other sources of inequality. Piketty thinks that the high rate of return on capital is a problem, while those who advocate privatized social security systems think that the high rate of return is essential for the success of that kind of system. These assumptions about rates of return are therefore very important.

Coming back to *rational expectations* and the discussion about rates of return and beliefs, I want to raise an unpleasant subject. It is about risk-return tradeoffs and how much we understand them, and about the equity premium puzzle, or equity premium. One reason that we advocate a privatized social security system, where people have their own individual accounts, is actually the democratic idea that rates of return on equity and risky securities have been much higher than rates of return on so-called risk-free securities over long periods of time. This is a pattern that has been replicated over and over again, and the rates of return are surprisingly high. This is the famous equity premium puzzle. What does "surprisingly high" mean? They are surprisingly high in view of what the risks involved in equities seem to be. The compensation received by the people who bear that risk, in terms of extra return for extra variance, seems incredibly high when you think that all that they are doing is bearing risk. Because it is so high, many people in the US did not get involved in the stock market until quite recently. They were simply excluded. So one thing that a privatized system does achieve is to give people who were previously excluded from the stock market the opportunity to gain access to the equity premium, through managed accounts. Until recently, at least in my country (the U.S.), one might have asked why the government did not invest in equity. Well, until the financial crisis, there was a tradition that the Central Bank did not invest in equity, because that was not its job. This may have changed.

Privatized social security wants to take advantage of this equity premium. The question is: to take advantage of it, do you really want to understand why it is there? Most financiers do not worry about the reason why it is there and just try to manage it, but people like Lars Hansen and Eugene Fama and Robert Shiller, who shared the Nobel Prize this year, have devoted much of their lives to trying to understand why it is there. Then they have tried to draw inferences from their answer to that question about many of the education issues that we have been talking about. I recommend listening to Lars Hansen's Nobel Prize lecture, which you can hear online, because he is a very smart man and he confesses that he does not completely understand the explanation for it. He also confesses that he may have to deviate from rational expectations in order to understand that explanation. He is one of the early advocates of *rational expectations*, a person who knows most about how to use it, but he is arguing that it is not enough to explain the equity premium. Maybe this can help us understand some of the issues that we were discussing with regard to financial education.

I am now going to refer to risk-return tradeoffs, the equity premium and what Lars Hansen thinks about it. Here the subject of paternalism is going to come up, even though I am not intending to talk about it. It is unavoidable, once I start listening to Lars Hansen. Lars Hansen goes back to basics when thinking about the equity premium. How do people make decisions in situations of uncertainty or risk? Back to the very basics: what economists, finance people and portfolio managers write down are expected utility models. Those expected utility models have two components: a utility function and a probability distribution over outcomes that should include the expectation factor. Risk-return tradeoffs are all about the following: "You tell me the utility function and the probability distribution, and I can work out the risk-return tradeoffs."

The question that Lars Hansen asks, as an econometrician who has spent a lifetime studying financial probability distributions, is, "Where does that probability distribution come from?" What I say is that I am a communist, by which I mean that I am a *rational expectations* person, therefore we all have the same probability distribution of returns, and it is the correct one. But that is pure theory. Lars is doing empirical work. So where does that probability distribution of returns come from? Lars' point of view on this is very close to that of Fischer Black, namely that sometimes the distributions of returns are extremely hard to estimate. You can have two distributions of returns and two probability distributions, and lots of data, and Lars will tell you that it is very hard to distinguish between the two, so now the question is, which one do you put in the expected utility function? From this point of view, if there are multiple-probability models of some returns, or some phenomena that are hard to distinguish from the data you already have, then heterogeneity of beliefs becomes perfectly plausible and perfectly rational, despite the propaganda saying that *rational expectations* is communist. So you could be in a situation where returns are hard to estimate statistically.

This is going to relate to some of the things that we were talking about yesterday concerning replacement rates. This is what Lars and some of his coworkers have discovered. There are some risks known as long-run risks, about things that occur infrequently: for example, is there a productivity slowdown or not? People in the US took three decades to make up their minds about that, and they were probably wrong even after they had made up their minds. Was there a productivity slowdown? These are matters concerning very low-frequency aspects of returns or growth in the economy, and they are very hard to learn from simply by taking a few observations because they are obscured by noise. So Lars and other people think that they can see these long-run, low-frequency risks that are hard to discern from the data. Whether or not you care about this depends on your utility function. For the kinds of utility functions that we usually use in finance, people care a lot about long-run risks. They do not like them and will pay a high price to avoid them.

Lars' theory about the equity premium involves several components: first, that long-run risks exist, they are hard to measure and it is really difficult to have a dogmatic view about them, but they are really important, because people care a lot about them and they have to be priced. In doing this work, Lars has gone back to a very old distinction. It is a distinction that was in John Maynard Keynes's PhD's thesis. It is called risk and uncertainty, and it is related to questions of financial education. Keynes, writing in 1910, said that when people make financial decisions, they do not manipulate probabilities the way mathematicians tell them to, and he also said that they were right not to do so. He produced some verbal arguments that are quite difficult to understand.

Later on there was a famous economist at the University of Chicago named Frank Knight. He distinguished two different concepts. One was risk, and he defined it in the following way: risk is ignorance described by a well-understood probability distribution. Although the return is unknown, I know that it is normally distributed with mean 0.05 and variance 0.1. He said that there is a worse kind of ignorance, which is the kind of ignorance that fascinates Lars Hansen and fascinated Milton Friedman too. It is this: not knowing the probability distribution.

