DEVELOPING THE POTENTIAL OF THE INDIVIDUALLY FUNDED PENSION SYSTEMS

Presentations given at the International Seminar “Developing the Potential of the Individually Funded Pension Systems”, organised by FIAP, on May 6 and 7, 2010, in Viña del Mar, Chile.

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Madam Minister of Labour, Camila Merino, Madam Superintendent of Pensions, Solange Berstein, Mr President of the International Organisation of Pension Supervisors (IOPS), Ross Jones, Superintendents, Members of Congress from Mexico and Peru, dear friends from the Associations of Pension Fund Administrators that make up the International Federation of Pension Fund Administrators (FIAP):

First of all, I want to extend a very warm welcome to you all at this meeting in Viña del Mar. You have come from great distances to accompany us in this new challenge: that of thinking about the development of the pension systems.

A year ago we met in Warsaw in the midst of the economic crisis, which had seriously affected the valuation of the pension funds. The impact was so great that many nostalgic individuals began holding forth about a return to pay-as-you-go systems.

The truth is that we pointed out in those moments that the analysis of Pension Funds must be carried out with a long-term criterion, because this is an
investment which is long-term by definition and is called upon to mature in 30 or 40 years.

Even so, there was insistence to return to the so-called "Defined-Benefit" systems. However, events proved us right and we saw how the defined-benefit systems were hard-hit by the economic crisis, possibly with more virulence than the Individual Capitalization Funds, because the effects of the crisis were compounded by the demographic problem affecting the world. As a result, all the defined-benefit systems began to make parametric changes, which forced 57 countries to change the contribution rate to the pension system; 18 countries to postpone retiring age; and 28 countries to change their formula for calculating pensions.

The question that needs to be asked then is, what remains for those defined-benefit systems? They offer undefined and uncertain benefits, which is natural, because the demographic pyramid has turned upside down and at this point in time it is impossible for a system of that type to provide an answer to the pension problem. By contrast, the individually-funded systems proved that they had greater strength to resist the crisis. Thus, between December 2008 and December 2009, 24 countries with funded systems, most of them members of FIAP, showed a 40% recovery. In other words, the funds increased by 40%, bringing them back to practically the same position as before the crisis. This proved how right we were in saying that analysis on these subjects must be carried out in the long term.

But even more important than this is the fact that all the countries which have introduced reforms based on individual funding have had a weighted average yield of 8% since the systems came into being, which is extraordinarily important. We know from the rough calculations made that, with adequate contribution density, a yield of 4% would be sufficient to finance a pension of
around 70% of the average wage, and we can already see that the yield to date has been double that 4% yield.

We know that every point of increased yield on a fund means 20% more pension.

This has been achieved by using very healthy criteria when investing the pension funds. We know that the yield and security of the funds are the investment criteria that constitute the very essence of any fiduciary administration. There can be no other criteria in investment decisions. However, even though the pension funds have followed those principles faithfully, they have still managed to make an immense contribution to the economic development of their countries, through their contribution to the whole process of saving and investment and certainly to a deepening of the capital markets.

On certain occasions at FIAP meetings we have analysed the paper prepared by Vittorio Corbo and Klaus Schmidt-Hebbel, in which it is stated that the Chilean pension system is responsible for 10% of the economic growth experienced by the country. 10% is explained by the contribution made by this system to the country’s economic development.

Pension systems certainly face risks, which appear in both the accumulation and draw-down stages, and these are not investment risks alone. However, I believe that individually-funded systems have the flexibility needed to allow them to deal more effectively with such risks. The first risk that naturally appears is employment risk, which manifests itself in the changes that exist in the labour market and the irregularity of wages. These result in uncertain contribution density with which to face up to funding the future pension. There are, however, ways of mitigating that employment risk and one of them is to use multi-funds.
Multi-funds are an effective tool to enable people to adjust their investment in the different stages of life. When a person is young, it is possible to take on greater risks; when he/she is older, it is natural to move towards more conservative portfolios.

Multi-fund schemes have been adopted already in Latin America by four countries: Chile, Peru and Mexico, plus Colombia, which will bring the scheme into effect next year. In Central and Eastern Europe, five countries have already implemented them: Slovakia, Estonia, Hungary, Latvia and Lithuania. Undoubtedly, this is an enormous contribution, enabling workers to improve the performance of their savings in order to have better funding for their pensions.

One thing that concerns us, and we have discussed it frequently, even with the regulators, is the inertia that may exist among workers who remain in a riskier fund, chosen when young, even when they are approaching retiring age. Fortunately, if we look at the funds the workers have chosen, we can see that they correspond quite closely to the criteria of the “Default Rule”. In other words, workers have chosen the fund that corresponds to their age according to the Default Rule, which confirms that workers do look for information, before choosing the most appropriate fund.

An effective tool for facing up to employment risk is Voluntary Pension Saving. Certainly, in view of the irregularity of income and the cycles that every person faces in the course of his/her working life in terms of unemployment or lower wages, voluntary pension saving seems a very effective tool. We naturally hope that such voluntary pension saving will always have strong incentives, so that workers can make extraordinary savings at moments when they are receiving better wages, to cover those periods in the past when they did not have them and those periods when they will not have them in the future.
Another solution is the use of multi-pillar systems, such as those existing in most countries. The first, non-contributory pillar is the most appropriate answer for all those workers who, for reasons of poverty, informality or unemployment, have been unable to fund their pension adequately. The first pillar must focus on sectors with lower incomes in order to guarantee them a pension, but without becoming a source of competition, as we have seen in some cases, or a disincentive for workers who can pay contributions.

There are other answers too to improve coverage, which we shall be exploring during the course of this Seminar. We shall see how the individually-funded systems can contribute to solving the pension problem of the poorest sectors, through incentives, pension education, etc.

Another subject to be analysed is investment risk, both in the accumulation and draw-down stages. Investment risk is associated with the volatility of pension savings. I am of the opinion that the individually-funded system has the flexibility and tools to mitigate such risks. The first is investment diversification: there are some countries that have extraordinarily high percentages of investment in domestic economies and government securities, which clearly puts those workers’ pensions at risk. Diversification must be a challenge for our whole system.

We have to continue advancing, not only in foreign diversification, but also in seeing how we can find other instruments for channelling pension savings. During this Seminar we shall be looking at two instruments about which there is already a certain amount of accumulated experience: investment in infrastructure and investment in housing. Those investments have the advantage, not only of channelling savings appropriately and delivering a good yield to those who have them, but also of making the pension system more approachable for workers, because they can see their savings tangibly
invested in the building of houses and roads and in the improvement of their countries’ economies.

Another risk faced in certain countries is the definition of the benchmarks (points of reference) for investments. There are absolute benchmarks and relative benchmarks. The problem with absolute benchmarks is that designing them means taking over a decision that corresponds to the administrator. He is the one responsible for the funds’ investment, within the limits stipulated by the law.

Relative benchmarks (such as minimum yield, as in Chile’s case) produce a “herd effect” because, in order to avoid sanctions or commercial risks, all the portfolios begin to look the same. For this reason, these relative benchmarks must be designed with sufficient leeway to allow the administrator to be the one taking the decisions.

In the draw-down stage, the member has to deal mainly with longevity risk. One way of eliminating this risk is to transfer it to a Life Insurance Company. However, in this case we have some enormous challenges. One of these consists in seeing how to create indexed, long-term bonds that are capable of hedging the investments in the various countries, and at maturities sufficient to finance life annuities.

In programmed withdrawal, the longevity risk is borne by the worker him/herself. I believe that there are also formulas to be explored here, to see how that risk can be reduced by a mutualisation or insurance of those investments. In this Seminar we want to put the experience acquired by the Pension Fund Administrators (AFPs) in managing pension funds at the service of the workers, to find answers to other problems that they are facing, which are closely related with social security.
So we are also going to analyse the possibility of managing unemployment funds or savings funds for health care in old age. All these new products are going to be food for discussion during this Seminar.

To conclude, I want to point out that the great challenge we are facing in all the countries is that of pension culture. We want the worker to move away from the idea that he is being confronted with a kind of tax and understand that with his/her savings and the decision not to spend in the present, he/she is financing a better retirement stage. This, given the growth in life expectancies, is a stage that is going to be increasingly long, and we therefore want it to have better coverage.

There are a thousand ways of providing this advice and extending this coverage, all of which we are going to explore, but one of them is of great importance and consists of creating trust. Here I appeal to the authorities and politicians of the various countries for their cooperation in creating trust. We must dig the debate about pension systems out of the ideological trenches. These systems are no longer the response of a particular model of thought. Individually-funded pension systems are coming into being because there is no other viable system. Pay-as-you-go systems can no longer guarantee defined benefits, as is shown by the magnitude of the parametric changes that countries have had to introduce. That is due not only to poor management, but also to the demographic changes that are taking place in the world.

Therefore, let us try not to injure the workers' trust in management and the provision of a long-term benefit from their pension savings. We are convinced that a large part of the coverage problem is the constant ideological criticism levelled at these systems. I am sure that time will prove us right, but today we must start creating this trust, because otherwise we shall be unable to improve the coverage that these systems ought to provide.
As is now traditional, this present publication, entitled “Developing the Potential of Individually Funded Pension Systems”, shows the result of the presentations given at the seminar of the same name, material which we hope will prove useful to all those actively involved in these subjects.

Guillermo Arthur
President of 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 Ministry of Education and Culture. It currently has twenty-one ‘full members’ in the same number of countries and eight ‘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: The Dutch Antilles, Bolivia, Bulgaria, Colombia, Costa Rica, Chile, El Salvador, Spain, Honduras, Mexico, Panama, Peru, Poland, Romania, The Dominican Republic, Ukraine and Uruguay.
The workers belonging to FIAP’s member associations and institutes number 105,438,461 as of December 2009 and have accumulated more than 758 thousand million dollars in their respective individual accounts.

The “collaborating members” are mainly companies that provide services and products to the pension fund management industry and currently include Aegon Pension Network; BlackRock, Inc.; Eurizon Capital S.A.; Gartmore Investment Management; Pictet & Cie (Europe) S.A.; Principal Financial Group and State Street Global Advisor.

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 of 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, drawing up of documents to contest criticism faced by such systems and preparation of Guidelines to assist in the better design of regulation for individually funded systems.
Viña del Mar
6th May 2010

Mr Guillermo Arthur
President
International Federation of AFPs

Dear Guillermo,

I send my warmest greetings to you and to all those taking part in the International Seminar of Pension Fund Administrators to be inaugurated today in the city of Viña del Mar, organized by the International Federation of Pension Fund Administrators.
For two days this Seminar will bring together representatives of the AFP Associations of countries as varied as the Ukraine, Kazakhstan, Mexico, Colombia, Peru, Costa Rica, Poland and Romania, among others, as also notable experts in the field, among whom I highlight the presence of Robert Merton, holder of the Nobel Prize for Economics. This is therefore an extraordinary opportunity to find out about how the AFP system operates in countries with a variety of cultures, to share experiences, foster good practices and promote ways of honing and improving the industry.

Our government has committed itself to an ambitious agenda, aimed at making Chile a society of security, opportunities and values. In terms of the first of these, the society of security, this presupposes that each and every one of the inhabitants of our county is able to cover his/her fundamental needs with dignity, including those arising from old age, disability and survivorship. Our AFP system, which will shortly be celebrating 30 years of existence, has shown itself to be a very effective instrument in this respect, because it has brought about a substantial improvement in workers’ pensions and made a decisive contribution to the economic development of our country’s capital market.

In point of fact, thanks to its bases which favour individual saving, members’ freedom of choice, competition between providers and a solid solidarity pillar, all of these duly regulated and supervised by the State, the AFP system has allowed Chile to enjoy an effective, solid social security network, in which over 4 million workers are currently contributing and 700 thousand people are receiving pensions.

Furthermore, the system has led to a significant increase in the rates of internal saving in our economy. As of today, the pension funds have accumulated resources of over 120,000 million dollars, equivalent to three-quarters of Chile’s annual GDP. These savings have produced a rapid development of our capital market, thanks to which it has been possible to finance innumerable projects for both public and private enterprise, thus boosting the growth of our economy and the creation of more and better jobs for Chile’s men and women.

There are currently dozens of countries that have followed Chile’s lead by adopting a system of individual capitalisation and private administration of their pension funds, benefiting over 120 million workers throughout the world.
While in no way denying the above, our AFP system also has room for improvement, like any human endeavour, without this altering its essential bases. In fact, in our opinion, to advance towards an improvement in the price-quality ratio of pension services by encouraging greater competition in the industry, increase the standards of the information provided to contributors and improve the opportunities, diversification and returns of the investments are all goals that the AFP industry is in a position to achieve.

Finally, at the same time as welcoming you to our country and to this Seminar, I would urge you to continue deepening the relationships of cooperation among yourselves, so that we may be able to count increasingly on more effective, sustainable, better-managed social security networks, in order to guarantee pensions that are fairer and more worthwhile for all our compatriots, as they need and deserve.

Yours most sincerely,

Sebastian Piñera
President of the Republic
Good morning.

I want to give Guillermo Arthur, President of the International Federation of Pension Fund Administrators (FIAP), my warmest greetings and thank him for inviting me to take part in this meeting. I would also like to give my best wishes to Solange Berstein, Superintendent of Pensions in Chile; to the Mexican deputies who are accompanying us; to the President of the International Organisation of Pension Supervisors (IOPS), Ross Jones; the Superintendents of Pensions of the Dominican Republic and El Salvador; trade union leaders and representatives of the Pension Fund Administrators; and all those present.

On behalf of the Chilean Government, I welcome the delegations of the countries taking part in this event. I want to take advantage of this opportunity to thank you and your countries for the help you so generously extended to us on the occasion of the earthquake and tidal wave that recently caused such devastation among us.
It is always good news when a seminar of this type is held, which addresses aspects of great importance for our pension system, but especially so when an event of this kind is held in our country, which paved the way to the inclusion of individually-funded programs in the social security structure, a situation of which we feel particularly proud. This shows that a country, even a small one in process of development, can produce public policies of quality that inspire debate even beyond its own frontiers. Today there are already 26 countries with systems of individual funding, each with its own distinctive characteristics, but all based on principles similar to those that inspire our own pension system.

In relation to this, I want to take advantage of this occasion to state the Chilean Government’s firm commitment to reinforce and develop the individually-funded pension system. This commitment is born of the conviction that programs of this type represent a powerful instrument for solving the problem of pensions and favour the long-term financial stability of the pension systems. At the same time, when correctly implemented, the reforms that create capitalization systems can have very important economic benefits, which include encouraging saving and developing capital markets, labour markets that are more flexible and efficient, and improvements in productivity. Most important of all, these reforms, by giving workers the possibility of choosing between different fund-managers, planning their retiring age and the amount of the pension and choosing their investment portfolio and pension option, are also giving them the freedom, power and great responsibility of influencing their own pension future.

Giving workers these same freedoms imposes a special responsibility on the industry. If exercising the right to choose is to have socially desirable results, then workers must be fully informed and educated about the consequences of their decisions. It is worth pointing out on this subject that administrators must commit themselves to a special, ongoing effort to improve the quality of the population’s pension education. Furthermore, we understand this to be part of the obligations attached to the possibility of a private company’s managing funds originating in a legal mandate.

In the opinion of the Chilean Government, the issues to be addressed in this Seminar cover some of the main challenges facing our own pension system today.

First, one of the high priorities in the modifications introduced into the Chilean pension system in the year 2008 was the extending of its coverage. To achieve this, a subsidy was introduce on the hiring and contributing of young workers;
changes were approved to improve pension education; the figure of the voluntary member was created; the non-contributory solidarity pillar was reinforced to extend coverage among those who are unable to save; and finally, measures were defined both to encourage the enrolment of self-employed workers and to make such enrolment in the pension system compulsory for some of them. We hope that the debate that will be starting in a few moments will provide insights into new ways and instruments to improve coverage, something in which we still have a long way to go.

With regard to new services and products, which will be another issue dealt with in your Seminar, the experience accumulated by the pension fund administration industry and by the regulators and supervisors of that industry should serve to find ways to make good use of existing capacity to produce and manage other products and services that would help to provide workers with a broader and more complete range of pension services without conflicting with the industry’s main corporate purpose.

Thirdly, as regards efficiency and excellence, the reduction of operating costs and prices must be an ongoing aim in the pension fund administrators’ work. Consequently, if we are to fulfil the aims of the pension system, we need an industry that does not limit itself to responding passively to the regulations’ demands, but also commits itself actively to seeking new and better ways of doing things.

I have no doubt that, given the high level of the guest panellists and given your genuine desire to perfect our pension systems, the debate that is shortly to begin will be fruitful. I am also sure that the authorities of all the countries taking part in this Seminar today are waiting for the suggestions that emerge from it.

For my part, I want to express to you at once our willingness to work together to implement initiatives that will benefit all the workers.

Once again I welcome you and wish you a very happy stay in our country.

Thank you very much.
CRISIS AND PENSIONS: LESSONS FROM THE GLOBAL FINANCIAL COLLAPSE
SEBASTIÁN EDWARDS ¹

¹ Sebastian Edwards is Henry Ford II Professor of International Business Economics at the Anderson Graduate School of Management at the University of California, Los Angeles (UCLA). From 1993 until April 1996 he was the World Bank’s Chief Economist for Latin America and the Caribbean. He is also an associate researcher of the National Bureau of Economic Research (NBER), member of the advisory council of the Trans-national Research Corporation and co-president of the Inter-American Economics Seminar (IIE). He has been President of the Latin American and Caribbean Economics Association (LACEA), an international professional association of economists with academic interests in Latin America and the Caribbean. He is a member of the Scientific Advisory Council of the World Economics Institute in Kiel, Germany and member of the Economic Advisors’ Council of the Governor of California, Arnold Schwarzenegger.
Any historical analysis of the past 25 years in Latin America reaches the conclusion that Chile is the country that has taken the most important steps in terms of reform, modernisation and economics.

A glance at Chile’s economic history and the reasons behind this success and the congratulations that the country habitually receives for its progress, shows that behind this success are three essential pillars. The first is an economic openness and a system that has reinforced competition and innovation as the driving force of progress and productivity; the second pillar is the existence of strong institutions, where the authority of the law, protection of property rights, a system of justice that is efficient and increasingly devoid of the corruption seen in other countries, provide the country’s economic development with this institutional framework; and in the third place is its pension system, based on individual funding and the private management of the workers’ savings, which has not only played an essential role in the Chilean economy, as will be stated further on, but ought also to play a very important role in other economies around the world.

In this document I shall be describing these important aspects of the Chilean economy and at the same time be referring to the subject of the economic crisis and the pension systems, especially the comparison between the individually-funded systems and the pay-as-you-go systems under government management.

I. Crisis and pensions

If one analyses the behaviour of the world’s pension systems, including the Chilean system, since the subprime crisis, which began in the year 2007-2008, one of the most amazing aspects, especially in the case of the Chilean system, is the strength and robustness with which this system responded to the crisis.
And this highly efficient, solid response of the Chilean system occurred in spite of the criticisms made by a series of international gurus and commentators, who have travelled around the world criticising the Chilean system without much reason or knowledge of what they are talking about. We have seen experts, some of them well-known names with very good reputations, criticising the individually-funded system in various international forums in such a way that, if one actually analyses the criticisms in detail, one realises that what lies behind them is essentially an ideological position, full of ignorance about what has actually happened.

A large majority of international systems based on individual funding, including Chile, have recovered the value of their funds after the crisis. As is shown in Graph N° 1, in four of the five multi-funds existing in Chile, the value of workers’ savings has already recovered, by comparison with the peak level of November 1997. Those people who invested in what we might call the “middle Multi-fund” (Fund C), in other words, the one which is neither too risky nor too conservative, would today have their savings at a higher level, approximately 9 to 10% higher, than at the peak of the year 2007.
This behaviour of the Chilean pension funds, which has been repeated in other parts of the world with systems based on individual funding, contrasts very seriously with what we have seen in the alternative pay-as-you-go systems, with defined benefits, administered by the State.

The criticisms levelled at the individually-funded systems are not merely ideological, but are also based on an incorrect methodological approach because they are not being compared with the alternative. Any serious analysis that might influence countries’ public policy must compare the system of capitalisation, with individual accounts handled by administrators in the private sector, with the alternative system, which is essentially a pay-as-you-go system administered by the State. When this comparison is made, the results are extremely illuminating, with the systems based on pay-as-you-go and managed by the public sector making quite a bad showing. The reason for this is essentially that the guarantors of this system, i.e. the Governments and Treasuries of the various countries, have accumulated an unsustainable level of debt as a result of the economic crisis of the year 2007-2008. In fact, investors, analysts, journalists and others are now increasingly starting to question the various governments’ ability to meet the debts that they have acquired with the workers in terms of pensions.

In Graph Nº 2 it is possible to see the levels of public debt recorded for various countries. It is obvious that absolutely all these countries have a level of debt today that is considerably in excess of the mythical 60% of GDP that was defined in the 1990s as the absolute maximum that an advanced country could absorb and still remain solvent. If these figures are compared with the case of Chile, the difference is appalling: the public debt recorded in Chile is only 9% of GDP.