If we go back to expected utility, what do we need? A utility function and a probability distribution, but we do not know the probability distribution. My friend

Chris Sims says that everyone does know the probability distribution, and if they say that they do not, you can force them to give an answer if you interrogate them enough. That is the Bayesian point of view. A Bayesian like Chris Sims will say: "If you tell me that you don't know the probability distribution, you are just not thinking straight." Well, Keynes and Frank Knight, and various other people in between, have said, "No, there is another kind of thing called uncertainty, which you just don't know. You don't know how to rate its probability." If you work at a central bank, you know about this, because somebody will bring in Model A and say: "This is the way that the economy is put together." If you are a governor of a central bank, I can guarantee that somebody has done this to you. Then somebody will bring in Model B and say, "Model A is not right. Here is Model B. This is "it"." And then somebody brings in Model C. So what do you do if you are the governor of a central bank and you respect all three? They have given you three different models, so where is the probability? What would you do? Ben Bernanke and many other people have written about this. Chris Sims would say, "Think hard and put a probability value on these three models, and you will have just one model." He would insist until you agreed, but people like Lars Hansen would say, "No, because the situation is even worse than that. There are more models out there, and I simply have no idea. There is just a set of models and I cannot even describe the set".

This is what Lars is talking about, so what do you do? I have done a little work with Lars on this. I was explaining to my wife, who is not an economist and says she knows no math but has really good genes. She asked me, "What are you working on?" so I said, "I'm working on how you should make decisions when you don't trust your model." And she said, "I'd be mighty cautious." And that is the message of Lars' Nobel lecture. When there are sets of models, people say, "OK, I'm going to investigate how well my decisions work under every single model there—" We call it min-max. "—I'm going to try to construct bounds on how well I do, because I think nature might not be using my central model but might be using some other model." The Army people do this all the time. They do worst-case analysis, and so do engineers. Engineers and people who send rockets to the moon do not trust their physics, so they build in factors that are constructed by thinking that nature is actually going to use physics differently from the way you do and is going to try to knock your bridge down, and then you try to design a bridge that is going to work well, even if that happens.

As you will notice, the result is that multiple models are on the table. There may be people with different objectives, different utility functions, who seem to be acting as if they believe different probability distributions, so there can be heterogeneous beliefs. You will notice what this does to *rational expectations*: it violates the communism assumption and gives us grounds for heterogeneous beliefs.

That is my position, as I try to struggle through and read some of Lars' writings. As I said, when I was sitting up at the top of the Temple of the Sun with Guillermo Ortiz, Yes, I do believe in rational expectations. Now, as an old person who should be on social security, it is very sad to see that my belief has been challenged and there are now people with heterogeneous beliefs. I now have to go back and look again at a whole series of issues in macroeconomics, such as social security, because my earlier beliefs were heavily influenced by rational expectations. That is where I am at the moment.

I am going to link this back to a few things. I would submit that many of the things that we have been talking about in terms of the risks involved in a social security system, whether set up publicly or privately, have to do with these issues of heterogeneous beliefs. Just to make my case, let me describe a relatively simple thing. It is relatively simple, but if you read the press reports after the release of this year's Nobel Prize, one of the winners – Shiller - was saying, "There are bubbles all over the place and they reflect irrational exuberance". Another – Fama- was saying, "There is no such thing as a bubble. There is no evidence for it." And the third person, Lars Hansen, was saying, "I don't know. You know, it's very hard to decide."

So what was the debate about? Let me just tell you why there was this heterogeneity of beliefs, all of which were credible. Heterogeneity of beliefs does exist, and what they were talking about really was heterogeneity of belief. Let me just tell you about a couple of models of bubbles. Bubbles are an issue that we need to understand. There is one leading model of bubbles, which goes under the name of "irrational exuberance". This is funny, because when you study it, it is in fact a *rational expectations* model, a communism of belief model. Olivier Blanchard, who is now at the International Monetary Fund (IMF), is the author of this and he is completely rational. What he did was show that you can have a bubble that is sure to pop, but nobody knows when it is going to pop. As long as the bubble continues, the expected return will consist of the return if the bubble does not pop, times the probability that the bubble will not pop, times 0 if the bubble does pop. But it is very easy to rig this, so long as the bubble is rising fast enough to compensate you for staying with it. This is therefore a bubble that everybody agrees is a bubble. They are riding it. Nobody is being irrational and it is going to pop. So that is one model of bubbles, which is a *rational expectations* model.

There is another model of bubbles that is based on a deviation from rational expectations. It is based on heterogeneous beliefs and is due to Harrison and Kreps and José Scheinkman. This model is based on the premise that the market consists of optimists and pessimists and that there are short-sales constraints and incomplete markets. People are trading this asset, and when you work it out, because there are these optimists and pessimists, with different ones merging over time, I cannot talk about optimists and pessimists with *rational expectations*. These guys are optimists and pessimists relative to something. So in that model, what can happen is that you can get a bubble to emerge. That is a really interesting model for policymakers, because the more leverage you allow, the worse the bubble. The way you can stop the bubble is to allow more short- selling. This means that if you allow people to trade derivatives on the asset, you can get better outcomes. If you are a regulator, like the European Central Bank (ECB), what should you do about derivatives on Greek debt? Should you let them be traded? Or should you stop them from being traded? And what will this do to outcomes? The model you take, whether it is heterogeneous beliefs or *rational expectations*, is going to matter a lot. This is a really interesting issue.

I am going to say a couple of things about financial education and why it is difficult. Some very wise things were said earlier. With pride or shame, I am going to tell you that I come from a country where a popular survey was carried out, in which adults who had graduated from the American education system were asked this question: What is one quarter divided by one half? And more than 50% of Americans said, "It's a trick question. You can't divide fractions." There are people like that, so talking about present values and risk and return is going to be an uphill struggle, at least in my country. That is one layer of difficulty, but there is another layer, which is the fact that the issues involved are very complicated. I think that this whole area is intrinsically difficult and challenging, and that is very important. I think that there is no substitute for financial education, and I believe that one of the challenges and jobs for people who offer private pensions is to educate. The replacement rate is a wonderful example. The way I heard that discussion went like this: I am just a regular guy, 40 years old, and I'm having a good time, thinking I will get a certain replacement rate, etc. Then somebody from the pension system comes up to me and says, "I have some good news for you and some bad news. The good news is that you thought your real wages were going to rise 1% a year. They're actually going to rise 4% a year." Great! "Another piece of good news is that you thought your life expectancy was 75. It's 95." That's great! "But the bad news is that the replacement rate is going to be lower unless you work for 10 years more." I think the message here is that it is crazy to promise people a replacement rate in that way. I think that people naturally understand that there is a menu of things and that through teaching, people can learn. There are some huge challenges in doing financial education. I wish that people, like the people who ran my university, knew what a present value and a random variable were. Probably many other countries have had experiences like that, too.

I would like to end with the problem of expectations, and it is at the core of both publicly- and privately-mandated systems. One thing that underlies the choice between public and private systems is that this choice is actually quite subtle, and it relates to the matter that I mentioned in connection with Thomas Piketty's book and his rate of return issue, because if you just strip off all the names from things and write down the pure economics of what is going on in social security systems, there are two essential objects. There is government budget constraint all the time, which means an inter-temporal budget constraint that restricts how a government can tax, transfer, pay off its debts, default on its debts, print money, raise inflation, tax, etc. And then there are the budget constraints of private individuals and those, again, are inter-temporal. A big part of this is that inter-temporal constraints reveal the consequences of our choosing whether to work for a longer or shorter time. If you look at social security systems from the point of view of those budget constraints, some things that have very different names look exactly the same.

I will give you one example: a government social security system is a pure tax and transfer scheme. (I am not saying anything new here, but I am leading up to something). I tax some people and immediately give the money to other people. They happen to be of different ages. So I look at how that affects budget constraints. Potentially, it does not affect the government budget constraint at all, because it is a tax. It is a transfer that goes straight through a balanced budget. How does it affect the private agents' budget constraint? Fine. That is one system.

Here is another system without a tax transfer scheme. Instead, there is a scheme where the government issues debt and rolls it over and what happens is that some people buy it, hold it for a while and then sell it. It is exactly the same thing. You look at the consequences on the budget constraints of both the private agents and the government, and they are identical. So there are different policies that are equivalent. If you take this further, you could say, “What difference does it make if there is no social security scheme and no tax transfer scheme, but there are private savings and people who save for a while? They pay no tax, but save for a time and then buy a government bond instead. They hold it for a while and, when they are old, they sell it and live off the returns. That looks very much like the tax and transfer scheme.

Why am I saying all these things? Several people said them earlier but I just want to emphasize the point. You have to look at public and private social security schemes and the government fiscal policy (the so-called fiscal policy rule), all as one package. You can have a government that privatizes the social security scheme and then completely undoes it with the profit of fiscal policy. A great example of a country that has not done that, but has made a comprehensive reform is actually Peru, in the last 25 years. The movement, or at least a partial movement, towards private social security has been accompanied with a fiscal policy that has driven the government deficit net of interest down towards 0 (in my country it is very high), and the government debt-to-GDP ratio down towards 0. That is a telltale sign that Peru has been serious about moving towards a privatized system.

The final thing is sustainability. This is the hardest thing in practical economics and in politics. How do you arrange institutions to sustain good outcomes in a democracy where you cannot commit your successors? In a democracy, you believe that the choices of the future about tax rates, regulations etc. are going to be made by future citizens. What that means is that both a privatized social security system and a public pay-as-you-go social security system are based on a fiction and on faith about expectations, where those expectations have to do with what our successors are going to choose. We believe that our children and grandchildren are going to choose to go along with promises that were made, implicitly or explicitly, by their forebears. This is an old issue. There is a real conflict between ourselves sitting here, designing a social security system that we think is optimal, - one that involves a whole series of promises about the future -, and the future taxpayers and administrators who will have to implement it; a conflict between what we think is best for them and what they are going to think is best for them when the time comes. It is called the time inconsistency problem or the credibility problem. Depending on the way that the system unfolds, it may seem to them that they should not follow through on these promises.

Thomas Jefferson, one of our founding fathers, said, "The current generation should never respect the dead hand of the past. We should always start over." So if everybody is like Thomas Jefferson, both the public system and the private system are under threat. Why is the public system under threat? It is always in the interest of the current young to restart it and to dishonor the promises to the old. The private system has a big pile of assets sitting there, and governments representing certain coalitions might want to grab it. I think that looking for ways to manage these problems creatively is an area of study for both academics and citizens. For me, one of the beautiful things about coming to this conference is the variation across countries, where you see lots of experiments being done. We are going to learn things about what works and what does not work, but just within this region there were social security reforms 20 years ago, some of which stuck and some of which did not. One thing that we are studying is why certain coalitions got together either to dislodge them or make them stick.