The problem lies not only in the fact that many countries today have very high levels of debt, but also that the prospects for the future are extremely dangerous.

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2 In the 1992 European Union Treaty, also known as the Maastricht Treaty, when discussion took place on the entry of various European countries to the euro zone and their ability to adopt the euro as the single currency, two essential fiscal criteria were established. The first was that the fiscal deficit of the countries that wished to have access to the euro could not exceed 3% of the GDP per year. The second requirement stipulated that the debt of the public sector could not exceed 60% of GDP, and this parameter was not an arbitrary invention, but the result of a really serious analysis, which proved that debts over this level led to a situation which called into question the solvency of the governments concerned and their ability to meet their obligations, particularly those involving pensions, with regard to those countries’ workers.
Graph Nº 3 shows the forecasts of the United States Congressional Budget Office up to the year 2019 and, as may be seen, the gross debt of this country in the year 2019 will be approximately 100% with no sign of falling, and the reason why these forecasts only go up to 2019 is that this Congressional Office is only obliged to make forecasts for 10 years. If the forecasts were made for 20 years, we would have these black bars remaining almost stable at the level of 100% into the future, and even increasing, and that produces a situation in which there is not only a question mark over the ability of these systems based on the public sector to provide pensions at this moment, but also in the foreseeable future.

**Source:** Produced by the Author.
This state of questionable solvency in public pay-as-you-go systems is getting even more serious for a number of reasons. In the first place, pension systems based on pay-as-you-go and managed by governments are under no obligation, unlike the individually funded systems, to be “marked to market”, in other words, to be valued at market prices on a daily basis. In these systems there is no need to calculate and publish the level of solvency day by day, as happens with the pension funds’ accounting units. If one were to make this valuation for these systems, it would become obvious that the situation is of the utmost gravity.

The second reason is that, as a result of the debt, there had been a flight-to-quality until recently and the price of government bonds had been strengthened in a series of countries, creating a false sensation that these were safe investments, when in

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3 Name given to the situation in which investors decide to move out of more risky assets and into safer, high-quality assets.
real... ability of these countries to deliver on their obligations. This question began to be asked as a result of the crisis in Greece and was also influenced by the reduction in the securities’ rating of various European countries and the fall that occurred recently in the international stock exchanges, reflecting precisely the fact that the market has begun to be aware of what is going on.

The third reason lies in the fact that there are numerous hidden costs, massive contingency liabilities that are not included in the information given in the graphs mentioned above. In the case of the United States, the total recorded public debt amounts to approximately USD12 trillion, of which approximately USD 8 trillion are in the public domain and USD 4 trillion correspond to United States Government debt for social security. However, if one calculates the present value of the social security and health obligations that have no support or funding, that additional public debt is equivalent to USD 59 trillion, and when one starts to make those calculations for other countries, the situation is absolutely horrific and demonstrates the danger lurking in the alternative pay-as-you-go system. For example, the University of Stanford has recently calculated that in the State of California, which has a series of public pension systems including the California Public Employees’ Retirement System4, the deficit of the three most important systems in California amounts to almost USD 0.5 trillion. As a result of this deficit, the State of California has arbitrarily introduced a reduction in its workers’ wages and an increase in pension contributions from one day to the next, which has resulted in a fall in State workers’ net income of up to 20% in some cases: figures that are really important. By contrast, in Chile’s case, a person who invested in Intermediate Fund C would today have 7% more than he/she had in November 2007 and would have the same wage, or one even higher, due to the growth of the economy.

On the subject of the crisis and pensions, we should not only analyse how the crisis has affected pension systems, but also how non-funded pension systems are catalysts of crisis and in particular, in view of the situation occurring in the world today due to the “Greek tragedy” that we are facing, we should be talking about what is happening in the famous PIIGS5 countries.

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4 California Public Employees’ Retirement System (CalPERS) is the largest public pension fund in the United States.

5 Acronym in English denoting the following countries: Portugal, Ireland, Italy, Greece and Spain.
Doubts are being raised about the PIIGS countries today, not only in terms of their economic solvency, but also because they are at the very heart of what has happened in the stock exchanges in different parts of the world. The crisis in these countries has been triggered to a large extent by their unrecorded social security debts. Graph Nº 4 shows recent calculations of the level of unrecorded social security debt in the PIIGS countries, as a percentage of GDP.

**GRAPH Nº 4**

**UNFUNDED PENSION OBLIGATIONS OF PIIGS COUNTRIES IN 2009 (% OF GDP)**

<table>
<thead>
<tr>
<th>Country</th>
<th>Unfunded Pension Obligations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
<td>491</td>
</tr>
<tr>
<td>Italy</td>
<td>364</td>
</tr>
<tr>
<td>Ireland</td>
<td>405</td>
</tr>
<tr>
<td>Greece</td>
<td>875</td>
</tr>
<tr>
<td>Spain</td>
<td>255</td>
</tr>
</tbody>
</table>

*Source: Produced by the Author.*

It can be seen that the hidden social security debt in Greece – a debt that almost nobody noticed, except a few academics – is 875 times the GDP, in other words, it is a situation in which there is no way of solving the problem through normal channels. Naturally and increasingly, although this debt is not officially recorded, investors, perspicacious journalists and bankers have begun to do their calculations and, on concluding that such massive debts do exist, have begun to question the payment capacity and solvency of these countries. This questioning of the payment capacity and solvency of these countries has meant that investors have stopped acquiring their securities, which has produced a fall in bond prices. With the fall in bond prices, the interest-rate that these countries have had to pay has gone sky-high, and today we are in a position where Greece has to pay an interest-rate of
13% for placing a bond on the international market. This is a much higher rate than what many Latin American countries, such as Chile, Colombia, Mexico, Brazil and even Venezuela, have to pay, which is a surprising situation if one bears in mind that this is a country belonging to the European Union and the euro zone, which decided to give up the monetary policy.

In Graph No. 5 it is possible to see the returns of the bonds of certain Latin American countries at maturity, and the average return at 5 years of Greece and Portugal.

As can be seen, the country risk in Greece has shot up lately and is much higher than that of the Latin American countries. Portugal, meanwhile, has the same level of country risk today as the Latin American countries. In short, we have a feedback mechanism in which unrecorded social security debt - the contingent liabilities of these countries - feeds the crisis, producing this leap in the country risk of countries such as Portugal and Greece.
Now, what is the answer to the problem of Greece?

Nobody knows.

Neither do we know if the euro is going to survive in the form it has had so far; we do not know whether maybe this straitjacket into which the countries of the euro-zone put themselves, that of not having their own currency, will fall apart. We do know two things: the first is that it is impossible to have a level of productivity, activity and efficiency like that of Turkey and a standard of living like that of Switzerland, which is what the Greeks had until a couple of weeks ago. The second is that pensions and pensioners will be the ones picking up the tab after this party. In fact, it has become public knowledge that the reform of the pension system in Greece pre-supposes a fall of 30% in pensions and an increase in retiring age of up to 15 years. Meanwhile, in Chile’s case there has been no fall in the level of pensions, because the funds have recovered, and so far at least there has been no increase in people’s retiring age (and if it does come, it will certainly not be 15 years).

II. Other important contributions of the individually-funded system

It is also necessary to mention some other more long-term contributions of the individually-funded systems, which I believe to be very important.

One of the most important contributions has to do with long-term growth. A very high percentage of Chile’s spectacular growth during recent years is due precisely to the pension reforms. The famous Goldman Sachs paper on the BRICs countries (Brazil, Russia, India and China)\(^6\) which was published in 2003 and was for some years the best-kept secret on all the boards of international companies, shows that there are two essential pillars behind the economic growth explaining the future success predicted for the BRICs countries, and especially China and India. The first is the accumulation of capital: in order to grow rapidly it is necessary to have more capital (machinery, construction, infrastructure, etc.) and to accumulate capital it is necessary to have funding. That funding comes from the capital market, and the capital market, especially in small countries, will take off and become capable of funding this vigorous growth, such as that of the BRICs, to the extent that there is

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\(^6\) “Dreaming with BRICs: The Path to 2050”, available on Internet:  
a reformed pension system with pension funds that are capable of intermediating and generating liquid markets, as has occurred in Chile.

Now, it is very important that pension fund portfolios be adequately diversified: they must contain securities of all kinds and cannot be restricted only to government securities, because in that case there is simply a change of name, with the debt becoming recorded instead of unrecorded. This is already progress, but what we really want is the ability to generate capital markets that allow the accumulation of capital needed to produce more capital, which is what lies behind growth.

But that is not all, the other important element in long-term growth is the total factor productivity or multi-factor productivity. This multi-factor productivity is a summary of countries’ ability to innovate, undertake and create new companies that will not only create wealth, but also create employment, especially among young people. This undertaking is only possible if there is risk-capital capacity and that depends on the depth of the capital market. So once again the driving force is based on the vigorous development of a social security system based on capitalisation.

But that is not all. In the year 2008, important second-generation reforms were introduced in the Chilean pension system, making an effort to add what has been called the Solidarity Pillar. If this Solidarity Pillar is well-designed, with adequate incentives, it may produce an important effect in terms of alleviating poverty and reducing inequality.

III. Some challenges and pending reforms in the individually-funded systems

Naturally, there is always room for improvement. There are reforms pending for the future and I shall be mentioning just a few.

The first refers to the creation of a pension culture, where the worker understands that these resources are his/her own, that they belong to him/her and are not a tax. I believe this to be absolutely essential; culture has to do with traditions, rites and customs and Chile has important issues here. For example, wages in Chile are negotiated net, which means that there is an implicit notion that the contribution to the pension fund is a tax. In the United States or in advanced countries, however, these negotiations are never net; the tax or the contribution to a savings plan are the
worker’s responsibility, because they are part of the wage. It is the worker’s money. In Chile I believe that it would be interesting to follow this same scheme of wage negotiations in gross terms, as part of a new pension culture.

The second issue that I believe to be very important has to do with having mechanisms to reduce or minimise people’s behavioural inertia. It is necessary to include in our analysis the fact that there is incredible inertia in people’s behaviour. Recent advances in the so-called “economics of behaviour” recognise that people have a tendency not to make changes. For example, in the pension systems in the United States it has been proved that 80% of people do not change the beneficiaries of their survivorship pensions when they change marital status. So, there is a series of trends towards inertia that must be included in the analysis. For example, there are firms that offer their workers parallel contributions (the so-called “matching contributions”), so that if, for example, the worker deposits USD 100 in voluntary savings, the firm pays a further USD 100 into his/her account. In these firms people do not sign up, even though they are being offered USD 100 as a gift. On the other hand, if the person is signed up automatically and has to go and pull out in order not to participate, almost nobody does so, simply because of this inertia factor. I think it is very important to start including this fact in the analysis of pension reforms for the future.

Another very important aspect is to continue incorporating multi-fund schemes into the individually-funded systems. This seems quite obvious for those of us who are fully-informed about pension system development, but politicians sometimes fail to understand the obvious. For this reason it is not enough to be concerned only about the active situation, promoting new initiatives to improve the individually-funded pension systems, reinforcing them so that they continue to operate with the robustness that they have shown in the last few years and operate much better than the alternative pay-as-you-go system. It is also necessary to have a defensive attitude and avoid the bad ideas of some politicians. I believe it is very important to be on the alert, and this is not an ideological issue but rather a purely professional question of common sense, concerned with halting the bad ideas that arise in all governments. It must be understood that retirement and pension funds are for retirement and pensions, and not for other purposes.

IV. Closing remarks

The individually-funded systems have given good service to the countries that have adopted them. They have been robust systems, capable of surviving the
assaults of crises much better than the alternative system. This system not only allows countries such as Chile to be the brightest star in Latin America today, but also allows other countries that have adopted the system to keep moving forward along the path of prosperity and progress that our peoples so richly deserve.
CHALLENGES FOR EXTENDING COVERAGE TO LOWER-INCOME WORKERS

FELIPE KAST 1

1 Felipe Kast is an Economist with a Master’s in Economics from the Catholic University of Chile and a Doctorate in Public Policies and Economic Development from Harvard University, USA. He has worked as a lecturer in Economics at the Catholic University of Chile and as Director of the Social Program of the Fundación Libertad y Desarrollo. He has also worked as a consultant for the Inter-American Development Bank (IADB) and the World Bank. He is currently Minister of Planning in the government of the President of the Republic, Sebastián Piñera.
The pension reform recently implemented in Chile has made considerable efforts to reinforce the pension system, with special advances in the protection of those who are most at risk. However, great challenges still remain in terms of extending coverage to lower-income workers.

This article presents a brief diagnosis of the situation concerning pensions in the country and proposes a series of measures to extend the system’s coverage to those sectors of the population that have least protection.

1. Diagnosis of the pension system’s coverage in Chile

The number of contributors in the country’s AFP System has grown considerably in the past two decades (68% between 1993 and 2009, see Graph Nº 1). The biggest rise occurred between the years 2004 and 2008, with the annual growth averaging 7%, but this slowed down in 2009, due probably to the financial crisis.
On breaking down the total figures according to assessable income level (Graph Nº 2), one discovers the existence of a large group of contributors in the medium-low income sectors (contributors with incomes between CLP 100 thousand and CLP 250 thousand). These correspond to 34% of the total number of contributors as of September 2009. It is also possible to see that the amounts of contribution have tended to rise, in fact two new groups of contributors have appeared, and the size of the group with lowest incomes (with an assessable income of less than CLP 100 thousand) has decreased over time (in 1993 they constituted 52% of the contributing population and in 2009, only 6% of it), due partly to economic growth.
GRAPH Nº 2
CONTRIBUTORS IN CHILE BY ASSESSABLE INCOME
(1993-2009)

2. How can the lower-income sectors be reached?

With the aim of providing for the old age of the group with fewest resources, of encouraging saving among those who pay contributions and increasing the system’s coverage, the recent pension reform created a series of new instruments, which are starting to be implemented. Most important among these are the Basic Solidarity Pension (PBS), the Solidarity Pension Contribution (APS), the increased incentives for Voluntary Pension Saving (APV), the creation of Collective Voluntary Pension Saving (APVC) and the compulsory enrolment of self-employed workers.

This has represented an important advance in terms of reducing vulnerability in old age. However, as was mentioned earlier, there is still the challenge of
increasing the contributory system’s coverage, especially towards the lower-income and informal work sectors, in order to achieve something better than the legal minimum at the moment of retirement. The great drama of the lower-income sectors is that they form part of an informal economy. This is not a characteristic specific to Chile alone, but one that occurs regularly in developing countries.

How, then, can coverage be extended to the lower-income sectors? How can contribution among informal workers be encouraged?

The answer to these questions could be along the lines of extending the Voluntary Pillar (which is already being used quite widely by the middle-to-high income sectors) to the middle-to-low income sectors, thereby encouraging those sectors to save.

2.1 Using scientific evidence and new technologies in mechanisms that promote saving

We human beings are normally less than prudent, and as a result we find it hard to save (that is why we have a pension system that obliges us to do so). In other words, our problem in some senses is that we are “temporally inconsistent”: we say Yes, I’d like to save”, but in practice we do not do it.

The theory states that the effect of the interest rate on saving might be important, but practice shows that this is not so in the case of sectors with lower incomes.

In an experiment carried out over three years in conjunction with Dina Pomeranz2, we studied the influence of various different mechanisms on saving. A control group was provided with a no-cost savings account during the period of the study and different incentives were used to encourage saving, particularly higher interest rates and group savings goals. The result obtained showed that the effect of the group savings goals was considerably greater than that of the interest rate, though in neither case was the average saving sufficiently important. Other mechanisms to increase saving, such as training people, have not been found to increase saving substantially either.

2 “Peer Commitment as a Saving Device: Evidence from a Field Experiment among Low-income Microentrepreneurs in Chile” (2009).
What has been seen to work well is default saving, in other words, arranging for the funds to arrive at a savings account by default. Pilot plans related with mechanisms of this type have given very good results and have shown the existence of a strong demand for preventive savings, which serve as a “cushion” for lower-income families in case of emergencies or to pay off loans or debts.

It is on the basis of this argument, that of default saving, that the proposal will be prepared for extending the Voluntary Pillar to the lower-income sectors.

2.2 Taking the Voluntary Pillar to the lower-income sectors

The proposal for extending the Voluntary Pillar of the pension system consists of carrying out voluntary saving by using the state transfer payments received by a percentage of the country’s population. In other words, the subsidies and monetary transfers that people receive would be paid into a bank account, which would have the option of sending a certain percentage of these to a savings account (or capitalization fund) automatically. The funds accumulated in that account would be kept for people’s old age and could be treated under conditions similar to those of the traditional APV.

The following would be a practical example: let us assume a family made up of a working woman in an informal job, with three children under the age of 18, who belongs to the poorest 40% of the population, in the second half-year of the Chile Solidario\(^\text{3}\) program, and who lives in Santiago. This woman receives the following subsidies each month:

<table>
<thead>
<tr>
<th>Subsidy</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Family Subsidy</td>
<td>CLP 6,500 for each child = CLP 19,500</td>
</tr>
<tr>
<td>Drinking Water Subsidy</td>
<td>CLP 9,500</td>
</tr>
<tr>
<td>Chile Solidario Grant</td>
<td>CLP 10,050</td>
</tr>
</tbody>
</table>

\(^3\) Chile Solidario is the component of the Social Protection System dedicated to attending families, individuals and territories in a position of risk. It was set up in the year 2002 as a government strategy aimed at overcoming extreme poverty. Later, the consolidation of an institutional network to support social integration, the generation of mechanisms to increase the opportunities available to people in the territories and the introduction of the Social Protection Record made it possible for Chile Solidario to extend its coverage to other groups, producing initiatives to deal with a variety of high-risk situations affecting the population.
In total, the head-of-household in the example receives a monthly sum of CLP 39,050. If the head-of-household were to save part of this subsidy, say CLP 2,000 per month, in a capitalization fund at 5.5% per year in real terms for 40 years, those savings could turn into CLP 20,000 per month at the point of retirement. If there were also a state subsidy of the APV type, this woman could achieve an additional pension of CLP 22,879 per month. 4 The fact of paying contributions would also qualify her for the Solidarity Pension Contribution (APS), meaning that she would have access to a pension higher than the Basic Solidarity Pension (PBS).

This idea of saving by default becomes particularly important if we consider that in the next few years the Government will be implementing the Ethical Family Income program, which is currently on the drawing-board and will allow the most vulnerable sectors of the population to have access to an even greater number of direct transfers. In addition, the intention is to reform the delivery of state transfers, in such a way that these do not have to be collected at an office in the form of a cheque, as occurs today, but will be paid directly into a savings account. Bearing in mind the fact that the recipients will have transfers that are quite stable over time (especially in the sector of mothers with children, where the transfers run from when the child is born until it reaches adulthood) this opens up a broad spectrum of opportunities for voluntary pension saving in the families of that socio-economic stratum.

2.3 Evaluating a possible link between the Voluntary Pillar and the high demand for "preventive savings" in lower-income sectors

Assuming that the transfers allocated to the lower-income sectors go directly (and by default) into a savings account, the funds collected could be used for a second purpose: that of serving as preventive savings to be withdrawn by people in times of low income.

Investigations for various different countries show that over half the estimated poverty corresponds to a component of transitory poverty, which is explained by the lack of a “cushion” to enable people to cope with economic crises in their own homes. In addition, low-income groups have more difficulty in obtaining external funding in moments of crisis.

4 Source: www.principal.cl.
Graph Nº 3 shows Chile’s response (EPS) to the following question: “If, due to an emergency, you needed to raise a sum of about six times your monthly wage, could you raise that sum of money within a month?” In the graph it can be seen that in lower-income sectors, although their monthly incomes are lower (and they therefore need to collect less money), the proportion of people who state that they could raise the money is only 17%, which is considerably below the 66% of the richest income quintile.

In this sense, being able to count on preventive savings might be extremely useful for the poorer households in the country. This is even more so, if one bears in mind that the negative shocks for this group of the population tend to be more frequent than for the remaining groups (it is a well-known fact, for example, that unemployment is concentrated in the lower-income sectors, meaning that the frequency and the intensity of this type of problem are more prevalent in those sectors (See Graph Nº 4)) and that a high proportion of the...
workers in the first quintile in the country are not eligible for unemployment insurance (generally because of informality), meaning that they have less coverage against such an eventuality.

By way of conclusion, the proposed instrument would therefore consist of voluntary savings based on state transfers that could be used for two specific purposes: (i) as old-age pension and (ii) for withdrawals in periods of low income.

In the design of the instrument, the possibility of imposing certain restrictions or costs on early withdrawal could be explored (as occurs at present with the traditional APV funds), in order to make the idea of keeping the funds for old age more attractive. For example, it could be made a condition that the withdrawal of funds in case of need should be partial and not total, or that the withdrawn money should lose a percentage of the interest that had been accumulated.
3. Final remarks

The 2008 pension reform made great efforts to improve the pension system existing in Chile and particularly to ensure a minimum standard of welfare in old age for the most unprotected members of society. The pending challenge is to increase the coverage among lower-income workers, and for that reason it is vital to explore mechanisms that are a little more sophisticated.