Finally, I will just conclude with the concept of paternalism. As soon as we say that financial education is a problem, we are being paternalistic or sounding paternalistic. Or are we? I like to think of it not so much as paternalism, which sounds bad, but more in terms of specialization and delegation. Adam Smith said that this was good. The world is becoming more and more specialized with the division of labor, so some of us know how to do some things well and some of us know how to do others. A big part of financial education is to try to figure out what the affiliate or the customer ought to understand, and how much he ought to understand about what he trusts us to do.

CLOSING SPEECH

CLOSING SPEECH

GIANCARLO GASHA[1]

1 *Giancarlo Gasha is an Economist who graduated from the Universidad del Pacífico, Peru, and has a Master's and PhD in Economics from the University of Pennsylvania, U.S.A. having specialised in International Finance, Macroeconomics and Econometrics. He has over 20 years of work experience in the public, private and multilateral sectors. From September 2013 to the present he has been Deputy-Minister of Economics in Peru. He is also currently Director of the Banco de la Nación, representing the Ministry of Economics and Finance of Peru (MEF), chairing the Audit Committee, and Director of the Military and Police Pension Fund. He has also served as Head of Mission at the International Monetary Fund (IMF) and has been a Consultant at the World Bank. He has over 17 years' teaching experience as principal instructor and teaching assistant at postgraduate and undergraduate levels at the University of Pennsylvania, the Universidad del Pacífico, the IMF and the Central Reserve Bank of Peru.*

At international level, the pension schemes based on individual funding have important features, stemming on the one hand from their being structured as systems of social security in pensions that make it possible to raise the quality of life for members in old age and cover other contingencies during their active working life, and on the other hand from their contribution to the development of the capital market, encouraging dynamic investment, the generation of new financial instruments and the consolidation of long-term investments.

Aware of this importance and after 20 years in operation, we have undertaken and still continue with the reform of the pension system in Peru, playing a very active role in strengthening it. This is being expressed currently in concrete efforts to approve and implement the Law for Reforming the Private Pension System (SPP), which is involved in a progressive process of implementation.

This law has a comprehensive vision with important goals, such as encouraging more competition, promoting an efficient, flexible and timely management of the portfolio and expanding pension coverage.

It was precisely to achieve these goals that the tendering of new members took place in 2012. This resulted in a very considerable reduction in the system's average fees on wages. The mixed fee was also put in place, which enables the aims of the Pension Fund Administrators (AFPs) to be brought into line with those of the members. That has also meant a considerable reduction in the administration fee.

Then, in 2013, the collective insurance for disability, survivorship and funeral expenses was put up to tender, significantly reducing the average level of the insurance premiums, which are now charged equally for all members of the SPP. This tendering has also made it possible to increase levels of coverage in survivorship pensions.

This year, 2014, the regulation of pension fund investments has improved, modifying and setting new limits and sub-limits that are applicable to alternative instruments, to promote investment in innovative instruments, facilitate greater diversification of the portfolios under management and improve their yield adjusted by risk, for each type of fund.

In this context, it is necessary to highlight the measures that were brought in to improve the investment process of the AFPs, enabling them to invest directly without prior authorisation from the Superintendence of Banking, Insurance and AFPs (SBS) in the case of relatively simple instruments. As a complement to this, the Law for Strengthening the Stock Market was enacted in 2013, in order to achieve a developed, liquid, deep, integrated and inclusive market, complying with the highest international standards and allowing pension fund investments to be steered more efficiently towards the local market, so expanding the investment alternatives for the pension funds, to the advantage of future pensions.

Within these important aspects of the law to reform the private system is the expansion of pension coverage. Mandatory contribution with progressive rates is included in this measure for independent/self-employed workers and the workers and directors of small businesses. The purpose of bringing these workers into a pension system is to provide protection for these sectors, enabling then, to save to gain access to a pension and to avoid poverty in old age, in addition to having insurance to cover disability, survivorship and health.

On the other hand, another aspect that is no less important is the centralisation of the AFPs' operating processes. The aim of this is to reduce operating costs and allow the AFPs to concentrate their efforts on producing higher yield for the pension funds under their management.

The implementation of the law of reform continues, and for the State it is also necessary to face up to the following challenges:

First, it is absolutely essential to formulate and implement measures leading to the reduction of the high level of informality in our country. Given that the social security system is based on belonging to a formal labour market, combating informality is important. It is also necessary to recognise that a multi-sectorial effort is required, one that involves not only the labour market but also market conditions, the education sector, and the policies to boost productivity, among others.

Second, another challenge is the adoption of measures to continue with pension education. It is vitally important to have discussion about the mortality tables, for example, or the decision that members have to take about which system to choose. Decisions of that type, information of that type, simply provide proof of the need to include pension subjects, not only in information campaigns but also in basic formative aspects of education itself.

Third, there is currently low pension system coverage for adults over the age of 65, and their active participation in the labour market is even lower. For that reason we need to recognise that most of the adults over 65 years of age do not receive a pension. Bearing in mind the growth and population dynamics of the coming years, which imply an increasingly large proportion of adults over the age of 65, we find ourselves with a problem of some magnitude. It is necessary to take action in advance, because the population's access to a pension is a long-term issue, which involves the participation of everyone: members, employers, administrators and the government, during the worker's active stage.

Fourth, it is also necessary to produce appropriate mechanisms to enable the portfolio managed by the AFPs to increase the flows of investment into infrastructure projects. Promoting this investment is needed in the initial stages of the projects, to make it possible to increase investment options, achieve a higher expected return and contribute towards reducing the gaps in infrastructure in our country. At the same time, in the context of the integration between the Asia-Pacific economies, it is necessary to promote mechanisms to facilitate investments between our countries, especially those of the pension funds. Given their size and long-term horizon, this would allow greater diversification of the portfolios under management, thereby reaching better risk-return combinations, to the benefit of all the members.

Finally, one important challenge lies in the need to start evaluating ways of linking up the pension systems in Peru, maintaining the fundamental principles and guarantees in social security and consolidating the principle of solidarity without leaving aside the promotion of individual saving, in order to ensure that the member receives basic benefits, allowing him/her to maintain his/her quality of life in old age, and that the incentives for competition are preserved in the companies making up the private pension system, so maintaining its important role in the development of the financial market by way of the investment of the funds under management, which results not only in higher yield for the member, but also in economic development for the nation.

Congratulations to the organisers, and to all those participating, for this important event, which has made it possible to create an important space for debate and encounter that will undoubtedly have a positive effect in strengthening our system.

Thank you very much.

CLOSING REMARKS

I would simply like to give a message of optimism, at the risk of its being fairly simple. I believe that the individually-funded system is the only workable one; and this without a shadow of doubt. The pay-as-you-go systems, as we have seen during the debate, are not fiscally sustainable due to the funding structure itself and therefore have no call to survive. So I believe that we must have clarity and certainty that the individually-funded system is the most solid system for providing pensions for the workers.

There can be no doubt that the individually-funded system, though sustainable, is affected by a series of events that have occurred in the world and are influencing its ability to provide better pensions. As Thomas Sargent pointed out in his comments, the increase in life expectancies, the fall in the interest rate and the increase in wages constitute good news. However, they have a negative effect on pension amounts. He also spells out for us the challenge of coverage.

Since the pension systems moved forward and changed paradigm, in an attempt to cover poverty during old age and not only replace wages, we have the challenge of integrating the funded systems with non-contributory systems, preferably designed in such a way that they do not reduce the incentive to pay contributions into the individually-funded systems. I am sure that an appropriate blending of these systems will be able to provide good pensions.

I think that the diagnosis is more or less clear. The serious part is that often policy-makers overlook the diagnosis and seek solutions that are drastically removed from it. It is to be hoped that the diagnosis that has been made will serve to correct all these situations that we have seen. We can undoubtedly improve the individually-funded system enormously if we act on all these aspects that I have mentioned, which affect our ability to provide good pensions.

I also feel that we should not let ourselves be distracted from giving a solution that is agreed on, and that is appropriate to the diagnosis and the problems presented by this system. Otherwise we are going to fall into a situation that has been only too common in Latin America: a swing of the pendulum, a change in the rules of the game that would be extremely serious and would set us back in this development that many of the countries in this region are achieving. And that development, naturally, is not something alien to our pension system, as Luis Valdivieso showed us at the beginning of this meeting.

The masses of resources that the workers have in their individual accounts are not stagnated. They are invested in the sectors with most economic potential, encouraging the economic growth that our countries so much need.

To close, I just want to make a note on a comment that suggested a divorce between the possible interests of a pension fund administrator and those of a member. I believe that in pension fund administrators, as in all companies, and even in the case of the smallest craftsman, there is always personal interest in making money. But that personal interest is associated with giving the best service. Even the shoe-shine boy knows that he will make money if he does his job well. There is therefore no divorce between service quality and the just reward for the person providing the service.

Thank you very much.

Guillermo Arthur
President FIAP

CLOSING REMARKS

The purpose of a conference is not always to provide answers, but sometimes also to air questions that are going to require reflection and study, in order to be able to improve the relevant aspects later on.

One of my greatest concerns lies in the winds that I can feel blowing from countries that want to preserve their pay-as-you-go systems, and it is important, because those winds are coming from countries that are currently receiving international funds to support or improve their fiscal positions, which are in the doldrums. The above is due to the fact that part of their problem lies definitely in their huge fiscal deficits. Those countries are trying to protect their unsustainable social security systems and have obtained financial support from the international community. It is quite obvious that if a country has a godfather that can help to cover the financial gaps of a system that is unsustainable, it is evidently going to want to keep it.

What we should do is show those policy makers that the private, individually-funded system that we represent is superior in terms of sustainability and that the great concern of the system is to try to meet members' expectations. The coexistence of a pay-as-you-go system that cannot maintain itself with its own resources and, on the contrary, generates a tax for the rest of the world, is a serious matter, and it certainly does not seem to me to be a situation that we ought to support.

We have discussed many possibilities for strengthening the foundations of the individually-funded system to guarantee its sustainability, and finding ways to act to ensure that the systems that are not sustainable do not survive. We have to create awareness that there are systems that are simply not viable, however much "temporary" support is given them. Those systems, and we have repeated this as nauseam, are not going to be viable, because of ageing, lack of fiscal discipline, lack of credibility on the part of the members and false promises made by governments under those schemes. That is the concern that I am taking away with me. I have felt these winds to preserve mixed systems during the World Bank Global Pensions Conference and in the recommendations emerging from many multilateral bodies. How to combat these winds presents our greatest intellectual challenge from now on. We need not only to demonstrate the sustainability of the individually-funded systems, but also their superiority. And the best allies for demonstrating it are going to be the members themselves, who must feel satisfied with the service, and the pensioners who will receive worthwhile pensions.