A possible voluntary pension saving scheme designed specially for these sectors, where there is also a component or link with preventive saving, may be an interesting mechanism for penetrating the most vulnerable sectors of the population and making them part of society.

In our culture, saving is not normally thought of as a great channel for dealing with poverty, but in other parts of the world these ideas are coming in with increasing force. Above all, because the diagnosis of poverty is starting to be made as a movie and not simply as a snapshot, in other words, we are beginning to see the dynamics of poverty over time. This is similar to what happens when we talk of income distribution versus social mobility. Income distribution is a snapshot, but the transition of income over time and between generations is what gives us a clearer picture concerning the real social problems and the real challenge that we have to face, and shows us where the most vulnerable points are located.

Understanding the vulnerability that exists in households when a negative income shock occurs is a crucial part of the task on which we are engaged. It is therefore imperative to develop a savings instrument that acts as a shock-absorber in crises, thinking in terms of a scheme in which the worker is informal. In Chile we also have the Social Protection Record, an instrument that makes it possible to identify the level of vulnerability and focus the subsidies.

Any preliminary proposal obviously needs to be evaluated and piloted, and the real effects on the population have to be observed. It is not enough to design an instrument or have a good idea: the tools that we have available today enable us to assess whether the quality of life in households really improves and whether the proposals turn out to be truly effective.
HOW TO INNOVATE IN A REGULATED INDUSTRY

WENCESLAO CASARES

1 Wenceslao Casares founded the Banco Lemon, a Brazilian bank for poor people, in June 2002. This Bank eventually had 7 thousand branches and 15 million clients before it was sold to the Banco Do Brasil. He previously founded the Video Game Development company, Wanakogames, with offices in New York and Santiago, Chile. Wanakogames was sold to Activision. He is currently Founder and Executive Director of Bling Nation, the Mobile Payment Firm, based in Silicon Valley in the United States.
The whole issue of innovation, whether in regulated industries or otherwise, is one that concerns me greatly, both directly and indirectly. The day-to-day business of the things that I have to do has a great deal to do with innovation. However, I have never had to expound my ideas on the subject of this article, and that has forced me to analyse the things I have learned. It seemed a very interesting exercise.

This article is written with two biases. One is that it is written from the practical side, as opposed to what the academy says about innovation. It is based on very practical examples, which I have seen many times. The second bias is that its main focus is on start-up companies.

The article is arranged as follows: first, there is a description of the types of start-up that exist in regulated industries. Then it looks into the environments that favour innovation. Thirdly, there is a description of two specific cases of companies that manage to generate innovation and live with its unwanted results. In the fourth place, it mentions some of the myths that are going around on the subject of innovation and also some realities that are worth clarifying. Finally, there are some conclusions referring to the attitude that one needs to have in order to achieve innovation and, also, its final aim.

I. Start-ups in regulated industries

In regulated industries (such as the financial or health sector), there are two

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2 A start-up company is a business with a limited history of operation but great growth potential. Such companies generally come from the business world, in other words, they belong to entrepreneurs who set up companies that make a positive contribution to the development of their countries and themselves by encouraging practices associated with innovation, technological development, quality jobs, better distribution of wealth, etc.
clear types of start-up. The first type, which is the most typical, is that founded with people who are veterans of the industry, people who have been there for many years, with over a decade working in the same industry. What these companies have in common is that they have large structures right away, from the moment they are launched. They are well-constituted from the point of view that they can pass any inspection, report to regulatory bodies and pass the inspection of a regulatory body, a client or a third party. The big disadvantage of having these large structures lies, first, in the fact that the window for finding a good match with the market is relatively short, because they are spending a lot of money right from the beginning, and second, these large structures also make it more difficult to iterate the business model until a good match with the market is found.

One of the most well-known risk investors in the United States, an investor in Facebook, Twitter and various other companies that are going very well, called me a little over a year ago and asked me a lot of questions, some of them quite strange, such as my height, measurements and whether I do sport. I answered them all and then asked him why he wanted to know. He told me that a study was being done on all the investments that people had made in the last few years and he wanted to compare all the successes with all the failures, to see if they had anything in common. Later I bumped into this person and asked him what he had found out in that study. The reply was that the only coincidence they had found was that absolutely all, or practically all the successes had occurred as a result of one or various subsequent business plans, a variety of iterations of the original business plan. In other words, the ability and will to try things out, keeping what works and rejecting what does not, is a consistent element of the successes. All the failures which occurred had in common the fact that people did not have the ability to iterate the original business plans, but stuck to and sank with the original idea.

The second type of start-up is one typical of Silicon Valley, with young people who probably have no experience in any sector, who have a tendency to be much more innovative and destabilising. Their problem is that they tend to have a very high failure rate.

When one sees a start-up in a company in a regulated industry, it typically matches one of the types described above. It is very interesting to see that there is a space in this environment, difficult to define but with a lot of value to be created, a space that allows us to operate with a minimum of infrastructure,
making it possible to pass an inspection, or work with a regulator, but at the same time, to have a low-profile structure and low costs, to iterate the model and leave out the parts that do not work. It is much easier to say this than to do it, but it is a more or less constant element of companies that work relatively well and innovate relatively well in a regulated space.

II. Which environments are favourable to innovation?

Which are the environments that cause or help companies to innovate? I find that it is quite useful to start by talking about the opposite, an environment that is specifically designed not to innovate, and the best example I know of is an army, especially an army in action, an army in a battle, which does not want to innovate. If you are a General, your aim is for the army to do what you expect. You do not want unexpected results, you do not want people trying out things other than what you are telling them. One of the most powerful tools that exist for achieving this are hierarchies. Hierarchies are very important, because one would never have the courage in such an environment to contradict one’s superiors openly in front of another person, but they are also very deep and are also reflected in everything, from how the members of the organisation are dressed to the way they behave, with salutes or with offices. Armies also have to be one of the most efficient bureaucracies in existence and this is consistent with the search for expected results.

When one sees the opposite example, in other words an example of an environment made to produce innovation, one finds obvious differences. An example that is used a lot, maybe the one repeated most often, is a company called IDEO, based in Palo Alto. It has 8 offices around the world and is a mixture of a consultancy firm and a design, creativity or publicity company, but dedicated to selling creativity and innovation to big companies. They have an environment in which, if they do not produce innovation, they will inevitably die, because they will have nothing to sell their clients. The tools that they use for this purpose are interesting. It seems trivial, but one walks through the IDEO offices and sees immediately that it is almost the opposite of what an army might be. It is very difficult to find out who the boss is; the offices are very unstructured and people dress in a way that is quite different from anywhere else. The way they address each other is also quite different and what people are doing seems peculiar. The organization chart is very flat and difficult to understand, with many changes; it is made up of groups that are constantly changing.
The offices have many productive elements, which are perhaps, in part, a consequence of a creative environment, but they also help creativity and innovation. You can see bicycles hanging on the roof, for example. Once I went to visit them. When I went in, we were walking into the conference room, and there was a man working inside a Volkswagen minibus. He looked very strange and I could not help asking: “What happened to that man? Is his cubicle a Volkswagen minibus, inside the office?” The reply was: “Oh no! It’s just that here in IDEO we have a custom that when someone goes on holiday we have a surprise waiting for him. Since he went on holiday and we know he loves that type of car, we arranged his office like that.” It would be hard to find that in an army, for example, but it is very curious.

The important thing to understand is that an environment that produces innovation does not only produce innovation; even at best, it produces 40% innovation with unexpected results that suit us and that we can use in various different ways. But at least 60% consists of things that we do not want: such as muddle, high costs, inefficiency and mistakes, which are unexpected results that do not suit us, not at all, but we cannot have one thing without the other. In other words, there is a trade-off between efficiency and innovation: the greater the innovation the higher the price you pay in terms of lower efficiency. It is like the equation of risk and return: there may be a little efficiency in the margin, but if someone tells us that he has an investment with a 25% return, we more or less know the type of risk we are taking. It is very difficult to have that sort of return without a relatively high risk.

Regulated industries are regulated for a specific reason: the regulator wishes to guide certain industries to produce expected results, to avoid injuring a person’s health or for financial security reasons. In that sense, the regulator ensures that certain industries are far more similar to an army than to an IDEO. Therefore, innovating in a regulated environment requires much greater creativity than in a non-regulated environment.

There are some interesting examples of how different firms innovate. This is a dilemma, because on the one hand I need to innovate but at the same time I have to bow to a set of rules, give security to my clients, the regulator, third parties, investors, etc.
III. Two specific examples

I do not think that the two examples I am going to give are unique, but they seem to me to be interesting because of the way in which they manage to produce innovation and live with the undesirable by-products of the innovation.

A very interesting example that I experienced at close quarters is that of Microsoft with its product Xbox 360. With the videogames company Wanako Games, we had to work quite closely with this product. Microsoft is a company that invoices USD 60 thousand million per year and has thousands of shareholding investors around the world. So although it is not a regulated company, its position generates certain responsibilities that would not allow a type of behaviour that would maximise innovation, such as is necessary in the videogames industry, because there are lots of responsibilities to be met in terms of income and costs targets. If I am an investor or shareholder in Microsoft, that is what I insist on. I also want innovation, but if they make a mistake on the first issue, I am probably going to penalise them.

In the videogames industry, this works very differently. If you do not innovate dramatically, you get left behind, and what Microsoft decided to do, after trying various options, was to make the Xbox building on the Microsoft campus in Vermont, separate and further away than all the rest. You have to walk quite a way to get there and it is a different building: large, strange, and when you go in, it is almost like coming face-to-face with a total accident. The organisational structure is different, the system of rewards is different, when you arrive they make you change, putting on a hat and a cloak. They make it quite clear to you that you are in another environment. This, therefore, is a way in which a large company like Microsoft can have an innovative element that absorbs part of the innovation but contains all the undesirable part of the result in this separate environment.

Another interesting example is Cisco, which has a very different approach, based not on spending the quantities of money that Microsoft spends on research and development, but on being much more disciplined in how the company is run, being the most aggressive in the market in terms of takeovers.

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3 Cisco Systems is a multinational company with its headquarters in San José (California, USA), dedicated mainly to manufacturing, selling, maintaining and advising on telecommunications equipment.
The idea consists of buying small companies with good innovation, which is not a bad strategy. It works well for Cisco.

IV. Innovation and regulation: myths and realities

There are many myths repeated about innovations in general. For me, the most important and most damaging is that you can set up processes that produce innovation, whereas in fact it is the exact opposite: it is “non-processes” that produce innovation.

In academics there is a whole school of thought selling the idea that there are certain processes that we can implement to produce innovation. I have never seen one that works well, and I believe that the careers of many executives are written off along the way, a lot of money belonging to large companies is spent and no innovation is produced.

The second myth going around is that regulation avoids innovation taking place. I believe that there are examples to prove the contrary and in fact I know many companies (such as PayPal, IShares, AlertPay, Moneybookers and ClickandBuy) that could not exist if it were not for regulation. Regulation becomes a restriction that makes people very creative, to see how there can be better service, given this regulation.

The third myth is that there can be no innovation in a regulated industry. There is a generalised belief that this is always so, but there are very interesting examples of companies (such as ING Direct, Progressive and Medtronic) which are innovation machines. The only way by which they have grown and continue to grow is by innovating within industries that are highly regulated.

From my point of view there are two facts as regards innovation. One of these is that innovating in a regulated environment really is more difficult than innovating in a non-regulated environment. In part, this is because a regulated environment is necessarily more structured. In a regulated industry, whether regulated directly or indirectly, one of the aspects being regulated are the returns, the companies’ yield, so it is unusual to find a regulated company being frightened that it will disappear tomorrow. And that fear of disappearing tomorrow is a great booster of innovation in general. So, in a regulated industry where this risk does not exist, that very strong urge of having to innovate is less
likely to be present. Sometimes, although the regulated see the regulator as a separate being for whom they have a lot of respect, they also make lots of complaints. The regulated body becomes like a walking regulation. It absorbs them so thoroughly that it is in the worst position to think about what things it might do around this regulation, and this ends up becoming a restriction.

The second reality - and though it is not pleasant to say so, it is nonetheless true - is that sometimes, in some environments, in some circumstances, innovation is not the best answer. Sometimes the same effort, the same resources and the same time that we could put into innovating would, in certain circumstances, be much better applied to other things. Sometimes innovation becomes a beautiful, glamorous, fashionable word and it seems that we must innovate at any price, for any occasion, at all costs, and I believe that this is not always true. There are many examples of this, some of them recent, with the innovation in financial products in the latest crisis, but there are many more.

V. Conclusions: the attitude that leads to innovation and its aim

Within the culture of a company, the consistent way that helps most towards innovation or thinking about what to innovate, is to concentrate on the client’s need, in as pure a way possible. This is considerably more difficult than it seems, because one ends up understanding the client’s need on the basis of the product that we are selling to him. But let’s take the case of a College Fund, for example, a fund that we sell to someone who has just had a son, who knows that within 16 years he will have to send his children to University and wants to save for that. The purest way of understanding this need lies in realising that the person to whom you are selling the fund wants to be certain that when his son goes to University, he will be able to afford it. That is all that matters to him, even though he has any number of uncertainties along the way: he does not know whether his son will get in or not; if he does, he does not know what his son will want to study; he does not know which University he will get into or how much it will cost. In theory, with the financial products that exist today, it would be possible to design a financial product that would simply sell him this need. We have to think of the client’s needs in a way which is that bare and that basic, and forget all about the product that we have, forget what we are selling now and what people are buying now, even forget the regulations. In other words, we really have to ask the question: what does this client need? It is less trivial than it seems.
Ultimately, if one thinks in this way, thinking of the client’s needs in as pure a way as possible, what is the aim of innovation? Is it to provide a better service? Or is it to make my company more profitable? There is a school of thought which says that the real aim of innovation should be to make the company more profitable.

I find it difficult to come up with real examples of companies that have a culture of focusing innovation on profitability and where this can be maintained over time; maybe it is an accident that innovation was once introduced and profitability improved. But I do find the opposite: in other words, companies that are obsessed with concentrating on providing their clients with better service are companies that are constantly innovating, and almost by accident, though they are not focusing on it, they are improving the profitability of the company.

I believe that realising intuitively how we might improve the service we are giving is a good indicator of how much emphasis we need to put on whether or not to innovate.
ROBERT C. MERTON

1 Robert C. Merton, currently Resident Scientist at Dimensional Fund Advisors, is the School of Management Distinguished Professor of Finance at the Massachusetts Institute of Technology Sloan School of Management. He was the George Fisher Baker Professor of Business Administration from 1988 to 1998, and the John and Natty McArthur University Professor from 1998 to 2010 at the Harvard Business School, where he is now University Professor emeritus. Professor Merton served on the finance faculty of the Sloan School from 1970 to 1988. He received the Alfred Nobel Memorial Prize in Economic Sciences with Myron Scholes in 1997 for a new method to determine the value of derivatives. He is a former president of the American Finance Association, a member of the National Academy of Sciences, and a fellow of the American Academy of Arts and Sciences.

Professor Merton received the inaugural Financial Engineer of the Year Award from the International Association of Financial Engineers, which also elected him a senior fellow. He is the recipient of the Nicholas Molodovsky Award from the CFA Institute, a distinguished fellow of the Institute for Quantitative Research in Finance, and a fellow of the Financial Management Association. He was a co-founder of Long-Term Capital Management.

Professor Merton received a B.S. in engineering mathematics from Columbia University, an M.S. in applied mathematics from California Institute of Technology, and a Ph.D. in economics from MIT. He holds honorary degrees from the University of Chicago, Claremont Graduate University, and seven universities outside the US.
I. Pension goal and means for achieving it

The pension goal is to obtain the *desired income* at retirement. That desired income represents an inflation-protected annuity for life, adequate to maintain the standard of living enjoyed in the latter part of work life.

After we have identified the goal, no matter how institutionally it is implemented, then it is imperative to develop an individual financial plan to maximize the probability of achieving that desired goal, subject to an acceptable level of risk protection expressed by a minimum level of life income in retirement.

Ways to improve the probability of achieving the desired income:

a. Efficient and effective use of all available assets of the employee and low cost of investment services

It would be relatively easy to meet the goal if everybody could save a fifth or a sixth of his income, however that is improbable. Therefore, every person has to make the most efficient use of all the assets that are available for achieving the goal. Nobody has “extra money”, so money should not be wasted.

b. Increase contribution rate: save more

If the efficient and effective use of all available assets is not adequate and one wants to increase the chances of achieving the desired-income annuity for retirement, one can make higher contribution rates, more saving and thus, less consumption now. That’s the fundamental life-cycle principle, there must be a balance between consumption during the work life and consumption in retirement. That is because nobody wants people forced to live at minimum
levels and most people would prefer not to have a standard of living in retirement that is very different from the one they had during their work life.

If someone wants to maintain the same income in retirement as that enjoyed in the latter part of his work life, the person needs to save an amount around 16 times the annual income. The point that matters is, whatever the investor saves, for whatever life income he wants to have in his retirement, that is the target.

One of the ways to improve the chances of reaching that target is having an adequate contribution rate.

c. Increase retirement age: work longer

Another way to enhance the probability of achieving the goal is to increase the retirement age. Although nobody likes that, since all people like the option of retiring earlier, there is good news. As we know, in developed and in developing countries, longevity has substantially increased and it is forecasted that it will continue to go up. However, there is a dilemma of balance here, because one works for part of one’s life and then one retires. During the work time, one not only has to make enough to eat and consume during that period of life but also in retirement. The longer one works, the more savings one will have for retirement and the less one will need for retirement.

The idea is not to judge how that balance should be done, but instead to make available meaningful choices in an understandable way. In theory each informed individual has to make that choice mainly based on his personal preferences. Either choosing to have less in retirement in order to enjoy more consumption today or choosing to have more in retirement to enjoy more during that period.

d. Increase risk of investments

Although changing the work life is effective, nobody wants to do it. The alternative that we have is to increase the risk of our investments in order to get a higher expected return and therefore obtain the target. However, we need to understand that taking more risk is really more risky.

However, there is a misinformed belief that over a long enough time-horizon
risky assets such as equities are not really risky. Therefore with a long enough frame of time we don’t have to worry about the risk; we just get the higher expected return. If this theory really worked there would be a solution for every country with a deficit. Even more, this could be a solution for people who don’t like paying taxes. Suppose a government issues debt at 5%, takes the proceeds and invests them in equities at 10% expected return. In the short run the risky investments can fluctuate but, if one believes in the long run, equities are sure to give a return higher than the debt issued. Therefore with enough time every country can solve any economic problem. Although this would be wonderful, unfortunately it is not an accurate picture of reality.

As a quick empirical validation, consider Japan, arguably still the second largest economy by some standards. In 1989 the Nikkei stock index was at 39,000. Well, in 21 years its value has declined by more than two-thirds to 12,000. That’s a pretty long horizon to catch up. Imagine how long, if ever, it would take to just get back to where it started. There was no revolution there, there was no depression. To consider taking additional risks is fine once we recognize and accept that it is really risky. Higher expected returns are not a free good. We have to communicate that to the individuals involved in making their decisions.

II. Household pension investment management in the future

Consider the work of Harry Markowitz, James Tobin and William Sharpe, the so-called Mean-Variance Model for Portfolio Selection which is more than 50 years old, almost 60 in the case of Markowitz. This model is still the mainstream influence on practice after more than half a century because it is a great tool for analyzing risk and return trade-offs. However, it is now time to expand beyond it to include other important dimensions of risk.

a. What is the “risk-free” asset for retirement funding?

The Mean-Variance Model does not consider other risks that exist in the pension regime. One such is interest rate risk, actually real interest rate risk, adjusted for inflation. A good way to explain why this risk is important for effective decisions is by using an example. Which is preferable, one million dollars or two million dollars? At a first glance the answer is very easy, two millions dollars. However, what would be your answer now if you have to choose between one million dollar invested for the rest of time at a 10% riskless
real rate and two million dollars invested for the rest of time at a 1% riskless
real rate. Which is preferable, a perpetual income cash flow of one hundred
thousand dollars a year in real terms or a perpetual income cash flow of twenty
thousand a year in real terms? Again the answer is easy. However, the goal is
not only how much money one can accumulate, but the earning conditions
that money can provide as a flow, in particular, how it relates to the desired
standard of living that one wants.

Standard of living is not is not measured by having a certain amount of money.
It’s described instead as a flow of income that would support a lifestyle. What
is shown by the example is that knowing how much money one has is not
sufficient to measure even economic welfare, because one needs to consider
the interest rate and what that money can support in terms of an income flow
for life. The question is not how much money one has at 65 years old, but how
much income it can produce to support the standard of living in the future.
Once that question is answered and accepted, the question of “what is the risk-
free asset?” can be determined.

The risk-free asset is not a treasury bill whose value doesn’t fluctuate over its
short life. Instead it’s a deferred real annuity for life starting at the retirement
age. To illustrate the significance of expressing one’s retirement accumulation
in terms of income units, consider the price of a treasury bill moving over a
month or a quarter, and look at the price movement in a deferred real annuity
for a 45 year-old retiring at 65. A deferred real annuity would have 20 years
and then it would have all the payments thereafter. Clearly, that would be a
very sensitive interest rate. Now, what is one of the problems that show up
in an independently funded plan over a Defined Benefit (DB) plan, caused by
uncertainty over future interest rates?

One problem is duration. All the contributions are made earlier than all the
benefit payouts. Because of that, the duration of the contributions has to be
significantly less than the duration of the payouts, and therefore as a structural
matter, every account is going to be “short duration” (meaning that if interest
rates fall, the present value of future payouts will rise more than the present
value of future contributions). It is important to recognize this risk caused by
the mismatch structure of payments. However this duration-mismatch risk can
be offset, if there is a sufficient account accumulation available to invest in very
long-duration assets.
An alternative solution to this structural duration-mismatch risk, which is actually being done in the private sector, is to have the plan-sponsored matching contribution-rate depend on the interest rate, instead of having a fixed-percentage contribution. One contributes more when rates come down and less when rates go up. In general, if the contribution function changes the duration mismatch will be affected as well.

My last point is rather a psychological-communication one, but important. Every person receives his statement every month or every quarter and that statement shows the current market value of the assets in the account. However, the standard format can be very misleading. Consider an account invested entirely in long-duration inflation-protected bonds with no credit risk. Clearly, this is close to being a risk-free asset in terms of the life income goal of the plan participant. However, the value of that portfolio can fluctuate quite dramatically because of possible unexpected changes in interest rates. Those changes in current market value arising from changes in the interest rate can produce effects on participants, since they may wonder why that volatility occurs, if this is a risk-free asset. The solution for avoiding confusion is to report the permanent income for the retirement account rather than the accumulated amount. It is understandable that by law the accumulated amount also has to be shown, but the first thing that people see should be the information that matters to them: namely, the level of inflation-protected income in retirement. A corollary to that is, for example, in periods where stocks go up, bonds go up because interests fall, and participants may be misled. If people look at their accumulation they are going to think that they are further along to their retirement goal than they actually are, because simultaneously with the value of the asset going up, the cost of the annuity, receiving a specified level of life income, is also going up.
III. Effect of real annuity as numeraire on risk-return frontier

To show the effect, one can use the Markowitz model, but in this environment the figures or units that matter are neither pesos, nor dollars, nor sterling, nor Euros. The figures here are retirement units, the annuity, what is the cost of that unit, that’s what matters, that’s the risk-free asset. All retirement units are priced as a deferred annuity starting at the specific retirement date of each individual. The retirement units provide us a stream of $1 every year in real terms, that’s the standardized unit.

**Graph No. 1**

MSCI World Monthly Returns

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Source: Dimensional.
GRAPH NO. 2
US TREASURY BILLS MONTHLY RETURNS

SOURCE: DIMENSIONAL.

GRAPH NO. 3
RISK/RETURN

SOURCE: DIMENSIONAL.
By inspection of the returns on MSCI World equities (a surrogate for the annuity) [see Graph No. 1], and US Treasury bills (see Graph No. 2), it can be seen how different are the observed patterns of returns, especially their volatilities, depending on which units are used to measure the returns.

The risk-return figure (see Graph No. 3) shows the average return and volatility for each of the three assets, measured in dollars and in retirement units. When one moves to using retirement units, the annuity becomes a risk-free asset with zero standard deviation. Treasury bills become risky. How they can be seen in terms of the risk versus returns points is quite different, just as it would be different if the returns on the same assets are measured in different currencies, such as Yen versus dollars.

There are other risks such as longevity risk and inflation risk. Even though we can not hedge longevity risks in the capital markets at the moment, we can still use insurance companies to get price estimates. But when longevity bonds become available in adequate amounts, the intention is to hedge that risk in the individual accounts in the same way we hedge inflation with inflation-
protected bonds. And again, the risk-free asset would be a deferred inflation-protected life annuity purchased at retirement and during the saving period, the amounts allocated to the risk-free asset would be invested in a portfolio of inflation-protected and longevity bonds that’s designed to mimic a real annuity, including longevity risk.

IV. Benefits of global diversification

Many countries have rules in their pension systems, even for the employer plans. Often there’s a limitation on how much investment can be done in securities outside the country and that implies a cost from the lack of diversification.

Graph No. 5 plots the expected returns versus volatilities, over the last 30 years of the 20th century, measured in dollars, for 18 equity and debt portfolios.
This graph can be used to illustrate the high cost to countries from inadequate diversification.

The white square is the market portfolio of those aggregated portfolios. By inspection the risk-free asset averaged about 6%.

For those 30 years the market portfolio strategy was the most efficient ex-post, because it has the highest Sharpe Ratio. The standard deviation of the emerging market equity portfolio was 22%, and its average return around 9%.

The Rule of 72 tells us quickly and roughly how long it takes to double invested money earning a specified interest rate. One has to divide 72 by the interest rate. For instance 72 / 6 = 12 means that an investment with a rate of 6% will double in 12 years. If one had a fully diversified portfolio, not knowing the right time to buy or sell, but just through efficient diversification one would have achieved in this period over that portfolio 5 to 6 times more wealth.

However, the reasons often given for not allowing more investment outside the country are not directly related to investment performance but are related to other issues. One such issue is people believing that money invested by the pension funds should go to companies for which the people are working. A second issue has to do with governance. Many countries are uncomfortable with the thought that with local investments going overseas instead of into own-country shares, foreigners could end up owning a controlling interest in many of the companies in the country. That is an issue in some countries.

Can the purposes for the diversification restrictions be addressed without penalizing the investors? For many years, Canada had a rule that 90% of pension fund assets had to be invested in domestic companies. To solve their lack of diversification problem while meeting the regulatory requirement, Canadian pension funds bought Canadian stocks and held them, but also entered into total-return swap contracts in which they received the total return on the world portfolio and paid the total return on the Canadian portfolio. Effectively they transferred the concentrated stock-market risk while maintaining the ownership and whenever there were new issues of stock, they bought the securities, so the cash was actually going into the local Canadian companies, thereby improving diversification while meeting the cash investment and governance conditions. This illustrates one example of solving multiple objectives while minimizing the unintended penalties from fulfilling those objectives.
Diversification is very important to economic growth through earning the highest returns for a given risk. There is a list that shows the benefits of doing so using this swap.

Relative Advantage of Equity Swaps for Globally Diversifying Risk:

- Minimizes moral hazard of expropriation or repudiation.
- Locals perform industrial governance, trading in shares in local market, receive benefits/losses of local-country-specific component of industry returns, thus avoids political risk of being accused of “selling off corporate control of the country”, if instead this diversification was achieved by having foreigners own the majority of shares.
- Credit Risk: no principal amounts at risk; set frequency of swap-settlement payments (.25, 0.5, 1.0 years); “right-way” contract [the country pays when it is better able to pay]; potential for credit guarantee and/or two-way-marked-to-market collateral, if needed.
- Policy is non-invasive: doesn’t require change in employment patterns and behavior, changes in industrial structure or changes in financial system design.
- Policy is reversible by simply entering into an off-setting swap.
- Robust with respect to local financial system design: even works with capital controls.
- Potential Gains: From 1972-2001, a gain of up to 600 + bps in average return for same risk level by efficient diversification, which would amount to five times greater wealth for the country over three decades.

V. Transform shape of payoffs from investing in the equity + debt Portfolio

There is a third thought on improving the returns for pension participants. The five pension funds in Chile A, B, C, D and E offer various mixes of equity that people can to choose among. The pension system could consider offering additional versions that transform the payouts of those underlying funds.
Graphs No. 6 and No. 7 present the payoff patterns for two examples. One set of payoffs is what an additional transformed portfolio would be worth as a function of the value of the original underlying portfolio, and the other is the 45 degree straight line representing what one would get by simply holding the underlying portfolio (whatever A, B, C, D or E). One can transform the payoffs to create a “floor” or value insurance. This minimum payoff can be thought of as an insured portfolio and can be measured in either retirement (income) units or dollar (current value) units. This insurance transformation is different from
going from A to B to C, because a floor changing the risk properties is put on
the same mix of assets instead of altering the asset mix.

The other payoff example is a “collar” pattern that is similar to a DB plan. It
has a minimum income level in retirement as in the first example. But there
is also a upper limit set at the desired income level for retirement such that if
that level is achieved at any time during the saving period, it is “locked in” by
going entirely into the risk-free asset surrogate portfolio. What is realized will
thus be somewhere between the maximum and the minimum, as the graph of
payoffs shows.

The maximum is set at the goal desired. Once the desired income is achieved,
nothing else is needed. The objective here is to maximize the chances of
achieving the desired income goal, subject to having a minimum income.

The reason for the floor is to be sure that people are adequately protected, that is
downside protection of the risk. However, the desire level can vary depending
on preferences. Even though the specific collar points can be changed, it’s
always the same pattern.

How likely it is to succeed depends on the probability of achieving the desired
goal. To do that one has to manage the money with a dynamic strategy, so as
to maximize that probability, subject to the floor. That is the nature of risks: the
higher the floor, the less risky, but also the less likely to achieve the desired
goal; the lower the floor, the more risky, but the more likely to achieve the
desired goal. By giving up the chance of getting more than the desired goal,
one improves the chance of achieving it. Safety is not free, and neither is having
the possibility of getting more than the desired amount. The floor can be used
as a device to persuade people to undertake more or less risk instead of using
the standard deviation or some probability distribution.

VI. Enhancements in the future

a. Age, means, and interest-rate-dependent contribution rates, and dy-
namic portfolio strategies to maximize probability of achieving desired
income.

There are some ideas about how to enhance the system. The voluntarily
contribution and the non-fixed contribution rate have already been mentioned. The contribution rate should depend on people’s costs in reaching the desired goal, and also on interest rates, which has actually been done, and of course it can also be age-dependent. These strategies are dynamic and separate from asset allocations; they are two different tools that can be used in the form of a contribution.

b. **Standard of living risk: consumption-linked annuities.**

Standard of living risk, that’s for people who may live a really long time. Just protecting them from inflation is not enough. People today, in 2010, wouldn’t like to have the standard of living that they had in 1980. So when people live a longer time in retirement, one has to think about the drift in effective inflation and also in the standard of living. For that reason, rather than investing in inflation-linked bonds it is better to invest in average-per capita consumption-linked bonds, because consumption change is a good surrogate for both inflation and standard of living changes.

c. **Contract efficiency: long-term care and life annuity.**

Everything has to be done efficiently. As an example, people in many countries have long-term medical care in retirement. If one has to buy an annuity contract, combining the choice and opportunity to buy both long-term care and the life annuity at the same time as a package, one should be able to get a meaningful discount. That is not only because of volume sales but also for statistical reasons. People who need long-term care don’t need life annuity payments for as long because they don’t live such a long time. Buying both instruments statistically offset the risks and that is a better deal for people and insurance companies. This is important because it is necessary to find every way to make people efficiently reach the goal.

d. **Bequests and asset efficiency: reverse mortgage.**

Finally, the last point has to do with housing and retirement funding. In the United States the single largest asset an American family has at retirement is not the pension fund, but it’s house. The house that a person is living in will be an important part of his annuity when he retires, because the property gives a stream of housing consumption in retirement, something that the retiree wants to keep. If someone doesn’t have a house, he is taking a risk.
On the other hand, the value of the house after the annuity is not needed is inefficiently used. If people knew how long they were going to live they could receive an additional annuity for retirement living in exchange for surrendering the value of the house at the moment they think they are likely to die.

Retirees who do not know how long they will live can achieve the same outcome by taking a reverse mortgage. It means that a retiree is paid for his house now (receives cash now for taking a mortgage), and lives in that house until he dies without paying anything. In the end, when the interest and principal covered by the property fall due, the retiree’s estate can either pay it and keep the house, or give up the house and not have to pay anything else back.

For those people commercially involved in managing assets, they can generate more assets from the reverse mortgage proceeds that can go into annuities or be managed. Beneficiaries can be convinced through the following exercise. Take the annuities without survivorship and with it. The annuity with survivorship costs more; take the difference in value, take the amount of money they get from the reverse mortgage and even if retirees do not increase their annuity they can take that cash from the mortgage and give it to the kids now. Retirees would be framing it as “giving it now when I’m 65 years old, alive, with children who are 40 years old and have two children aged 10 and 11, who need the money now, versus getting the house some day, this year or 30 years from now at some price, like a lottery ticket”. It’s preferable for the beneficiaries to get the money now when they need it and their parents are alive, rather than as a lottery ticket on their parents’ deaths.
PART I

HOW CAN THE COVERAGE OF THE INDIVIDUALLY FUNDED PROGRAMS BE EXTENDED?

NATALIA MILLÁN. The Pension System in Colombia: Challenges and Alternatives to increase Coverage
EDUARDO FUENTES. Encouraging the Self-Employed to Contribute Voluntarily to the Pension Funds
CARLOS HERRERA. Subsidies on contributions: Mexico’s experience
THE PENSION SYSTEM IN COLOMBIA: CHALLENGES AND ALTERNATIVES TO INCREASE COVERAGE

NATALIA MILLÁN

1 This document is a summary of a paper prepared by the Fundación para la Educación Superior y el Desarrollo (FEDESARROLLO) for the Colombian Association of Severance Pay and Pension Fund Administrators (ASOFONDOS). The authors of the paper are Mauricio Santa María, Roberto Steiner, Jorge Humberto Botero, Mariana Martínez, Natalia Millán, Erika Schutt and María Alejandra Arias.
This article is the summary of a paper that identifies the problems, risks and weaknesses facing the General Pension System (SGP) in Colombia. Its aim is to put forward a proposal that is financially and technically viable, that makes it possible to improve the system’s operation in the future and, particularly, to increase its coverage and reduce its characteristic inequity, resulting from, among other things, the substantial subsidies received by wealthier populations, as is common in defined benefit schemes in Colombia, known as the Régimen de Prima Media or average premium regime, (RPM). The document contains four sections: (i) the background; (ii) the analysis of the perverse relationship between the pension system and the labour market; (iii) the fiscal and financial position of the pension system and its impact on public finances; and (iv) a series of policy recommendations that aim to improve coverage, equity and the fiscal and financial position of the SGP, while underlining the fact that coverage and fiscal problems end up, almost by definition, also being a matter of equity. The final aim of these recommendations is to improve access to the pension system for poorer people, removing the main obstacles that prevent this today.

I. Background: a brief history of the pension system and the transformation in 1993

Although the implementation of the RPM brought benefits to one part of the population and created the bases for developing the pension system, the scheme began to show signs of being financially unsustainable after twenty years in operation, with low coverage and lack of equity. Such problems, which characterised the SGP prior to Law 100 (1993), were due to:

(i) The fact that the contribution rate was not increased gradually, as had been envisaged from the beginning, and that the State failed to pay its part of the contribution. The difference between the planned and real contribution rates marked the road towards the SGP’s lack of financial sustainability from the outset.
(ii) Excessive benefits, relative to the contributions; this gap also became wider as time went on.

(iii) The existence of a wide range of special regimes and management funds which made benefits more expensive (relative to contributions) on the one hand, while at the same time making it impossible to quantify the liabilities and manage the system efficiently.

(iv) Demographic changes, which implied fewer contributions (due to increasingly fewer young people) and higher costs (people were living longer). This phenomenon is disastrous for a system that relies on the premise that the contributions of the young will be sufficient to pay the pensions of the older.

(v) Corruption and administrative disorder that characterized the administration of the RPM.

The pension system was characterised by low coverage, financial unsustainability and inequity and was crying out for structural reform. To give a few examples: at the beginning of the 1990s, membership coverage for pensions (members over the Economically Active Population, EAP) was only just over 20%, while the average in Latin America was between 40% and 50%. What was happening in terms of inequity was even worse: according to Vélez (1996), 50% of members enrolled in the ISS belonged to the wealthiest 30% of households and 5% to the poorest 20%. For these reasons, and in an effort to correct the distortions present in the system, Law 100 was enacted in 1993.

Law 100 aimed to achieve fiscal balance, increase coverage especially for vulnerable populations, improve equity, strengthen the financial system (savings) and improve efficiency in the management of the resources. This reform set up the general pension system, composed of two mutually exclusive schemes: an RPM with defined benefits that combined all the existing funds –the Social Security Institute (ISS) and Cajanal-, and an Individual Savings Scheme with Solidarity (RAIS), managed by Pension Fund Administrators (AFPs) and based, as its name indicates, on individual savings as the hub of protection against the risks of old age.

In addition, it adopted the Minimum Pension Guarantee (GPM), stipulated that the members of the armed forces and police, public employees and employees of ECOPETROL were to be excluded from the SGP –under a separate scheme-, and defined new membership and pension parameters, modifying them for the RPM. These new membership and pension parameters were not put into place for all people, as the reform also established a Transition Regime (RT) that was to end in 2014, that is, 21 years after the reform was issued.
Following Law 100, there were other reforms – Law 797 in 2003 and Legislative Act Number 1 in 2005 – in response to the persistent breakdowns of the pension system, that Law 100 had not managed to solve completely, despite its great achievements, especially in terms of encouraging savings and introducing transparency and protection of individual rights into the SGP. Unfortunately the results were less than expected, as far as coverage, equity and fiscal sustainability were concerned.

It is remarkable and very telling that significant efforts have been made to transform the pension system by means of three reforms (1993, 2003 and 2005), including a constitutional reform, all of which always sought the same objectives. However, even after a reform as deep and politically important as that of 1993, the main structural problems still remain in force, even today. Coverage, for both members and pensioners is still low. For the former, the figure is only about 43% and, as for pensioners, only 26% of the population of retirement age (slightly over one million people) is receiving a pension. Furthermore, the system is fiscally unsustainable. According to figures from the Ministry of Finance, transfers from the Central Government to cover the deficit produced by the RPM amounted to 4.5% of the GDP in 2007 and slightly more in 2008 and 2009. In other words, from the point of view of the country’s general budget (PGN), pensions constitute one of the largest items of expenditure, only exceeded by a very short head by the General System of Shares (the so-called “transfers” to regions) and defence expenditure. One can highlight problems such as the State’s new obligations with assistance pensions and the minimum pension guarantee, an extremely long and expensive Transition Regime, the fact that the parameters do not match the demographic realities and that there are arbitration incentives between schemes which have recently resulted in considerable member transfers from the RAIS to the RPM. Furthermore, the RPM is inequitable: in the subsidised health scheme, for example, the lowest two quintiles of the income distribution receive something over 66% of the subsidies, while in the pension scheme these same quintiles receive less than 2%. This fact alone should be enough to grasp the perversity of a system such as the RPM, which privileges the wealthiest households with substantial amounts of public resources.

There is no doubt that Colombia urgently needs a deep reform to transform the pension system and, as will be seen further on, many of the system’s problems, especially that of fair coverage, are determined by restrictions in the labour market. When people are excluded from the labour market, they are automatically excluded from the pension system. For this reason, a structural reform that only tackles issues strictly related with pensions will be insufficient. If the restrictions imposed by the labour market are not eliminated, the efforts made with regard to the pension scheme will almost certainly be in vain.
II. The labour market and the pension system: two manifestations of a single problem

What is the nature of the Social Protection problem in Colombia?

Generating employment in Colombia is extremely costly, especially when compared with the price of capital. For this reason, it is not surprising that formal employment grows very little, while levels of informality and unemployment remain high. Since contributions to the pension system are directly tied to (formal) employment, the great restrictions to generating employment have obvious consequences for the growth of coverage and equity in the SGP. It is worth starting by saying that social protection is funded with taxes on labour that currently represent 60% of wages (70% for people with lower wages). Since 1994, non-wage labour costs have risen over 14 percentage points, the largest increase occurring as a result of Law 100 (1993) (which came into effect as from 1994). That law increased contributions for health and pensions, including solidarity contributions. There is no disputing the fact that the impact of non-wage labour costs on wage-earning employment and self-employment, as well as on informality and unemployment, has been considerable.

Non-wage labour costs, which refer to charges in addition to wages that have to be paid by the employer or employee by law, make employment more expensive, over and above the wage the worker receives, reducing the demand for wage-earning employment or, on the contrary, increasing evasion and circumvention of those payments on the part of employers or employees and therefore encouraging informal employment. There is also no doubt about this fact from the conceptual point of view: those payments constitute a tax on formal wage-earning work and, as such, reduce the quantity of that type of employment. It is worth pointing out that another possible effect of non-wage labour costs on the labour market is a reduction in wages, to the extent that the employer is able to transfer these costs to the employee through a lower wage, in which case it would reduce their impact on the quantity of work (i.e., on unemployment and/or informality). Of course, if the transmission of taxes on the wage were total, there would be no impact on employment or informality. Nevertheless, as will be seen further on, this has not been the case in Colombia, because the existence of a relatively high minimum wage implies that most formal workers earn around the minimum and, therefore, with the exception of qualified workers, the labour market can only be adjusted by quantities (the number of workers in demand) and not by wages.