Thank you very much.

Luis Valdivieso
President
AAFP

EARLIER FIAP PUBLICATIONS

EARLIER FIAP PUBLICATIONS

One of the aims of our Federation is to make known the advantages of pension systems based on individual saving and support the governments that wish to adopt them. With this in view, one of our regular activities as a Federation is the organization of seminars and round-tables. As a result of these activities, FIAP has published twelve books, which summarize the presentations given at those seminars, and are sure that these have contributed towards improving the literature on this subject. These books are described below:

"Regulación de los Sistemas de Pensiones de Capitalización Individual: Visiones de los Sectores Público y Privado" (Seminario Lima-Perú, diciembre 2002). [1 2]

This publication tackles aspects such as the challenges of the new pension systems, the models and priorities of supervision, collection of contributions and management of individual accounts, coverage, regulation and supervision in the area of benefits, price formation in the social security industry, regulation and supervision of marketing and sales, and regulation and supervision of pension fund investments. The authors deal with these subjects from different points of view, which contribute to an enrichment of the debate on the subject of pensions in the countries that have carried out social security reforms, especially in Latin America.

1 *This book is the only one on the list that was published not by FIAP, but by the International Labour Office (ILO). However, it is included on this list because the seminar on the basis of which it was written was organized jointly by the International Association of Pension Fund Supervisory Authorities (AIOS) and FIAP.*

2 *This book is not available in an electronic version on the FIAP website.*

"Pension Reforms: Results and Challenges" (Seminar held in Cancun, Mexico, May 2003).

In this book an analysis is made of the results of the new social security systems, both in Latin America and in Central and Eastern Europe, from the point of view of how they have influenced improvement in pensions and contributed to the growth and economic development of the countries. In order to do this, it reviews the rates of return of the investments of social security resources and matches them with the growth of workers' wages. At the same time, it measures the impact of the reforms on savings and investment, thereby attempting to measure the contribution that they signify for the economic development of the country. There is also an analysis of the main challenges in the social security area for the industry, the regulators and the political system.

"Pension Reforms in Eastern Europe: Experiences and perspectives" (Seminar held in Kiev, Ukraine, May 2004).

This book summarizes the experiences of social security reforms in the countries of Central and Eastern Europe, such as Bulgaria, Croatia, Hungary, Poland, Kazakhstan and Kosovo. Also presented are the main perspectives for reform in Slovakia and Macedonia. The common denominator in all these countries is that they possess individually-funded systems in expansion. The book follows with an analysis of the challenges for implementing reforms, in terms of the regulation and supervision of pension funds and their fiscal and economic impact. The book concludes with an analysis of the conditions necessary to ensure the success of the reforms.

"Pension Fund Investment" (Seminar held in Lima, Peru, November 2004).

This book contains a diagnosis of pension fund investment regulation in Latin America. It contains an analysis of the improvements to that regulation, dealing especially with the case of the multi-fund system in Chile, Mexico and Peru. It also looks in depth at the development of the capital markets and analyses the political risks of pension fund investment in the region. Among the most important conclusions to be drawn from the aforementioned subjects are the role of the return of the investments as a deciding factor in improving pensions and the need for greater diversification, including investment abroad.

"The Strengthening of the New Pension Systems: The Role of each pillar in the Solution of Pension Problems" (Seminar held in Cartagena de Indias, Colombia, May 2005).

This publication analyses reforms to social security systems that have included mandatory individual capitalization/funding systems in their second pillar, in response to the criticisms and objections that are being levelled at them, and analyses future improvements. The role of each pillar within the social security system is highlighted and an in-depth study made of the structure of first pillar (non-contributory) programs in Latin America. The key issues of mandatory contribution programs in the second pillar are reviewed and experience in the area of voluntary social security saving (third pillar) is described. One of the most important conclusions arising from the discussion is that the criticisms made of the mandatory individual saving systems are seen to include aspects that, though part of social security, are not the responsibility of the contributory systems, as is the case of coverage.

"Pension Funds Investment Perspectives" (Seminar held in Santiago, Chile, May 2006).

This book discusses which the best investment alternatives for pension funds are. The facts show that 1% of additional return over the course of the whole working life of a member of a pension fund administrator may result in a pension that is 30% higher. To corroborate this, an in-depth analysis is made in this publication of issues such as the historic performance of the pension funds in Latin America, the regulation and control of investment risks, the best portfolios for social security funds, the characteristics of the multi-fund systems, the strategies for the international diversification of pension funds, the financial impact that occurs in the stage just prior to retiring age, and the importance of corporate governance in pension funds.

"Funded Systems: their contribution towards solving the pension problem" (Seminar held in Varna, Bulgaria, May-June 2007).

In the first instance, this book shows the political economics of pension reforms, taking into account the experience of countries in Central and Eastern Europe and also the pension reforms in Bulgaria and Mexico. Secondly, it analyses the results of the pension reforms for the workers, separating the effects on the labour market and on redistribution of income. An analysis is also included of the workings of the Disability and Survivorship Insurance (DSI) in the Chilean case. Thirdly, it shows how to structure an effective multiple-pillar system in the light of the new Chilean pension reform, the public/private ratio in the pension reform, the design alternatives for non-contributory pension programs (social pensions), and the fiscal effects of the pension reform in Chile. A fourth set of issues analyzed here concerns the investment policies and strategies of the pension funds, experiences and trends in multi-fund systems and regulation and monitoring of investment risk in mandated, defined-contribution pension systems. Finally the book culminates with a number of different views of the prospects for the pension reforms in Europe.

"Pensions for the Future: Developing Individually Funded Programs" (Seminar held in Lima, Peru, May 2008).

This book analyzes the performance of the new pension systems in Latin America and Central and Eastern Europe, describes the progress of pension reforms in countries that have recently begun to implement them or are about to do it in the near future, and identifies best practices for improving the design of regulations in the individual capitalization programs. It examines issues related to the lessons of pension reforms, investments regulation, supervision models, coverage, pension options, pension business management, and disability and survivorship insurance in the cases of Argentina, Chile and Mexico. It also discusses the pension reforms in China, Philippines, Romania and New Zealand. It also analyzes the future of pensions in Peru, addressing the issues of pension coverage, quality of social protection, capital markets, and the supervisor´s view. Finally, the book ends with a discussion on whether the battle of public opinion regarding the pension reform has been won.

"Investments and Payouts in Funded Pension Systems" (Seminar held in Warsaw, Poland, May 2009).

The book is divided into nine chapters. The first four chapters refer to subjects related to the pension accumulation phase, whereas the other five chapters show issues inherent to the payout phase. The first chapter of the book deals with the pension fund investment performance. In the second chapter, the book asks how much financial risk level a funded system may accept, showing the life-cycle risk perspective in the context of pensions. The third chapter shows a close relationship between economic cycles and pension funds. Chapter four shows the current tendencies of pension fund investments and presents the views of three outstanding speakers on infrastructure investments, thematic investments and Exchange Traded Funds (ETF), respectively. Regarding the pension payout phase, chapter five refers only to the issue of explaining the optimal pension modes in a mandatory pension system. Chapter six analyzes the market of annuities and programmed withdrawals under the commercial and descriptive perspectives. Chapter seven contains issues that are of vital importance for an adequate development of the pension market: the keys for success in the annuities market, the challenges involved in the selection of products during the payout phase and an explanation on why the funded pension systems will be more capable to face the demographic challenges than the PAYGO systems. The second-to-last chapter deals with the perspectives of the Polish pension system. Finally, the book finishes with chapter nine, where the future of mandatory pension funds in Europe and beyond is reviewed, describing the financial crisis implications for the private pension funds, commenting the lessons derived from the crisis for the funded pension systems and stating the medium-term challenges for reforming the mandatory pension funds in Europe and other industrial countries.

"Developing the Potential of the Individually Funded Pension Systems" (Seminar held in Viña del Mar-Chile, May 2010).

The publication provides the reader with several papers that seek to identify means and instruments whereby pension fund managers can extend the contribution they make to solve the pension problem and, in more general terms, improve the quality of the population's social protection. Papers presented by renowned academics and authorities are featured at the beginning of the book. They address the seminar's subjects with a practical and objective focus aimed at highlighting the characteristics and concrete results of policies, products and organizational and management models that can serve as a reference for innovating and improving the processes and regulations of pension fund managers and regulators.

The book is divided into three parts. The first part, "How can the Coverage of the Individually Funded Programs be Extended?", explores different ways in which the funded programs can extend their coverage to sectors of the population that are not currently engaged in pension saving. The second part, "New Products", explores ways in which the pension industry can use its experience and capacity to advantage for attending to other social security protection needs of the population. The third part, "The Quest for Excellence", is divided into three chapters. The first one, "Pension Information and Education," analyzes the role played by financial education within the context of defined-contribution pension systems from the standpoint of the industry and the supervising agencies. The second chapter, "Ideas for Improving Operational Efficiency," analyzes the organization and process alternatives that enable the operational management and efficiency of the industry to be improved. Finally, the third chapter, "Ideas for improving the impact of investments on local economies," analyzes the investment alternatives available to the pension funds in housing, infrastructure and micro-companies.

"Advancing in the Strengthening and Consolidation of the Individually-Funded Pension Systems" (Seminar held in Punta Cana, Dominican Republic, May 2011).

This book provides the reader with various studies analyzing different issues related with pension fund investment (best practice in the design of investment policies; impact of pension funds in the development of infrastructure projects and securitization of assets) and the benefits granted in the payout phase (pension options, advantages and disadvantages; replacement rates and adequacy of contributions), and also presents experiences and proposals that enable continued progress in strengthening and consolidating individually-funded pension systems, after the global financial crisis of recent years. Additionally, the book analyzes, from the points of view of the industry and the international organisations, the topic of the implicit and explicit public debt generated by pension systems, its accounting and impact on the creation and development of individually-funded programs, in light of recent events in Central and Eastern Europe.

"Opportunities and Challenges for Individually-Funded Systems in a Globalised World" (Seminar held in Cancun, México, May-June 2012).

This publication look into the opportunities and challenges being faced by the authorities and administrators, to boost the development and stability of individually-funded pension programs and obtain adequate replacement rates in a globalised world, with more volatile financial markets, imperfect labour markets and more demanding clients.