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Non-wage labour costs include unemployment pay, contributions to the social security system on pensions and health (including solidarity), the so-called “parafiscal taxes” (contributions to finance training through the National Employment Service (SENA), family subsidies and childhood and family programs via the Colombian Family Welfare Institute (ICBF)) and premiums.
However, the most serious aspect is that the so-called “pure taxes” within the total non-wage labour costs (in other words, the contributions that do not result in direct benefits for the employee or the employer), have also risen substantially. The bulk of these pure taxes corresponds to the so-called para-fiscal taxes (9 percentage points), which go towards financing the Colombian Family Welfare Institute (ICBF, 3 points), the National Employment Service (SENA, 2 points) and the family allowance and compensation funds (CCF, 4 points). It is worth noting that no country in Latin America has payroll taxes not associated with social security that are as high as those of Colombia (9%). In Panama they are 3%, in Peru, 2% and in Ecuador 1%, i.e., considerably less. The countries with levels closest to Colombia’s (though still lower) are Brazil with 8.5% and Mexico (where they vary between 6% and 8%).

The funding of a variety of social programs through payroll taxes has led to a vicious circle, as shown in Figure N° 1, in which, in order to collect the resources needed to achieve increases in coverage in these sectors (health, pensions or other social protection programs), payroll taxes are increased. However, this increase implies a reduction in the contributor base (formal wage-earning employment shrinks), so the system does not in fact increase its revenue. As a result, additional resources are needed and the same decision, to increase the payroll charge, is repeated. In this way the disastrous cycle starts all over again.

FIGURE N° 1
FUNDING SOCIAL POLICY THROUGH PAYROLL CHARGES LEADS TO THE “VICIOUS CIRCLE OF INFORMALITY”

SOURCE: SANTA MARÍA ET AL.
One would expect that the growth of the economy would allow for a reduction in labour informality, but this has not been the case. Informal labour has shown no sign of falling in response to variations in the GDP, even between the years 2003 and 2007 when the economy showed high rates of growth (around 6% on average). Graph Nº 1 clearly shows that in Colombia (unlike in other countries) informality does not respond to the economic cycle, indicating the existence of strong rigidities in the labour market.

**GRAPH Nº 1**

**DESPITE THE RECENT GROWTH OF THE ECONOMY, THE PERCENTAGE OF INFORMAL WAGE-EARNERS HAS NOT BEEN SUBSTANTIALLY REDUCED**

SOURCE: SANTA MARÍA ET AL. 2009A.

If one takes into account self-employment, which constitutes a high proportion of informal labour, the evidence is even stronger, as there is a high correlation between non-wage costs and self-employment. Graph Nº 2 shows that until 1993 the relation between self-employed and wage-earning workers, on the one hand, and payroll costs on the other, was stable. However, since the introduction of Law 100, when the non-wage costs were increased to increase social security coverage, self-employment began to grow steadily, at the same time as its relative earnings were falling. Furthermore, it is worth noting that self-employment did not fall to desirable levels (even to the levels seen before 1993) when the economy produced important
growth-rates. It is also possible to see in Graph Nº 3 how, since the implementation of Law 100, the number of self-employed workers (shown by an index) begins to increase rapidly and at a rate greater than the number of wage-earners. It is clear that, since 1994, practically the only employment that has increased is poor-quality self-employment, displacing wage-earning work which is the most formal type of occupation. Wage-earning work becomes scarcer, whereas, among the self-employed, a considerable number of workers who cannot find formal work end up taking refuge in self-employment as the only alternative (the almost literal definition of “doing jobs on the side”). The result is clear: there has been a collapse in wages for the self-employed, producing a deterioration in the quality of this type of occupation.

**GRAPH Nº 2**

The relative employment of self-employed and wage-earners has risen with the increase in non-wage labour costs

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SOURCE: SANTA MARÍA ET AL, 2009A.

Note. The graph shows the development of relative employment and the non-wage labour costs, 1984-2006.
This increase in self-employment has ended up producing a deep segmentation of the labour market as a result of a disastrous combination between the recent developments in the current legal minimum wage (LMW) and the increase in payroll costs. The labour market began to segment after the great increase in non-wage labour costs in 1993, reflecting the fact that the wage-earning and self-employed sectors were becoming substitutes for one another. In other words, in Colombia the choice of self-employment is not voluntary. The decision to work as self-employed is taken because there is no alternative and the only way out is to engage in poor-quality informal or self-employed work. The fact that self-employment in Colombia tends to be of poor quality is corroborated, for example, by the fact stated by Perry (2007), in which, for the year 2007, less than 40% of self-employed workers in Colombia were satisfied with their form of occupation, compared with 70% or more in Argentina, Bolivia and the Dominican Republic, among others.

The most serious aspect is that it is precisely the least qualified people, who earn around the minimum wage, who, due to the low demand for formal employment, tend to take refuge in the informal/self-employed sector. In the lower strata, over half of self-employed workers work under this scheme for reasons of exclusion.
Perhaps the strongest evidence of this fact is shown in Graph Nº 4: in 1995, slightly under 50% of working people belonging to the extremely poor population were self-employed and by the year 2006, this figure was 70%. On the other hand, the number of wage-earners belonging to the extremely poor population fell from around 40% of the population to around 20%. Among the non-poor population the number of self-employed remained stable at around 30%. In broad terms, the negative effects have hit the extremely poor population disproportionately hard.

**GRAPH Nº 4**

**SELF-EMPLOYMENT IS CONCENTRATED AMONG THE POOR AND VERY POOR POPULATIONS**

![Graph showing self-employment and wage-earners by poverty level, 1995 and 2006.](source: Santa María et al., 2009A. Note: The graph shows the proportion of those in work who are wage-earners and self-employed, by total poverty level, 1995 and 2006.)

The second part of the problem is the inflexible legal minimum wage (LMW), which is high in relation to the average productivity of the economy. In Latin America, Colombia is the country with the second highest minimum wage per capita compared with its GDP, after Nicaragua. Countries whose LMW/GDP ratio is high are precisely those that have higher rates of unemployment, for example, Colombia, Argentina and Brazil.

The legal minimum wage, irrespective of its purchasing power, has increased considerably as a proportion of the average wage. At the beginning of 1996, the minimum wage represented 39% of the average wage, while by the end of 2006 it was already equivalent to 54% (an increase of 40%). In other words, the minimum wage has grown more than average labour productivity, which has meant, not surprisingly, that an increasing number of people are earning a wage below the
minimum. In other words, more people are working in the informal labour market. There is no better definition of informality than earning a wage that is below the minimum, because this by definition excludes the employee from the SGP and the contributory health scheme, at the same time leaving him/her without a formal contract. As is shown on Graph Nº 5, at the beginning of the 1990s, 26% of urban workers earned less than a minimum wage and in 2008 this number had risen to 35% (an increase of 35%). It can be seen that the situation is even worse in the self-employed group, where 60% earn income below the minimum wage. However, what is most important about the graph is how the proportion of workers earning wages below the minimum (both wage-earners and self-employed) closely follows the evolution of the minimum wage/average wage ratio. There is probably no more convincing proof of the inadvisability of the policy implemented in Colombia for the past ten years of adjusting the minimum wage above labour productivity levels.

**GRAPH Nº 5**

THE GROWING RATIO BETWEEN THE MINIMUM WAGE AND AVERAGE WAGE RESULTS IN INCREASES IN THE PERCENTAGE OF WORKERS EARNINg LESS THAN A LEGAL MINIMUM WAGE (LMW)


NOTE: THE GRAPHS SHOW THE MINIMUM WAGE RELATIVE TO THE TOTAL AVERAGE WAGE AND THE AVERAGE WAGE OF ALL WORKERS, CONTRASTED WITH THE PERCENTAGE OF WORKERS WHO EARN LESS THAN ONE LEGAL MINIMUM WAGE (LMW).
The effect of non-wage labour costs is even more serious due to the presence of the legal minimum wage, because this makes it impossible to transmit all the labour taxes to the worker; this means that the final effect is a reduction in employment, inevitably resulting in an a rise in unemployment or increased informality. The empirical evidence shows that the impact of the joint presence in Colombia of a legal minimum wage that is high in relation to the mean wage, and high labour taxes (among the highest in the world) is very negative and, in particular, much more so than the impact of each of these rigidities separately, for the reasons explained above.

It is important to mention that the relatively high legal minimum wage, in addition to affecting the pension system through the labour market, also harms it in terms of obtaining a minimum pension through the RAIS, with negative consequences for the coverage of people of retirement age. This is because few people receiving a minimum wage manage to complete the number of weeks required to obtain a pension, because the rigidities of the labour market particularly affect people at this income level, exposing them to considerable periods of unemployment or self-employment/informality; in other words, substantially reducing their faithful payment of contributions. But on the other hand, the political nature of the rises in the minimum wage makes it impossible for insurers to carry out an actuarial calculation for hedging risks. For this reason, the recent Financial Reform allowed this imponderable contingency to be taken over by the State. The fiscal consequences of this decision remain to be seen.

These exaggerated increases in the cost of formal work (around 15% on the side of non-wage labour costs and over 20% on that of the LMW), which most affect workers with lower incomes, are also accompanied, as if this were not enough, by a fall of almost 60% in the cost of the use of capital (Graph N° 6). This reduction occurred for three main reasons: (i) the long-term decline of real interest rates; (ii) the behaviour of the exchange rate (whose appreciation reduces the price of imported machinery); and (iii) tax deductions associated with the purchase of productive fixed assets. The above, together with inflexible labour legislation and high hiring costs, have led companies to adopt more capital-intensive processes, rather than hiring more personnel, especially those who are less qualified.
What about incentives?

There is also a problem in the design of social policy and in the incentives in the labour market, which ends up making the vicious circle of informality even deeper. In other words, informality is created by inappropriate policies, such as those just described, concerning labour and the financing of social protection and then, instead of being solved, it is accentuated through subsidised social protection programs that workers and their families ought to receive through the labour market. So, the population that is excluded from the Social Security System of Health and Pensions receives subsidies from the State that encourage their remaining in the informal sector and discourage the search for, or acceptance of, a formal wage-earning job. Those subsidies, such as the subsidised health scheme (RS) and the conditional cash transfer program Familias in Acción, in addition to being generous, have no time-limit and their coverage among the population is continuously increasing, making them less targeted towards the poorest and creating incentives for beneficiaries to remain in the informal sector even longer. One example is the health sector, where slightly over 7 million contributors are subsidising 23 million people who belong to the subsidised scheme. According to the Longitudinal Social Survey carried out by FEDESARROLLO (ESLF), almost half informal workers would not be willing to lose the benefits of the subsidised health scheme for a wage-earning job at the same salary.
The implications of the subsidies that encourage informality and self-employment are very serious for the pension system, because a considerable proportion of the people receiving these subsidies will not take the opportunity to work in formal employment even if it is offered, meaning that they will continue to be excluded from the pension system and, years later, having no pension, will find themselves unprotected in the face of the risks of old age. Therefore, when this population that is receiving subsidies today reaches retirement age, pension subsidies will inevitably have to be continued.

To summarise, the pension system faces an insuperable barrier to entry in the distortions of the labour market, which limit access for a large part of the population and make it inherently inequitable. In that sense, many of the shortcomings of the pension system, especially those related to low coverage, are determined by distortions in the labour market. A transformation of the system will only be achieved when a solution is found for the structural defects of the labour market.

III. Coverage, fairness and fiscal aspects of the general pension system:

Have we made any progress?

Effects of labour market problems on the pension system

The data regarding the coverage of the pension system reflects the shortcomings of the labour market very precisely. Although there is an upward trend in the number of members for the two schemes included in the pension system, as may be seen in Graph N° 7, the levels of coverage and loyalty are still low, to a large extent as a consequence of the expense involved in formal employment and the vicious circle of informality. In fact, on the one hand, the proportion of pensioners in relation to the population of retirement age in 2008 was only 26%, and on the other, as of February 2009, only 43% of members were actually paying contributions. This reflects the fact that the majority of those actually working, 54% during 2008, were not yet enrolled in the pension system.
It is interesting to analyse which population groups have a greater concentration of people who are outside the system. It is no coincidence that those individuals correspond to people who are excluded from the formal labour market. In the first place, as can be seen in Graph Nº 8, self-employed workers are the ones who least enrol in the pension system: only 12%, versus 71% of employees. This result is to be expected, because, as shown in the previous section, one of the main problems of the labour market is that it is producing and deepening informal labour. For this reason, as a group, people who decide to become self-employed not only receive lower wages, they also seek to avoid the costs of the formal sector and evidently do not see pension contributions as a priority.
As is shown in Graph N° 9, over the course of time, most of the poorest population has been excluded from the pension system. 90% of the people who earn less than a minimum wage are not enrolled in the system, nor are 38% of people who earn between 1 and 2 LMW. If no solution is found to this situation, when the population reaches retirement age the pension system is going to present the same problems as the labour market: exclusion of the poorest population and low levels of coverage. In that way the shortcomings of the labour market will be transferred to old age.
Different exercises carried out in the study show that there is little loyalty to the pension system, particularly on the part of women, young people, informal workers, the self-employed and the less educated, all of which results in a greater financial burden for the state. This is particularly serious if one bears in mind that pension subsidies are poorly targeted towards the poor: according to Graph Nº 10, 80% of subsidies are received by the wealthiest 20% of the population, while the poorest 40% receives less than 5% of these. This situation is more than serious, because, to give an example, and as may be seen in Graph Nº 11, the equivalent of all the revenue generated by the value added tax is dedicated solely to subsidising a million pensioners, who do not even belong to the poor population. To put those figures in perspective and contrast them with the education system, for example: with half of those resources (about COP 10 billion), 8 million children, who do tend to belong to the households with lowest incomes, are provided with education.
PART I

HOW CAN THE COVERAGE OF THE INDIVIDUALLY FUNDED PROGRAMS BE EXTENDED?

GRAPH Nº 10

80% OF PENSION SUBSIDIES ARE RECEIVED BY THE HIGHEST INCOME QUINTILE


GRAPH Nº 11

THE EQUIVALENT TO THE REVENUE IN VAT IS DEDICATED TO 1 MILLION PENSIONS, WHILE IN THE EDUCATION SYSTEM, 8 MILLION POOR CHILDREN RECEIVE BENEFIT WITH HALF THE RESOURCES

SOURCE: AUTHORS’ CALCULATIONS.
The system’s sustainability problems

A central issue is the analysis of the fiscal and financial aspects of the general pension system and its impact on public finances and, by that way, on the coverage and equity of the pension system. For that reason, this chapter attempts to identify the risks facing the system in both its schemes (RPM and Individual Savings with Solidarity, RAIS) and the impact of demographic change and economic cycles on them and on the probability of qualifying for a pension. Furthermore, it attempts to answer the question of whether, even after the 2003-05 reforms, the system, in its average premium component, is still under-financed, and makes a brief analysis of what would have happened if Law 100 had not been passed.

On the basis of Table N° 1, it is possible to conclude that there is a growing differential between retirement age and the population’s life expectancy, which has led to an increase in the number of years during which the pensions are paid out. This results in a need for more resources to pay the pension debts arising from the RPM, producing strong pressure on the sustainability of the system.

**Table N° 1**

<table>
<thead>
<tr>
<th>Retirement age in the ISS</th>
<th>Life expectancy at retirement age</th>
<th>Life expectancy at birth</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 years men</td>
<td>77 years men</td>
<td>58 years men</td>
</tr>
<tr>
<td>55 years women</td>
<td>80 years women</td>
<td>62 years women</td>
</tr>
<tr>
<td>77 years men</td>
<td>82 years men</td>
<td>70 years men</td>
</tr>
<tr>
<td>86 years women</td>
<td>85.3 years men</td>
<td>77 years women</td>
</tr>
</tbody>
</table>

**Source:** DANE, OMS and calculations of the Finance Superintendence – 2009. Produced by FEDESAARROLLO.

3 Helmsdorff (2007)
4 OIM – Life Expectancy in Colombia (http://apps.who.int/who.int/whosis/databases)
The vast majority of members, both in RAIS and RPM, contribute on less than 2 LMW. In 2008, 75% of RAIS members contributed on less than 2 LMW, while in the RPM the figure was close to 95%. This fact produces a dramatic situation for public finances under the heading of the minimum pension guarantee, for the simple reason that the capital contributed by this portion of the population is far from financing a pension of a minimum wage, given the parameters of the model. People who receive pensions of 1 LMW can do so, but not with their savings. On the other hand, for those who contribute to the RAIS on this range of income (approximately 75% of members), there is a very high risk that the capital saved and the weeks contributed will be insufficient to acquire a pension, given the imperfections of the labour market; thus, this group of people will undoubtedly end up having their balances refunded.

The behaviour of the economic cycle also affects the SGP, particularly with regard to its financial sustainability. One of the main consequences of an economic slowdown is the fall in investment yield, which may encourage transfers out of RAIS and into RPM, producing a critical situation for the pension system in the medium and long term. These transfers have increased in the past few years (for various reasons that are analysed in the study), causing an increase in pension debt of 5% of GDP. Specifically, between January and September of 2009 the number of transfers from RAIS to RPM amounted to over 80,000 people. Transfers between schemes has become one of the most serious problems in the pension system.

The results of a theoretical exercise carried out in the study made it possible to draw the following conclusions: (i) the RPM continues to be under-financed: the pensions of those who contribute based on over 2 LMW are under-financed by 80% on average, while those with 1 LMW will have to be subsidised by more than 88%; these subsidies are considerably greater for women; (ii) in the RAIS, all those who contribute for 25 years on 1 LMW will have insufficient capital to finance a pension of 1 LMW and will be eligible for a pension equivalent to 1 LMW thanks only to the resources in the Minimum Pension Guarantee Fund (FGPM); (iii) there is great inequality between those who contribute for 1,300 weeks in the RPM and the RAIS, because in the former case the replacement rates are higher, even though they contribute on the same base income, with the exception of those who contribute on 1 LMW, who receive the same pension. Only with yield rates of over 7% will people in the RAIS obtain rates similar to those of the RPM with 25-year contribution periods; and (iv) if a person pays contributions continually for 35 years and the rate of return is over 5%, he/she will be able to have a pension considerably higher than that obtainable in the RPM and, what is more, greater than the base income on which he/she paid contributions.
All what has been discussed results in an unsustainable fiscal position. The payment of pensions chargeable to the government has increased markedly since 1990. Whereas in 1990 and 1994 this represented 0.8% and 1.2% of GDP, respectively, for 2008 it was already exceeding 4.5 points of the GDP, a figure which continued to grow during 2009, despite the improvement experienced by the renewed ISS fund, as a result of the increase in transfers. This means that payments under this item during this year corresponded to over 20% of the national budget. Furthermore, the ratio between the total pension payment chargeable to the national central government and the number of pensioners is surprisingly low.

The pension debt (the sum of the pension obligations) in Colombia amounts to almost 140% of GDP, but covers only 25% of the target population. A high public debt for paying pensions has a direct effect on the welfare of all Colombians, because in order to meet the acquired pension obligations, it will be necessary either to increase taxes to be able to pay for them or sacrifice expenditure on education, healthcare or other spheres of social expenditure. Although the reforms since 1993 made it possible to reduce the amounts of subsidies and contributed towards improving the equity of their assignment, the scheme continues to be under-financed, the amount of the subsidies is still high and their distribution is highly regressive. It is worth mentioning that in Colombia there is a pension liability of around 140% of GDP to cover only about 25% of the target population, while in developed countries the liability is around 170% of GDP but it covers between 80% and 90% of the target population.

In the absence of the 1993 reform, the pension debt would currently be about 296.5% of GDP and that of the ISS in particular would amount to 144.4%. What is more, without Law 100 and the subsequent modifications of the SGP, the annual expenditure on pensions chargeable to the nation’s budget would have reached 6% of GDP by 2015, 7% by 2030 and would have continued at levels over 5.5% of GDP until 2050; at the same time, the ISS deficit would have reached levels of 4%. However, as is shown in the document, the reduction in the operating deficit was insufficient.

IV. Policy recommendations

I. The Defined Benefit Scheme (RPM): leave it to wither or eliminate it?

It has been shown on various occasions that the Defined Benefit Scheme (RPM) is excessively expensive for a number of reasons. One of the most important is that the pensions provided by this scheme are heavily subsidised, which means a very unfair burden on fiscal resources. That burden has also grown out of all proportion: from 2% of GDP at the end of the 1990s to almost 5% of GDP today.
On the other hand, the RPM is incompatible with the solidarity pillar, one of the main recommendations of the study, as will be explained further on. By definition, the RPM requires subsidies that will take funding away from the solidarity pillar, which seeks above all to reinforce equity, which does not exist at present.

So the first recommendation of this document moves in the direction of leaving the RPM to wither. This means, first, prohibiting the entry of new members and, second, prohibiting new transfers. In this way, it will be possible in the course of time to make it fade away. It is important to make it clear that this proposal does not mean doing away with the ISS or whatever institution may replace it, but with a pension scheme that has shown itself to be non-viable and has produced very poor results in terms of equity. It might be possible to envisage a proposal in which the ISS continues to exist as a public pension fund within the RAIS, competing with the other AFPs in the market.

II. Implementation of a three-pillar system

Given the low coverage and the inappropriate targeting of the subsidies characteristic of the Colombian SGP, it is advisable to move towards a three-pillar system, in order to offer the population an appropriate solidarity scheme.