The book is divided into three parts. The first part analyses the spheres of responsibility and limits corresponding to pension funds, in the performance and public information of the companies in which they invest the pension funds under their management, and how these can contribute towards the development of the corporate governance of such companies. The second part evaluates the extent to which the design and characteristics of the individually-funded programs, especially contribution rates and retirement ages, are appropriate and consistent with the replacement rate targets expected of such programs, given the conditions of the labour market and the trends in life expectancies. Also this second part examines the contribution that can be made by voluntary pension savings in funding pensions and meeting the defined targets. Finally, in the third and last part of the book are analysed the basic conditions required to ensure the stability and development of the individually-funded pension systems, and the opportunities and challenges being faced in order to improve their public image and strengthen their relationship with their members in a globalised world where clients have become increasingly demanding.

"Individual Savings: Better Pensions plus Economic Development" (Seminar held in Cartagena de Indias, Colombia, April 2013

This book starts by giving the reader an analysis of the lessons learned from the international recession with regard to managing risk and investing portfolios. It then goes on to describe the pension reforms that have been implemented recently and the trends that are being seen in pension systems, especially in the programs based on individual funding, as also the impact of these and the effects that they may have on the efficient functioning of the funded programs and their consistency with the fundamental principles on which these programs are based.

The book also analyses the most significant challenges facing the pension systems in achieving the aim of providing adequate pensions for their members in the long term, pointing out the aspects of design and operation in which changes should be made in order to enable the individually-funded programs to meet their target of providing adequate pensions, plus the limiting factors that are being faced due to shortcomings in the operations of other related markets.

In particular, the book describes the virtuous circle between the development of the individually-funded programs and the countries' economic development, and finally it explains the interdependence between the labour market and the pension system and the experiences, lessons and recommendations that emerge for implementing public policies in matters of labour and social security.

For your information, these publications are available in an electronic version on the FIAP website, <http://www.fiap.cl>, in the "FIAP Publications/Books" section. Copies of these publications may be obtained writing to e-mail: <fiap@fiap.cl>.

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Phone: (56-2) 2 2530 79 14 Fax: (56-2) 2 2530-79 82
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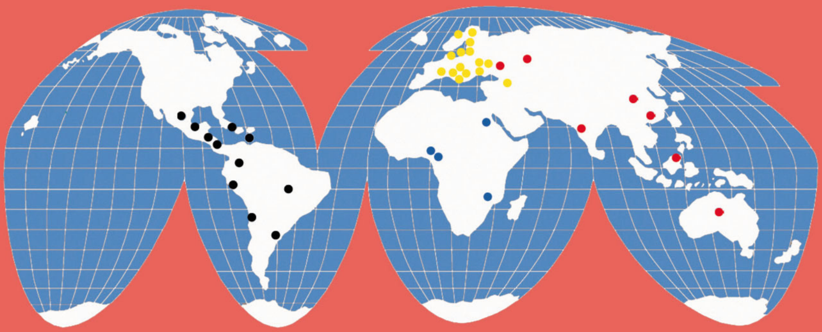
FIAP was created in May, 1996. The legal status of this international institution was granted on 29th June 2004 in the city of Montevideo, by Supreme Decree Nº 801, issued by Uruguayan Ministery of Education and Culture. It currently has nineteen "full members" in fifteen countries and thirteen "collaborating members".

The "full members" are associations, federations, chambers or other institutions that represent the interests of the pension industry in the respective country. Thus, the following countries are represented in FIAP: Bolivia, Bulgaria, Colombia, Costa Rica, Curaçao, Chile, El Salvador, Spain, Kazakhstan, Mexico, Panama, Peru, Dominican Republic, Ukraine and Uruguay.

COUNTRIES WITH REFORMED SYSTEMS (1)



● LATIN AMERICA AND THE CARIBBEAN ● EUROPE ● ASIA AND THE PACIFIC ● AFRICA

Latin America and the Caribbean	
Chile	1981
Peru	1993
Colombia	1994
Uruguay	1996
Mexico	1997
El Salvador	1998
Costa Rica	2000
Panama (*)	2002
Dominican Republic	2003
Brazil (*)	2013
Curaçao (***)	

Europe	
Poland (2)	1999
Sweden	1999
Latvia	2001
Bulgaria	2002
Croatia	2002
Estonia	2002
Kosovo	2002
Russian Federation	2003
Lithuania	2004
Slovakia	2005
Macedonia	2006
Romania	2008
United Kingdom	2012
Armenia	2014
Ukraine (**)	

Asia and the Pacific	
Australia	1992
Kazakhstan	1998
Hong-Kong	2000
China	2001(3)
India (*)	2004
Brunei	2010

Africa	
Nigeria	2005
Ghana	2010
Egypt (***)	
Malawi (**)	

The year given corresponds in each case to the start of operations in the mandatory pension system based on individual funding.

(1) Information updated to December 2014.

(2) Poland: On February 1st, 2014 a new pension reform law took effect that, among other things: (i) makes second-pillar individual accounts voluntary for all new entrants to the workforce; and (ii) allows current participants to opt out of the second pillar and transfer their account balances to the public first-pillar notional defined contribution (NDC).

(3) China: This refers to a pilot plan of mandatory individual accounts for formal workers, which began in 2001 in the province of Liaoning. Currently, the individual accounts operate only in a subgroup of provinces, but it is hoped that they will be implemented nationally in the future.

(*) Reform for public employees.

(**) Reform approved, but not yet implemented.

(***) Reform proposed, but not yet either approved or implemented.

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