1. Solidarity pillar
   • Targeted towards the poorest people, who have a low probability of obtaining a pension
   • Funded through general taxation.
   • No need to meet any requirement except being 65 years old and belonging to the level 1 SISBEN\(^5\) and, possibly, level 2.
   • The benefit is less than the minimum wage in order to avoid the same distortions as exist today and make it more viable.
   • People who are eligible to receive the minimum pension would not receive the subsidy.
   • In order to avoid a total disincentive to contribution in the pension system and increases in informality, a gradient has to be defined (40 to 60% of a LMW) which would depend on the number of weeks of contribution payments during the working life.
   • The cost would be between COP 3.8 billion and COP 6.1 billion pesos per year (0.8-1.2% of GDP), less than a third of what is paid out on the RPM today.
   • The solidarity pillar would replace existing programs which provide monetary subsidies to elderly adults, such as Juan Luis Londoño de la Cuesta and the Social Protection for the Aged Program (PPSAM).

5 Selection System of Beneficiaries for Social Programs; the SISBEN is the instrument for focusing social programs, levels 1 and 2 representing the population most at risk.
2. Mandatory Individual Savings Pillar
   • All contributions will be deposited into the individual accounts except administration fees and a percentage allotted to the Minimum Pension Guarantee Fund, as long as it exists. In other words, there will be a lower tax component and a higher percentage of the contribution will go into the personal account.

3. Voluntary Individual Savings Pillar, the same as exists at this moment.

It is worth mentioning yet again that the general budget allots 4.5 points of GDP to paying pensions today -over 70% of them subsidised- to people most of whom have medium-to-high incomes. One could therefore say that what exists in the SGP is a kind of solidarity pillar, but one that is badly designed, very expensive and directed towards the wrong population. This is undoubtedly the worst possible scenario. For that reason, the existence of a solidarity pillar such as the one proposed would definitely constitute an advance once the RPM fades out, both in fiscal terms (the cost would be lower) and in coverage, subsidy targeting and transparency. Furthermore, by reducing the pure tax component of the contribution, a great incentive to informal labour would be removed.

III. Labour Reform

It is common knowledge that there are positions arguing that a reform of the labour market is not the correct solution, because reforms have been made in the past in this field and they have not been reflected in the growth of employment, or at least not to the extent that the government had initially estimated. However, it can be stated, and it is a fact, that those reforms have not obtained the expected results because they did not attack the real problems of the labour market: the minimum wage and the payroll taxes. The proposed labour reform is based on these two crucial points.

a. Taxes on work or non-wage costs

1. Eliminate 13 points of pure tax on the first 2, 1.5 or 1.3 minimum wages (the three scenarios are included); from there on, there would be contribution on the differential. The wage ranges are chosen because:

   - Pure taxes are almost 15 points of the wage; therefore the natural range would be 1.15, but this would be very small.

   - The proposal would centre on the population group which is most affected by the restriction, encompassing most of the country’s employment and the population most likely to encounter bouts of unemployment (people who earn up to 2, 2.5 or 1.3 LMW).
b. Introduce a deep reform of the minimum wage indexation scheme

1. The minimum wage should be differentiated by age groups, deepening the current figure of the apprenticeship contract.

In Colombia, the minimum wage for young people is too high by comparison with their productivity, which is why this population group is largely excluded from the labour market. Differentiation of the minimum wage has already been used in Latin American countries such as Chile, Mexico, Panama and Uruguay. Taking advantage of the fact that this measure has already been implemented indirectly through the implementation of the reinforced apprenticeship contract in the 2002 reform -which undoubtedly gave positive results in terms of the creation of jobs for young people- a start could be made by deepening the apprenticeship contract, by allowing a wider range of action, for example, and probably a greater application time. In other words, it might be possible to think of making the apprenticeship contract more flexible and extending it to other groups of the population.

2. Carry out a reform of the minimum wage indexation system. In order to extend the benefits of a modified minimum wage (with the extension of the apprenticeship contract) to the whole population and not only to the young, the proposal is to adjust the minimum wage for inflation only for the next 5 years.

3. Differentiate the minimum wage by urban and rural zones, in such a way that it reflects the productivity of each group. At present, the average wage in rural areas is 60% of that in urban areas. This indicates that it is equally important to differentiate the minimum wage using this criterion.

IV. Deep reform of the minimum pension scheme currently in force

The way in which the current minimum pension scheme is set up, with an interaction between a high LMW and a minimum pension guarantee tied to that minimum wage, is imposing massive obstacles to obtaining a pension. On the one hand, the contribution to the FGPM is a tax on labour and, worse still, of the most regressive type; a person who does not manage to meet the requirements to obtain a minimum pension has his/her contributions refunded, but what he/she has contributed for the fund during his/her life-time is deducted. Part of this problem is solved by the proposal made above concerning the minimum wage. However, the minimum pension scheme, as conceived today, needs to be reformed directly in two ways:

1. The minimum pension guarantee must not be tied to the LMW.
2. The adjustment mechanism needs to be changed year by year.
V. The pension system must respond to the various types of contracts that exist in the labour market

For these reasons, it is necessary to design alternative contribution schemes that take into account the realities of the labour market which will not disappear simply because they are not allowed within the SGP. Among the most important examples of these schemes are: contributions on incomes lower than the minimum wage (which would complement the elimination or reduction of the minimum pension guarantee), contributions on hourly work, elimination of mandatory contributions for different occupations, and contributions for occasional work on any income.

V. Final observations

The recommendations proposed here seek to arrive at a pension system that guarantees all pensioners a worthwhile income during their old age. If these recommendations are not implemented, and the RPM continues to function as it does at present, the pension system will not be viable and will continue to be highly inequitable. One of the fundamental recommendations is to allow the defined benefit scheme to fade out; otherwise, in order to attempt to make the system financially healthy, the only alternatives are:

1. To adjust the parameters periodically: these adjustments will have to be very great if the system is to achieve viability. However, a point will come when the size of the adjustment will be prohibitive because the contribution rate will have to be raised to 40% of the wage, for example, or retirement age raised to 70-75 years of age, or the replacement rate dropped to levels of 20% of the final wage. It must not be forgotten that, with the growth of the population, the parameters will have to be adjusted again every so often.
2. To make retirement age the same for men and women.
3. To raise taxes to pay the growing pension liabilities produced by the RPM.
4. To increase taxes on high pensions and possibly make low ones taxable at a modest rate.
5. To prohibit transfers between schemes.
6. To finish cutting back anything related with the 14th monthly allowance.
ENCOURAGING THE SELF-EMPLOYED TO CONTRIBUTE VOLUNTARILY TO THE PENSION FUNDS

EDUARDO FUENTES 1

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In this article I shall be developing some ideas on the problematic subject of people who are not paying contributions, which ultimately influences the low coverage levels of Latin American pension systems.

This is an issue on which the BBVA Group has been reflecting and working for some time. Our concern is particularly centred on looking more deeply at those aspects that might encourage self-employed workers to take part in pension systems.

The article is arranged in the following manner: first there is a description of the current state of the situation, in other words, what has been achieved with pension reforms so far. In the second place, we describe one of the pending problems that still exist in the pension systems, in other words, the circumstances that influence low coverage. The third point sets out what we consider to be the proposition that the industry would have to deal with in order to encourage those who are not contributing at present, to do so. Fourthly, there is a brief description of the key points and results of our study in BBVA. Finally, the article concludes and synthesises the aspects that remain, as a reflection.

1. The Current Situation: Reforms

As the starting-point, it is important to highlight the enormous contribution made by pension system reforms in Latin America, and particularly the introduction of individual funding plans. It is thanks to this that the pension systems have managed to become financially sustainable for the first time in their history, which is a crucial aspect in starting to provide adequate pensions.

In this respect, different studies have shown convincingly that if these reforms had not been implemented, the countries’ debt commitments would be exceeding 200% of GDP on average, on the item of pension provision alone. Having solved this simple fact is already enough to give the systems a sense of timeliness and a certificate of naturalisation.
Furthermore, it is worth highlighting the impacts achieved by the new pension system on growth, higher savings rates and capital markets, facts that will crystallise gradually into higher pensions.

However, the results achieved have not been as completely satisfactory as we might have wished. The pension systems have been receiving criticisms from different forums about the difficulties involved in providing adequate replacement rates and also about the low rates of coverage or participation in the system.

Quite apart from the positive impact of the pension system reforms on macroeconomics and financial sustainability, the grounds for developing the system are that workers should get an adequate pension. However, before that can happen, it is essential for them to belong to a system, have coverage and contribute regularly on that basis.

We shall therefore concentrate on coverage as the central problem. It is quite clear, in spite of the criticisms levelled at the pension systems about this situation, that the main reason for the low coverage has to do with structural problems occurring in the countries and the main way of solving these does not lie with the pension system, but with other long-term State policy decisions.

We believe, however that, leaving aside this massive wall erected by the countries’ basic problems, the industry must plan to provide answers that attract workers to participate more fully in the system. Therefore, in order to answer the question of how to overcome the limitations on extending coverage imposed by the structural problems in Latin America, we have to think “out of the box”.

The position that we are attempting to reach relies on two elements. The first, which we call “economic-financial legitimacy” is where the funded systems have emerged triumphant, reducing governments’ debts and ensuring a self-financing system. On the other hand, there is “social legitimacy” which depends on the systems’ ability to provide adequate pensions and broad coverage.

On this second point, by contrast, countries have not managed to overcome workers’ employment difficulties and low incomes. Despite this limitation, we believe that we should not wait for the countries to overcome these problems in order for coverage to grow.

For the industry, which works with a commitment that is essentially social and therefore subject to the intervention and opinion of different political factors and forces, its own legitimisation in the countries is crucial: in other words, our institutional recognition as relevant, indispensable protagonists in providing the social function, as far as pensions are concerned. The viability of the system in the long term depends on this. The
industry must not remain aloof and must assume a proactive role, both in the meantime and throughout the whole process.

II. Pending problems

In many of the countries, coverage problems are dramatic. Although the participation of the Economically Active Population (EAP) - taken as the number of members in the systems - has been increasing, the ongoing contribution, i.e. what we call real coverage, has not kept pace with it.

It is possible to see this in much more detail from the statistics in Raphael Rofman’s paper for Latin America. In Figure N° 1, the participations of the EAP are arranged according to income quintiles. As was to be expected, the higher-income quintiles have a higher participation than the poorer, but the percentage of participation in the first quintile (that of the poorest people) is practically non-existent for some countries, as in the case of Peru. In general, except in Chile’s case, the remaining countries show enormous deficiencies in this aspect.

**FIGURE N° 1**

EAP COVERAGE BY INCOME QUINTILES
(Q1 = POOREST, Q5 = RICHEST)

As has been pointed out, this is an immense challenge, bearing in mind that the underlying factors are of enormous depth. Figure Nº 2 shows the high correlation that exists between informality rates and coverage and Figure Nº 3, the correlation existing with poverty rates. So, the structural factors of a country, arising from its levels of poverty and informality, become enormous burdens for the economies, limiting the possibility of developing a pension system that comes somewhere near universal coverage.
III. Working proposition for the industry

Bearing in mind what was said above, this section analyses what we see as the working proposition for the industry in terms of extending coverage.

We need to have a working proposition for the industry vis-à-vis the real situation. This proposition must obviously rest on the important advances already achieved by the reforms, without sacrificing what countries have made such a great effort to win. But we must be aware that these have not been sufficient to provide wide coverage.

Furthermore, we have to bear in mind that if this coverage remains low for a long period, then social and political difficulties will appear on the horizon and undoubtedly affect us.
In order to advance on this proposition, we need to identify where the problems are and correctly assign the responsibilities for solving them. This is important, because the degree of participation in the pension system, which defines the level of coverage to a large extent, depends on the interrelation between workers, employer, State and pension industry.

The worker, on the one hand, expresses his/her degree of interest in participating, depending on regulatory obligations and his/her socio-economic conditions.

The employer, on the other hand, has to comply with regulatory obligations (which in some cases stipulate contribution to the worker’s pension fund) and facilitate the latter’s participation in the system.

The State, for its part, has to institute an appropriate framework, so that the conditions supporting the systems work well. In other words, contributing to pensions depends in the end on employment conditions, which correspond to a framework of labour. Meanwhile, socio-economic conditions depend on the economic models that are introduced. The State has to work on all of this, in order to give impetus to the correct operation of the contributory systems.

Although the basic role of the industry is the effective management of the resources received from its members, it also has the duty to adopt a proactive attitude with a view to creating bridges between the various actors, especially with governments, in order to encourage the extension of the system to a larger number of workers.

Our duty as an industry is ultimately to propose and develop alternatives that will encourage people who are outside the system to come in. The vast majority of these are self-employed workers.

Although the structural limitations in the economies are the key, it is also possible to achieve participation rates in other ways.
IV. Key issues and results to encourage contribution by self-employed workers

In this section, we give a summary of the BBVA paper², which we have suggested as a first stage in starting to develop a better approach to the challenge of extending coverage.

The first step towards appropriate proposals that enable coverage to be extended demands a detailed analysis of the situation on the basis of the statistical information available, especially that developed through surveys of households and families, in order to discover the characteristics of the worker whom we would like to see taking part in the pension systems. With that aim in mind, we have produced, with the support of the America Pensions and Insurance Unit and the BBVA Research Service, the research paper entitled “Creating Incentives for Voluntary Contributions to Pension Funds by Independent Workers: An Informal Evaluation based on the Case of Chile”².

In the aforementioned paper we began by making an analysis of Chile, taking advantage of the wealth of edited information obtained from the social protection survey (EPS). The EPS makes it possible to find out, in detail, not only the socio-economic characteristics of the family groups, but also their preferences and their position with regard to the social security systems. We believe that this analysis of the Chilean case is a first step which can then be extended to other countries. In that sense, it will also be important for those countries, with the support of the industry, to be open to developing surveys similar to the EPS for the rest of the system.

The aim of that paper is therefore to set out the statistical probability that workers who are not contributing will have incentives to do so.

There are various elements that are necessary in order to tackle the problem of coverage: for example, (i) to identify the causes of the informality problem; (ii) find out the characteristics and preferences of those who are not covered; (iii) identify schemes that encourage workers to take part in the pension systems; and (iv) for the industry to design and provide attractive products.

So, faced with the question of how to produce schemes that provide an incentive to pay contributions into an individual account, it must be recognised that this is a problem with many facets, which will depend on people’s socio-economic characteristics and their own cost-benefit analysis.

² For further details of the paper, you can download it directly from Internet by the following link: http://www.bbbaresearch.com/KETD/fbin/mult/WP_1012_tcm348-221423.pdf?ts=1982010
Table N° 1 gives a summary of the most relevant bibliographical material reviewed in relation to the problem of informality in countries, and its main causes. Though the economic literature finds different definitions and explanations, these coincide in identifying certain key elements, such as economic growth, rigidities in labour markets, excessive state regulation (which imposes excessive costs and inefficiencies on all those concerned), and the optimisation of the decisions made by the worker on the basis of his/her own specific cost-benefit analysis. It is particularly on this last aspect that we have to work, in such a way that we present the potential contributor with a product that is suited to his/her needs, at a reasonable price. And to carry out this approximation, it is essential to get to know the characteristics of the self-employed worker.
### Table N° 1

**Review of Literature Dealing with the Informality Issue**

<table>
<thead>
<tr>
<th>Author</th>
<th>Objectives</th>
<th>Definition</th>
<th>Determining Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loayza and Rigolini (2006)</td>
<td>To study the trends of informal employment in the short and long term, linking the two aspects both theoretically and empirically.</td>
<td>Phenomenon typical of under-development Expressed in two forms: i) production methods; and ii) relation between agents and regulations and monitoring. It is dynamic in time; in other words it responds both to basic factors and to inter-temporal economic conditions of the economic cycle and short-term policies.</td>
<td>Informality is produced by: i. Excessive taxes ii. Excessive regulation iii. Failings in public institutions iv. Restrictions in the labour market.</td>
</tr>
<tr>
<td>World Bank (2007)</td>
<td>To analyse the various definitions of informality and the factors that determine its development in different countries.</td>
<td>Multi-dimensional phenomenon which is one manifestation of the relations between the economic agents and the State. Various definitions: a. Self-employed worker b. Worker without pension rights c. Informal Worker (productive definition) d. Informal Worker (legal definition).</td>
<td>Informality is produced by: Perspective 1 (exclusion): Complicated regulations that prevent small firms crossing the formality barrier. Perspective 2 (escape): Workers choose their best level of support for formality on the basis of its benefits and the State’s supervisory capacity (implicit cost/benefit analyses)</td>
</tr>
<tr>
<td>Loayza (1996)</td>
<td>To study the factors determining the informal sector and their effects on economic growth.</td>
<td>A set of economic units that do not comply with regulations and taxes, according to definition of Hernando de Soto (1989)</td>
<td>Informality occurs because of: i) excessive taxes, ii) excessive regulation, iii) failings in public institutions, iv) restrictions in the labour market.</td>
</tr>
<tr>
<td>Schneider (2003)</td>
<td>To estimate the size of the informal economy as a percentage of GDP and identify the main causes of informality.</td>
<td>The production of goods and services that is hidden from the public authorities to avoid having to pay income, value added or other tax, or social security contributions, or having to comply with labour market requirements.</td>
<td>The informal economy depends on: i) the heavy tax burden and other types of regulation; ii) the quality and quantity of public services; iii) the high levels of unemployment; iv) the low growth of the GDP.</td>
</tr>
</tbody>
</table>

Source: Produced by BBVA on the basis of information from various sources
The case of Chile

Looking at the statistics from the survey, we see first of all that almost 80% of self-employed workers in Chile pay no contributions into the pension system, a fact that expresses the clear message they are sending (see Figure N° 4). We see that, in terms of age, those who contribute least are the groups under 26 and over 65 years of age (see Figure N° 5).

FIGURE N° 4
SELF-EMPLOYED WORKERS ACCORDING TO THEIR CONTRIBUTIONS TO THE PENSION SYSTEM

In Table Nº 2 one can also see the importance that income level may have on the decision not to pay contributions. In point of fact, about 65% of self-employed workers receive an income lower than USD 380. Furthermore, these workers mainly have jobs in tertiary sectors such as commerce and services (see Figure Nº 6), which makes it possible to foresee enormous difficulties in the process of supervision and control by the competent authorities.
## TABLE Nº 2

**SELF-EMPLOYED WORKERS BY INCOME-BRACKET**

<table>
<thead>
<tr>
<th>Income bracket in USD</th>
<th>Without contribution</th>
<th>With contribution</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 190</td>
<td>532,134</td>
<td>70,075</td>
<td>602,209</td>
</tr>
<tr>
<td></td>
<td>88%</td>
<td>12%</td>
<td>35%</td>
</tr>
<tr>
<td>Between 190-380</td>
<td>425,349</td>
<td>135,593</td>
<td>574,129</td>
</tr>
<tr>
<td></td>
<td>74%</td>
<td>24%</td>
<td>34%</td>
</tr>
<tr>
<td>Between 380 - 570</td>
<td>183,749</td>
<td>83,194</td>
<td>270,642</td>
</tr>
<tr>
<td></td>
<td>68%</td>
<td>31%</td>
<td>16%</td>
</tr>
<tr>
<td>Between 570 - 760</td>
<td>62,096</td>
<td>30,313</td>
<td>92,409</td>
</tr>
<tr>
<td></td>
<td>67%</td>
<td>33%</td>
<td>5%</td>
</tr>
<tr>
<td>Between 760 - 950</td>
<td>29,007</td>
<td>27,497</td>
<td>57,034</td>
</tr>
<tr>
<td></td>
<td>51%</td>
<td>48%</td>
<td>3%</td>
</tr>
<tr>
<td>Between 950 - 1,330</td>
<td>26,596</td>
<td>13,202</td>
<td>39,798</td>
</tr>
<tr>
<td></td>
<td>67%</td>
<td>33%</td>
<td>2%</td>
</tr>
<tr>
<td>Between 1,330 - 1,900</td>
<td>13,284</td>
<td>16,767</td>
<td>30,743</td>
</tr>
<tr>
<td></td>
<td>43%</td>
<td>55%</td>
<td>2%</td>
</tr>
<tr>
<td>Over 1,900</td>
<td>14,007</td>
<td>16,383</td>
<td>30,390</td>
</tr>
<tr>
<td></td>
<td>46%</td>
<td>54%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,286,222</strong></td>
<td><strong>393,024</strong></td>
<td><strong>1,679,354</strong></td>
</tr>
</tbody>
</table>

*Source: Social Protection Survey (EPS), Chile, 2004.*
i. Reasons

One important element of this information is that it reveals the reasons why people do not pay into the pension system. As may be seen in Figure Nº 7, there are two main reasons: low income and lack of familiarity with the system. Bearing this in mind, it is easy to understand why 86% of the sample of self-employed workers is not prepared to pay contributions.
Nevertheless, the fact that the second reason for not paying contributions is unfamiliarity with the system leaves a window of opportunity for increasing the participation of the non-contributor, by making the advantages of the system more widely known. To do this, it is vital to have a pension “product” which is attractive for the self-employed worker and bears some relation to his/her needs. These needs are clearly marked in Figure Nº 8, where it is possible to see those benefits that would give him/her an incentive to pay contributions. The self-employed workers state that these potential benefits, that they would hope to receive, would be related with health, education and housing.
ii. Factors

We look below at those factors that increase the probability of paying contributions into the pension system. This should be a first step, and serve as a basis so that the industry can study it in more depth and propose the design of a pension product that suits the preferences of the self-employed worker and allows him/her to save for a future pension.

The methodology is based on a probit model of binary choice, where the dependent variable will be 1 if the informal worker pays contributions and 0 if he/she does not. The model is corrected for selection bias, using the Heckman method in two stages, because the decision to be a self-employed worker, or not, produces biases in the estimates. The secondary equation estimates the probability of the worker’s being self-employed. Within the model, we include variables related with alternative methods of saving, characteristics of the individual, characteristics of the household and the context of the job in which he/she works.
On applying the model, the basic findings show that:

1. Making contribution compulsory is not sufficient to solve the problems of coverage and pension amount, since over 50% of self-employed people work informally and are not subject to control mechanisms.

2. Self-employed workers are heterogeneous and have preferences for different types of alternative savings, depending on their income level:
   a. Those with low incomes prefer to save for housing.
   b. Those with high incomes prefer greater liquidity.
   c. An increase of 1% in alternative savings (capital goods or financial savings) reduces the probability of contribution: this leads us to conclude that it is necessary to associate pension saving with other savings needs in the case of self-employed workers.

3. With regard to incentives, we saw that self-employed people would be prepared to pay contributions if by doing so they obtained health, housing or education benefits.

4. Children’s education is a significant variable, implying that an increase in the cost of children’s education increases the probability of contributions being paid into the pension system for those in medium-to-high income brackets.

5. A positive correlation is found between contribution to the public health and pension systems. However, paying health contributions to private institutions reduces the likelihood of contributing for pensions, which is why the regulations should be adapted to allow these aspects to be brought closer together.

6. Other variables:
   a. Education: improved education increases the probability of paying contributions in the system between 0.4% and 0.9%.
   b. Permanent work: continuity in self-employment increases the probabilities of paying contributions in the pension system.
   c. Sex: this variable is very significant in some cases. Men contribute to a lesser extent than women, who seem to be more inclined to assume this responsibility on an on-going basis.
   d. Age: between the ages of 26 and 65 there is an increased probability of contribution, which coincides with Life-Cycle Theory. The probability of paying pension contributions increases as we move through the age-groups, reaching a maximum of 20% in the age-group corresponding to 46-55 years of age. It decreases in the last age-group of workers’ active life, between 56 and 65 years.
V. Conclusions

Bearing in mind the results, it only remains for me to present the main conclusions and synthesis.

The reforms have succeeded in achieving financial legitimacy, but social legitimisation, with adequate pensions and, above all, greater coverage, is still pending. The solution to these problems lies in countries’ gradually resolving their structural problems, but this does not mean that we have simply to wait for this to happen. We must make proposals that contribute towards finding the solution to this problem. Providing coverage under the system for large groups of the population means joint action on the part of the different actors who take part in it, with the aim of producing a pension scheme with sufficient incentives to make workers want to get involved. That in turn means studying and becoming thoroughly acquainted with their needs.

So, in the first place, it is clear that we have to study the behaviour of self-employed workers in depth and identify their needs. As we have seen, their socio-economic characteristics are what will finally define their position vis-à-vis the pension system.

On the basis of this first step, there are certain obvious variables that may increase the probability of social security contribution. With that end in view, we need to incorporate specific benefits related with housing, health and education in the pension system.

Secondly, it is countries’ structural problems, such as high informality, high poverty levels and bad distribution of income, among others, that lie behind the low participation in pension systems.

The solution to these problems involves governments’ adopting economic policy measures that establish a coherent model, one that encourages actors to interact with efficiency and to contribute with legal frameworks.

Thirdly, if the aim is to provide greater pension coverage, the State will have to concentrate its subsidies on the population groups that need them, while at the same time avoiding this affecting the fiscal sustainability already achieved.

Fourthly, if the orientation of the subsidy is correct, it will not discourage people who do have the possibility of contributing from doing so, so there might be a better response with a pension product that really matches the needs that have been identified.
SUBSIDIES ON CONTRIBUTIONS: MEXICO’S EXPERIENCE

CARLOS HERRERA

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This short article examines an issue which is of key importance in enabling pension systems with defined contributions to provide adequate replacement rates: the level and frequency of contributions.

The article is structured in the following way: in the first place, it looks again at the case of Chile, to focus on the importance of contributions in pension systems and especially the frequency or density of contribution. Secondly, there is an analysis of the Mexican experience with social security contributions, evaluating how adequate their level and frequency really are for the pension system, and thirdly there is an analysis of the impact of the so-called “Social Quota” (“Cuota Social”), a contribution from Mexico’s federal government to the individual capitalisation system, which seeks to be an instrument of State solidarity to support the contributions of account-holders, particularly those with lower incomes. Finally the article rounds off with a few conclusions.

I. The example of Chile

If Chile’s pioneering work has taught us anything, it is that, within the whole area of pension system contributions, the densities of those contributions are a key element in the pension that members will receive when they retire. Prior to the Social Protection Survey (EPS) that Chile has been carrying out, many pension systems assumed that contribution densities behaved in a highly uniform manner from one member to another. But thanks to the EPS developed by Chile, we have realised that the distributions of contribution densities are not uniform, but are highly heterogeneous and vary between the sexes (see Figure Nº 1).
II. The case of Mexico

Being familiar with the Chilean experience, the BBVA Group decided to carry out a study on Mexico, in order to understand the problems of its pension system and attempt to provide some proposals to solve them that might include essential elements within the pension system. The research work was consequently undertaken from the point of view that pension systems do not act in isolation or individually within an economy, but are totally linked with the demographic and economic aspects that are occurring within it. So any proposed solution that we might wish to offer the pension systems must act on many fronts, in other words, a pension reform strategy must include actions that can accommodate a solution to a variety of different problems that are added together and then summarised in the replacement rate and/or pension that a worker receives (see Figure Nº 2).
PART I

HOW CAN THE COVERAGE OF THE INDIVIDUALLY FUNDED PROGRAMS BE EXTENDED?

II.1 Diagnosis

The first thing that we found in the study on Mexico was that, sure enough, densities of contribution between members were very heterogeneous, just as in the Chilean case. So we learned that it is not really possible to talk about representative individuals within pension systems, because in fact, if we begin to describe individuals, we have any number of profiles. For example, Graph Nº 1 shows that even if we included nothing more than gender, three wage-levels and four levels of contribution density, we would be talking about twenty-four member profiles. Something that we found in the study is that the histories of workers within an individually-funded system can be very varied. There are some who are not doing well in the system because they have low contribution densities, whereas there are others who have medium-to-high contribution densities and may be doing relatively better as a result.
We also noted that in Mexico’s case, a particularly important limiting factor in the defined contribution system is that the contribution rate (6.5% of the gross wage) is relatively low compared with those existing in other countries (see Graph N° 2).
As is readily understandable, in a defined-contribution system where the contribution rates are low, it would not be surprising to find that pensions and/or replacement rates were also situated at relatively low levels. Low contribution rates lead inevitably to low replacement rates and especially in cases where the contribution densities are low, regardless of the member’s wage-level (see Graph № 3).
II.2 The solution suggested by BBVA

Of course, the solution to the problem of contributions in Mexico implies raising contribution rates to international levels. In the Mexican case, the contributions are tri-partite, in other words, they are paid by the worker, the employer and the State. However, the mandatory contributions paid in these three ways add up to 6.5% of the total wage (see Table № 1). If we add to these mandatory contributions another called the “Social Quota”, which would be 1.1% as a percentage of the wage in this example, the total contribution in Mexico would be 7.6%, which is far below the average for Latin America, which is around 10% of the gross wage.
So, as was said before, the natural solution is to raise the system’s contribution rates. The big problem, however, is defining who is going to pay the difference. So no sooner do we find a possible solution than the question arises: Can we do anything? Well, if we look at the structure of social security contributions, we see that though the employer pays 67.8% of the money that goes towards the pension, the worker 14.8% and the State, on the mandatory side, 3%, the social quota may play an important part as an instrument of solidarity in the system, because in this case it represents 14.5% (see Figure Nº 3).

**TABLE Nº 1**

MANDATORY CONTRIBUTIONS TO THE RETIREMENT, SEVERANCE AND OLD-AGE INSURANCE (RCV)

% OF BASE WAGE FOR CONTRIBUTION PURPOSES

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Worker</td>
<td>1.125%</td>
</tr>
<tr>
<td>Employer</td>
<td>5.15%</td>
</tr>
<tr>
<td>Estate</td>
<td></td>
</tr>
<tr>
<td>I. Severance and old-age</td>
<td>0.225%</td>
</tr>
<tr>
<td>Sub Total</td>
<td>6.5%</td>
</tr>
<tr>
<td>II. Social Contribution*</td>
<td>1.1%</td>
</tr>
<tr>
<td>Total</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

*CONSIDERING A WORKER WITH 5 MINIMUM WAGES. SOURCE: PRODUCED BY THE AUTHOR ON THE BASIS OF THE SOCIAL SECURITY LAW.
The social quota is in fact a very important solidarity instrument, not only because of the percentage that it represents in the total contribution, but also because of its design. The Social Quota was introduced in 1997 as a fixed monthly contribution from the Federal Government to each individual account for each contributed day, and its amount is equivalent to 5.5% of the General Minimum Wage in Force (SMGV) in the Federal District on 1st July 1997, updated quarterly according to the National Consumer Price Index (INPC). Because of its design, consisting of a fixed payment into an account, the Social Quota offers most benefit to people with fewer resources. If we analyse the case of Mexico, where we have a wage structure for social security contribution purposes with a ceiling of twenty-five wages, if we arrange them from less to more, we see that the impact of the social quota really is much higher in the case of workers with one to three contribution wages (see Graph Nº 4).
Knowing this structure of the Social Quota and its beneficial effect on workers with lower incomes, it would seem obvious that if we can manage to increase the Social Quota, we could increase the social benefit of this solidarity instrument. The problem, of course, lies in how to finance this increase in the Social Quota. Many countries that have reformed their pension systems have also done so by having to absorb some short-term fiscal cost, precisely in order to close down the defined-benefit scheme and be able to move into the defined-contribution scheme. In the case of Mexico, not introducing the reform would have meant allowing the contingent liabilities to grow along an indefinite time-line, with unsustainable fiscal costs. Thanks to the reform in Mexico, it has been possible to revert this phenomenon and we know that eventually this fiscal cost will have to be assumed. However, this is not a minor cost, (it amounts to 54.8% of the GDP according to our calculations) [see Graph Nº 5].
So, in a system that already has high fiscal costs in itself, the question is how to increase the social benefits without making those fiscal costs significantly heavier. Our proposal consisted of redistributing the public resources in the Social Quota towards those people on whose pension it has greatest impact. This implied eliminating the Social Quota for all those workers earning more than three minimum wages and concentrating the Social Quota on workers with one or two minimum wages, thus doubling the amount of this contribution for this group of workers (see Graph Nº 6).

II.3 The reform adopted by Mexico

The legal initiative of the Federal Executive which was approved by Congress in 2009 was broader in its coverage. It was decided to apply the increase in the Social Quota to the first fifteen income levels, in stages, eliminating it for the wage levels above this threshold (see Graph Nº 7). Of course, by not having limited the reform to the first three minimum wages, the Government and the Congress decided that it was possible to assume a certain fiscal cost, but the idea of redistributing the Social Quota has already

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2 Instituto Mexicano del Seguro Social (Mexican Social Security Institute).
helped to finance 60% of those new fiscal costs, meaning that although the reform did finally have a fiscal cost, this was limited to a certain extent.\(^3\)

3 The authorities at the treasury in Mexico estimated that the transfer to lower-income workers as a result of the redistribution of the social quota was approximately USD 130 million in the first year of the reform.
II.4 Results of the Reform

The increase and subsidy on contributions by means of the Social Quota today offers better prospects of welfare for members with lower incomes. On doing our simulation exercises, it is clearly evident that before and after the reform there is a significant improvement in workers’ welfare in terms of their replacement rates (see Graph Nº 8). In the case of Mexico, this reform to the Social Quota achieved a more progressive assignment of public resources, benefiting workers with lower incomes. In fact, 90% of workers contributing in the Pension System saw an increase in the contribution to their individual accounts. By improving the contribution rates, as might be supposed, the expected replacement rates have also improved, increasing workers’ welfare.
Nonetheless, this reform to the Social Quota represents only a first step towards solving problems inside and outside the Pension System. These call for a solution with an overall view, both in Mexico and in Latin America as a whole. For example, it has already been said many times that one of the main challenges facing all our defined-contribution systems is the issue of informal work, which is at a very high level in all the countries in the region.

Other challenges that also have to be faced are how to extend the coverage of employees to include self-employed workers in the system, increase the financial education of account-holders, encourage voluntary pension saving, include all the issues that may exist in connection with pensions other than those for old age (e.g. disability and survivorship), etc.
However, one task that must be concluded as soon as possible is that of fiscal consolidation. There are many countries in which defined-benefit systems with actuarial deficits are still coexisting with defined-contribution systems, and as long as the growing breach of fiscal resources required each year by the defined-benefit systems is not closed, resources are escaping that could be used in one way or another to support the social protection network within the defined-contribution scheme, whether in the form of a Solidarity Pillar, like that of Chile, or a Social Quota scheme like the one I have commented on in the case of Mexico. In that sense, the task of extending the bases of fiscal collection and improving the efficiency of public expenditure is an on-going one which, if carried out, will benefit the defined-contribution systems.

III. Conclusions

The Mexican Pension System faces challenges today both inside and outside the Pension Industry’s sphere, such as informality, low contribution densities and low rates of mandatory contribution.

In a system with defined contributions, these are crucial for the pension. In this sense, in the reformed system in Mexico, the Social Quota has been an important instrument of solidarity from the State to the account-holders. The Social Quota is an example of how solidarity instruments can fit perfectly within defined-contribution systems to support workers with lower incomes.

With the latest reforms to the Social Security Law, which focus the destination of public resources on people with lower incomes, the Social Quota has strengthened its goal and allows progress to be made today towards better welfare conditions for members.

Nevertheless, the subsidy on contributions for people with low incomes is only part of a solution that needs to be more broad-based and comprehensive. In order for a Pension System to meet its goal of providing protection in old age, it must have appropriate conditions. We have to tackle the problem from various angles, in terms of improving coverage, improving the formality of contractual relationships and having adequate, regular contributions and also in terms of having an investment scheme that matches members’ investment horizon. These are necessary conditions to enable a pension system really to achieve its objective, which, when all is said and done, is to provide adequate protection in old age.
PART II

NEW PRODUCTS

JOSEPH RAMOS. New activities for the AFPs: unemployment insurance policies
AUGUSTO IGLESIAS. Voluntary Pension Saving
MICHAEL CANNON. Personal Medical Accounts: An Alternative to Compulsory Health Insurance
NEW ACTIVITIES FOR THE AFPS: UNEMPLOYMENT INSURANCE POLICIES

JOSEPH RAMOS

Joseph Ramos received a Doctorate in Economics (1968) at the University of Columbia U.S.A. He is currently full Professor at the Economics and Business Faculty of the University of Chile. He held the post of Dean of that Faculty between the years 2002 and 2006. He formerly advised Latin American governments on matters of employment, income and development for the International Labour Office (ILO, 10 years) and for the Economic Commission for Latin America and the Caribbean (CEPAL, 17 years). He was also main economic Advisor of the Ministry of Labour in Chile between 1990 and 1991. He was (the first) Chairman of the Unemployment Insurance Users’ Commission of Chile, between 2002 and 2006. He has written 6 books and over 60 articles in specialised periodicals.
The use of individual capitalization accounts to replace or complement traditional pension systems has been growing all over the world. That success makes it natural to wonder whether that same mechanism might not be the answer for other social needs. Certainly, if it were, a natural synergy would occur with the individual accounts of the pension system, with additional benefits both for the insured and for the Pension Fund Administrators (AFPs).

In this article, I want to consider the desirability of using individual accounts as a form of unemployment insurance. The first section looks at the reason why unemployment insurance is necessary and why traditional insurance may be unsatisfactory in providing it. The second examines the possible advantages of individual capitalization accounts (CIC) over traditional unemployment insurance schemes, including in this section the relative advantages of CIC alone, or when combined with access to credit and/or solidarity unemployment funds. The third section presents a concrete case, that of Chile, with 8 years in operation, a system in which the CICs are complementary to the system of severance pay, and where the CICs function in combination with a solidarity fund (FS). The fourth section considers some possible extensions, where the CICs are combined with credits, using the pension funds as guarantee (similar to the proposal put forward by Stiglitz and Yun (2002)), and a second in which severance payments are transformed into individual accounts (as in Austria, Brazil and Colombia). The final section concludes with some considerations of political economy involved in such reforms.

I. The advisability of unemployment insurance

a. Why insurance?

There are various reasons for suggesting that unemployment insurance is worthwhile. First, even in a normal economic environment without any large-scale unemployment crises, a considerable percentage of the workforce faces the not insignificant risk of being without income for what may possibly be a long period, due to the creative destruction characteristic of modern economy. In point of fact, a considerable percentage of jobs...
are destroyed every year and a similar percentage created, as part of the process of job reallocation from less productive companies and uses to more productive companies and uses. For that reason, what with people joining the labour market, voluntary job changes, project-based or fixed-term contracts and dismissals, it is estimated that the average worker will change his/her job once every 4 years\(^2\) in the course of his/her professional career. If the search period lasts for between 2 and 3 months, that in itself would mean a “frictional” unemployment rate of around 4.2% to 6.3% per year\(^3\). This problem may become serious because not every search works out according to plan; some searches may be unexpectedly long, making the process particularly expensive. On the other hand, the best search implies being able to turn down some offers and not having to accept the first job that comes up. Lack of income may therefore prevent an efficient search. Unemployment insurance would step in to meet this need to smooth consumption in the face of an unexpectedly prolonged job search.

Secondly, the gravity of unemployment becomes exponentially more acute in economic crises with widespread, generalised unemployment, when most companies are laying off workers and few are hiring them. Depending on their gravity, these may be recessions, such as the recent international crisis in 2009, when the GDP of Latin America fell by about 1.5% and unemployment reached 10%, or depressions, such as the external debt crisis in 1982/1983, when the GDP of some countries fell over 10% and unemployment doubled. The average worker has no defence against such crises, with the result that losing his/her job becomes a real catastrophe.

Thirdly, even workers on short term contracts (as in construction, for example) or on fixed term, have problems. It is true that the worker who chooses jobs of this type knows that he/she does not have a stable income and will have to look for work every so often, so he/she has to save part of his/her income to cover the search period. Unfortunately, it is not easy to predict the duration of that search.

Furthermore, not all workers are so far-sighted. Many are short-sighted. What is more, even if there were no short-sightedness, personal savings serve to defend the worker in case of foreseeable situations or those with clearly-limited risk, but unemployment is not a clearly foreseeable or limited issue. In fact, if falls of 10%, say, in the demand for labour in a company simply reduced working hours, individual saving would

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\(^2\) According to ENCLA (2009), about 25% of all workers with indefinite contracts (that is, without any fixed date of termination) in Chilean companies were hired and discharged in the year 2008. This means that on average each worker changes job once every 4 years.

\(^3\) In fact, if a quarter of the workforce is looking for work each year and if their search lasts for 2-3 months, then between 4.2% (1/4 multiplied by 2/12 of a year) and 6.3% (1/4 multiplied by 3/12 of a year) of it would be out-of-work at any given moment. See Cowan and Micco (2009) for a discussion of the importance of turnover in the labour market.
be a socially effective mechanism. However, that solution is highly inadequate if, as often happens, the fall in the demand for labour is concentrated randomly in a few individuals, increasing unemployment by 10% or more, and not affecting the rest. There is no reasonable saving that can offer protection to face this latter contingency.

This is even more so in the face of large-scale unemployment or a catastrophic contingency⁴, where individual protection by saving sufficient money ahead of time is virtually impossible. On the other hand, even in situations of “normal” unemployment, the search period is not completely predictable and has considerable variance. This means that individual saving is not an efficient protection for confronting the risk of unemployment. Unemployment insurance makes it possible to diversify that risk between all those potentially affected, thereby smoothing consumption and improving the welfare of the workforce.

On the other hand, there is no perfect capital market in which the unemployed worker can borrow to smooth his/her consumption in periods of unemployment. On the contrary, at such moments, when he/she most needs it, nobody is prepared to lend anything. For that reason, when faced with relatively random risks such as unemployment, it is much more efficient to socialise such risks through unemployment insurance.

For all these reasons unemployment insurance schemes have been created around the world, not only to provide the worker with sufficient income to reduce substantially the variability of family consumption during his/her unemployment, but also to avoid his/her having to accept the first job that appears, however bad it may be, and allow him/her to extend the search time until a more suitable and better-paid job is found. So, if it is well-designed, unemployment insurance clearly improves social welfare.

b) Why not private insurance? Why should it be mandatory?

If unemployment insurance is such a good idea, why not generate a private market for it, as happens with insurance against car accidents, for instance? The problem is that a private unemployment insurance would have to cope with what is known as adverse selection. Since the risk of unemployment is not entirely random, but affects some jobs and individuals more than others, individuals with higher risk would tend to want to be insured. Since the insurers would anticipate this, they would charge a very high

⁴ Most of the problem of large-scale unemployment would disappear if, in time of recession, when companies are facing reductions in their sales, the government would encourage them to reduce working hours instead of dismissing personnel. In fact, it would be socially preferable if, in the face of a generalised fall in sales and production of, say, 5%, everyone worked 5% fewer hours, rather than having a rise in unemployment of 5 percentage points. For a proposal of this type see Bravo, Larrañaga and Ramos (2003).
premium, which would discourage everyone even more, except those with highest risk, meaning that the market would become increasingly narrow and possibly disappear altogether.

The solution to the problem of adverse selection is to make the insurance mandatory for all workers, so that both those with lower risk and those with higher are insured. That is why unemployment insurance around the world, where it exists, is mandatory for the whole working population.

Finally, an additional problem for private insurance is that, particularly in case of crisis, the risk of unemployment is not unrelated from one worker to another. Private insurance is highly vulnerable to systemic risks of this type, where the risks are related, as occurs during a period of mass unemployment. What is more, the assets underlying such insurance typically lose their value in those moments of greatest need, making the insurance insolvent unless the State commits itself to cover its possible deficits. That is why, typically, this insurance is state-run, because only the State is in a position to cover systemic risks.

II. Traditional insurance and the relative advantages of individual accounts for facing up to unemployment

For all the above reasons, unemployment insurance schemes have been and are being set up, especially in developed countries. Although their characteristics vary from country to country, traditional insurance essentially pays a subsidy when the unemployment event occurs, a subsidy which is independent of any contribution that the worker or his/her employer may have made. In that sense it is “pure” insurance. In order not to discourage the search for work altogether, the subsidy is not open-ended, but has a time-limit, varying from 6 months (USA) to 2 years and more in some European countries. For the same reason, the subsidy is lower than the real wage that the worker was earning, the “replacement rates” being typically between 50% and 80%. Despite these two safeguards, the subsidy represents a strong disincentive to look for work. On the one hand, the fact of raising the worker’s reserve wage tends to produce job rejection; on the other it prolongs the duration of the unemployment period until the subsidy ends or its amount becomes relatively insignificant. For that same reason it implies a very high cost that can only be met by rich countries. In fact, as is shown in Table 1, expenditure on unemployment insurance, retraining of the unemployed and special job-creation programs may amount to as much as 5% of GDP per year.

In order specifically to overcome this problem of high costs and disincentives to search for work, the idea of using individual capitalization accounts (CICs) has arisen as a mechanism, partial or complete, for providing unemployment insurance. In fact, the CICs have two big advantages over traditional insurance. First, as a kind of compulsory
savings, it means that the worker him/herself (or indirectly, through the employer) finances a good proportion or all the cost of a “normal” unemployment. Second, insofar as the worker him/herself assumes the cost of his/her unemployment, - in the case of individual accounts alone – the “negative” incentives, to turn down a job or unduly prolong the search for work in order to charge the subsidy, virtually disappear. In fact, these funds are his/hers, whether or not he/she becomes unemployed.

There are three versions of CIC and it is worth drawing a distinction between them for purposes of unemployment insurance. The first is individual accounts alone. If unemployment were evenly spread for everyone – at about 6% -, this would be the best possible instrument, because each worker would know that he/she would be out of work for 6% of his/her professional life. He/she would therefore need to save the equivalent of 6% or less in his/her individual account, depending on whether he/she wanted a replacement rate of 100% or somewhat less. In fact, each person would finance his/her unemployment with compulsory saving (either directly or through the employer). Since the worker him/herself assumes the cost of his/her unemployment, there would be no disincentives of any kind. The problem is that neither the unemployment nor its duration is even from one person to another. Therefore some may be unemployed for 10% of their professional life or more, while others are lucky enough to suffer no unemployment at all. These latter would have surpluses in their individual accounts, which is not a problem, since that money, with interest, will be theirs when they retire. However, for the former, the individual capitalization accounts will be insufficient to provide adequate coverage for their unemployment at the desired rate of replacement.

This leads to the second version of individual accounts: that of CIC with access to credit (Cortázar (1993) and Feldstein and Altman (1998)). In order to supplement the shortfall in the individual accounts of the first group of workers (since capital markets are imperfect and will not lend to people without work), once the funds in the accounts are exhausted, a credit is granted to give them appropriate cover during their unemployment. The credit is charged by way of a higher contribution once the person is back in work\(^5\), meaning that theoretically the worker assumes the cost of his/her unemployment (almost) completely and there are no disincentives. Even so, this is not an insurance policy, because the person who randomly suffers a high level of unemployment in his/her professional life has to finance that unemployment completely him/herself.

The third version, used in Chile as we shall see further on, consists of individual accounts combined with a solidarity fund that covers the event of having more unemployment

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5 This is so in the version proposed by Cortázar. In the Feldstein and Altman version (1998) it is a government credit and is repaid out of the individual account, but if the worker has a deficit at the end of his/her working life, it is condoned. This is more beneficial for the worker but weakens search incentives.
than average. In fact, the idea is that everyone should cover a normal unemployment with his/her CIC, while the solidarity fund provides protection against the misfortune of suffering more unemployment than normal. It is therefore the solidarity fund that insures against the misfortune of suffering more unemployment than normal. Although this version has the virtue of protecting those who randomly suffer more unemployment, the existence of this insurance does to a certain extent discourage the job search while money is being withdrawn from the solidarity fund. There is therefore a dilemma: the more generous the protection (the solidarity component), the greater the disincentive to search. Nothing is perfect in this world.

Certainly, any one of the three versions is interesting as a new activity for the AFPs, both because of the volumes of business involved and because of the positive synergies between individual accounts for unemployment and individual accounts for retirement. In fact, if the individual accounts were intended to cover a normal unemployment of 6% with a replacement rate of 50%, that would mean an annual contribution (between the employer and worker) of 3% of the worker’s wage (or 1½-2% of GDP). That is comparable with a typical contribution of about 10% for pensions. Nevertheless, the figures are not perfectly comparable, because the pension fund accounts are kept for a long period, while the unemployment accounts are of shorter duration.

With regard to possible synergies, there is no doubt at all that the AFPs can provide the maintenance service for individual accounts of unemployment contributions relatively easily, given their experience in generating individual accounts for retirement. At the same time, their offices make it easy to provide a now even wider service for their clients. Finally, their investment strategies are really quite similar to those of the less risky funds in the retirement investment portfolio. Since the provision of these new services complements their work of managing the retirement funds so well, it significantly reduces their unit operating costs. These savings are even more significant if the unemployment funds end up being awarded by tender to a consortium of AFPs, as turned out to be the case in Chile.

III. The case of Chile

The 2002 Chilean unemployment insurance is a double hybrid. On the one hand, it combines a compulsory savings component in individual accounts with an insurance

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6 In fact it is estimated that, when running normally, the funds managed by the AFC in Chile will amount to almost 2.5% of GDP.

7 Nonetheless, if the income of the AFP depends on the contributions and not the funds under management, the difference in the duration of the funds would not affect the AFP’s income.

8 For a full description of the Chilean unemployment insurance, at least until it was reformed in 2009, see Acevedo, Eskenazi and Pagés (2006).
component by means of a “solidarity” fund. The second component is the real insurance, because the beneficiary receives this subsidy if he/she becomes unemployed, regardless of his/her contribution to the fund. On the other hand, it was designed to be combined with the existing severance payment of one month per year, in order to give adequate protection to the unemployed person, between the two elements.

It aims to give the unemployed worker adequate protection, while minimising the disincentives and “leaks” towards groups considered to be less of a priority that are so typical of this insurance in Europe and the U.S.A.. In point of fact, the programs of the developed countries tend to benefit many people who are less needy (seasonal or single project workers); lead to collusion between employers and workers at the expense of common funds and government resources; discourage the search for work in order to continue receiving the subsidy. As a result such programs are exorbitantly expensive for developing countries such as Chile. The Chilean unemployment insurance introduced an innovation by eliminating most of these abuses and leaks, working out a program more in keeping with the funding abilities of a developing economy such as Chile’s. In fact, all the innovations designed to avoid abuses and “leaks” of benefits to non-priority groups turned out to be so successful that the first reform of the insurance, carried out in the year 2009, was motivated by the realization that the original law of 2002 had erred on side of “stinginess”.

The new insurance is mandatory for all wage-earners in the private sector hired since October 2002, except people in domestic service and unpaid family workers, and is voluntary for those who were already working. Self-employed workers were excluded, because it was considered that any attempt to insure them would lend itself to misuse. In fact it is virtually impossible to identify whether a self-employed worker is unemployed or has restarted work. Neither is it possible to distinguish between a self-employed worker who is really unemployed and one who is not active but declares him/herself to be an out-of-work self-employed worker in order to collect the insurance. For reasons similar to these, the idea of insuring unpaid family workers was also ruled out, because since they are virtually indistinguishable from those who do not work, it would lend itself to misuse.

The priority group for the new insurance are the wage-earners with indefinite contracts, because it was felt that seasonal or single project workers (as in the building industry), or those on fixed-term contracts, work in that way of their own free will. The unemployment that they experience is therefore to some extent predictable and therefore “voluntary”, so they would not deserve significant additional protection.

In the case of workers with indefinite contracts, the individual account is fed by a monthly contribution from the employer of 1.6% of the worker’s assessable income
and another 0.6% from the worker him/herself. The Solidarity Fund is financed with a monthly contribution from the employer of 0.8% of the assessable income plus a minimal state contribution (barely US$13 million per year when the system is running normally). In the case of workers on projects or fixed-term contracts, the contribution is paid exclusively by the employer (equivalent to 3% of the wage): 2.8% to the individual account and 0.2% to the Solidarity Fund.

In order to have access to the individual account, the person must have contributed for at least 6 months. The withdrawal of the funds accumulated in the individual account is “in all cases”, whether for voluntary reasons or dismissal. In this way it helps both the worker who leaves voluntarily to seek a better job and the one who loses his job.

In concrete terms, workers of both types can have access to their individual accounts if they lose their jobs. The specific-project or fixed-term worker has access to all the savings in his/her account immediately, because it is assumed that he/she has probably been working for less than a year. On the other hand, the worker with an indefinite contract cannot withdraw all his/her funds at once (unless he/she has been working for a short time, specifically, less than eighteen months), but has to do so gradually. The possible number of withdrawals increases with the number of years of contribution, according to a pre-established table.

In the case of the Solidarity Fund, the dismissed worker only qualifies if he/she has made at least 12 continuous contributions in the past 24 months and 3 continuous contributions with his/her latest employer. He/she receives the funds accumulated in his/her individual account and, if these are insufficient, resources from the Solidarity Fund (FS). In the case of the worker with an indefinite contract, he/she can receive up to 50% of the average gross income of the last 12 contributions from the FS in the first month, 45% for a second month of unemployment, 40% for a third, 35% for a fourth and 30% for the fifth month of unemployment, with a minimum and maximum monthly subsidy amount of around US$175 and US$380 respectively for the first month, decreasing over time according to the percentages given. In the case of a fixed-term or specific-project worker, he/she can only make two withdrawals from the FS, of 35% and 30% with a minimum and maximum amount.

9 There is no need to contribute on that part of the wage over US$2,400 per month (approx.), because it was considered that people with that level of income would protect themselves with their own savings.

10 Though the employer’s contribution for the single-project or fixed-term worker (3%) is higher than that of the indefinite contract worker (2.4%), this does not necessarily mean a real higher cost for the employer, because it was assumed that, since these contracts are renewed frequently, the new contract could absorb the higher cost by having a lower net wage.

11 These maximums should be compared with the average wage of the Chilean workforce, which is around US$600 per month.
The new insurance also introduces an innovation by making a distinction between a situation of “normal” unemployment and a “catastrophic” one, providing greater protection in the latter: economic crises. In fact, the number of withdrawals is increased in periods of unusually high unemployment: in the case of open-ended contracts, a sixth and seventh withdrawal can be paid, of 25% and 20% of the gross monthly wage, respectively. For workers hired for a specific project or term, a third and fourth withdrawal have been introduced for times of “crisis”, for 30% of the gross monthly wage.

Table 2 shows the benefits that a dismissed worker with an indefinite contract would receive, depending on his/her length of service in the company and his/her income. Here it can be seen that the lower the worker’s income, the larger the percentage of the wage represented by the mean benefit during the five months to which the worker may be entitled to: it ranges from 23% of the net wage for a worker who earns 5 minimum wages to 51% for one who earns a minimum wage. The re-distributive intention of the law is therefore clear, in that it provides more protection for the worker who is more at risk because of having less income.

Nevertheless, the total benefit for a wage-earner with an indefinite contract who loses his/her job is greater than this. It is necessary to add the current severance pay of a month of wage per year of service, because the new insurance on its own would not be nearly enough to smooth the consumption of an unemployed worker’s family adequately. For this reason the aim of the insurance is to fulfil this function, together with the severance pay. So the total protection (insurance plus severance pay) of a worker with an indefinite contract who earns a minimum wage will consist of his having a monthly income equivalent to 71% of his net wage for the 5 months that his/her unemployment may last (if he/she has one year’s service), 91% if he/she has two years of service and is over 111% with three or more years of service.

Table 2 also makes it possible to appreciate the difference signified by the total insurance (benefit plus severance pay as percentage of wage) compared with the position prior to the insurance, when only severance pay was available. For example, a worker who earns a minimum wage and has one year’s service sees a rise in his/her total protection from 25% of the net wage for 5 months without the insurance to 71% with the insurance.

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12 When the national unemployment rate exceeds the average of the last 4 years by 1%.
13 The percentage of the net wage is taken into account because, at the end of the day, that is what concerns the worker most for smoothing his/her consumption. So the 50% of the gross wage is equivalent to about 62.5% of the net wage. For the same reason, for example (see last line but one of the 1st column in Table 1), the indemnity of one month of gross wage is equal to 1.25 months of net wage. This indemnity payment “stretched” over the 5 months of the assumed duration of the unemployment period is equivalent to receiving 25% of the net wage per month.
In the same way, the worker with a minimum wage and 2 years of service moves from a total protection equal to 50% of his/her net wage without the insurance to 91% with the insurance. However, it should be noted that as the wage rises, there is a gradual reduction in the percentage by which the insurance increases the worker’s protection, compared with severance pay alone.

Workers who have worked in their company for a good number of years (around 5 or more) will not therefore have access to the Solidarity Fund, and neither will those with high incomes, because the funds accumulated in their individual accounts will tend to cover the necessary minimum contemplated in the law. In fact, the Solidarity Fund is designed to supplement the funds in the individual accounts for the worker who loses his/her job, especially in the early years of an employment when the indemnity is scanty and the worker is more exposed. In fact, as shown in Table 1, the benefit from the Solidarity Unemployment Fund as a percentage of the net wage is highest (44%) for the worker who earns a minimum wage and has only one year of service, and falls in proportion to the rise in income and increase in length of service in the company. So, the same Table shows how the benefit falls to scarcely 1% for a worker who earns 5 minimum wages and has 3 years of service.

There is also a series of requirements to be met in order to have access to the resources in the Solidarity Fund. These involve showing a final settlement certificate from the employer, being enrolled at a Municipal Labour Intermediation Office (OMIL), visiting it monthly while collecting FS benefits and not having turned down any job that pays 50% or more of his/her former wage.

Finally, as regards the benefits, the insurance also introduces an innovation by paying out the resources from the individual account, but not from the FS, to the worker who becomes unemployed of his/her own volition. This is equivalent to approximately a week and a half of net income per year of contribution. This is a way of encouraging labour mobility.

The design of the unemployment insurance includes a series of original measures. First of all, in order to avoid an excessive rise in the cost of the insurance for the company, employers are allowed to deduct the contributions paid into the individual account (1.6% of wage) from the severance payment that they will have to make in case of dismissal. Since the severance payment of one month per year is equivalent to 8.3% of the gross wage, this means that this payment is reduced by approximately 20%.

Secondly, in order to preserve the financial viability of the Solidarity Fund and ensure subsidies for all potential beneficiaries, the law includes downward adjustments in the Solidarity Fund payments if a crisis were so severe that the total payments from the fund in a month exceeded 20% of the accumulated funds.
Thirdly, the insurance is managed by the private sector. In order to reduce costs, this was limited to a single company – called the Unemployment Fund Administrator (AFC) – by means of a bidding process which awarded the management of the insurance program for a period of 10 years. In this way, the cost associated with the administration of the system (collection of contributions, servicing of accounts, investment of funds, checking that the eligibility criteria are met for receiving benefits, paying those benefits and collecting from debtors) has proved to be relatively low: 0.6% of the accumulated funds per year, as established by the winning administrator’s bid. Since the administration is a monopoly, it is subject to rules and regulations fixed by the Superintendence of Pension Fund Administrators (SAFP). Although at the beginning the fund’s investments were limited to fixed-income instruments, because it was believed that the resources would be withdrawn rapidly, permission was later given for part of the portfolio to be invested in equity instruments in order to increase its yield, because the authorities realised that a considerable percentage of workers (possibly 50%) remain for over 4 years in their company, meaning that the funds did not need to be so liquid.

Fourthly, it was considered that the SAFP and other State supervisory bodies were there to ensure compliance with the letter of the law, but there was no independent body to make sure that the system was functioning properly in accordance with the intention and spirit of the law. For this reason, an innovation was introduced by setting up the Users’ Commission, an independent body made up of users – representatives of the unions and employers, and chaired by an academic. In order to carry out its mission, it is entitled to demand information from the AFC and the relevant state bodies (those concerned with social security, training and intermediation, among others) and so fulfil its obligation to present an annual, non-binding report (on the functioning of the system), descriptive in nature but also containing proposals suggesting ways of improving unemployment insurance.

The new insurance, meanwhile, increases protection for dismissed workers, especially those with few years in the company and those with low or medium incomes. Another innovative aspect was the introduction of benefits, albeit small ones, for workers who are left without work at the end of the specific project or period of time for which they were hired, and also for those who leave voluntarily. This should facilitate greater labour mobility.

In any case, its most important original features were to be found in its design, which minimises both the leakage of resources towards lower-priority groups and negative incentives to prolong the period of unemployment in order to collect the insurance, phenomena which have made the systems of unemployment insurance very expensive in developed countries. The first evaluations support these conclusions, see Reyes, Van Ours and Vodopivec (2010).
Faced with the dilemma of whether to be generous with benefits or minimise leakages, priority was clearly given to the latter. First of all, possible collusion between employers and workers - involving agreement on artificially inflated final settlements at the State’s expense - was minimised by making the financing for the insurance come almost exclusively from the first two sources. Secondly, the bulk of its benefits come from individual accounts, financed by both parties, and these are substituted only when the accounts are exhausted, in case of dismissal, with resources from a common fund, funded largely by an employers’ contribution. In this way, the potential abuse of prolonging the unemployment period while making use of other people’s money is discouraged. Thirdly, the use of the Solidarity Fund was restricted mostly to wage-earning workers with indefinite contracts, since it was felt that it is they, rather than the specific-project or fixed-term workers, who most need the insurance. Fourthly, rapid reinsertion was encouraged, because the benefits decrease over time, starting from a maximum of 50% of the gross wage and ending in the fifth month with a subsidy of no more than 30% of income. Fifthly, the benefits of the Solidarity Fund were concentrated on workers with low and medium incomes, the groups who have least protection in the event of unemployment, because maximum limits are fixed on subsidies. Sixthly, any significant increase in hiring costs was avoided, because the employer can deduct his/her contributions to the worker’s account from the severance pay.

Having said all that, it must be recognised that the insurance must not be evaluated in isolation. It was envisaged as a complement to severance pay in case of dismissal. So, taken together, the insurance plus the severance payment provide a relatively decent protection for the dismissed worker with more than one year’s service and low income, with replacement rates of around 60-70% for such workers, similar to those of developed countries.

However, the benefits of the Chilean insurance are particularly poor for the worker with less than a year’s service who does not manage the 12 contributions in 24 months; and for the worker with less than eighteen months’ service but with a wage of over 3 minimum wages (a third of the workforce earns over 3 monthly minimum wages). Neither is there any distinction in the insurance benefits between a young person with no dependents, who is looking for a suitable job, and another with a family, or an older worker. The current protection of the insurance is perhaps excessive for the first of these, but clearly inadequate for anyone with family obligations and little length of service in the company.

Finally, due to a large extent to the structure of the Chilean labour market, where a wide group of workers is self-employed or informal, the insurance still leaves a high percentage of the workforce (around 40%) without any protection whatsoever.
IV. Possible extensions of individual accounts\textsuperscript{14}

a. Individual accounts with credit using the pension as guarantee

One problem with the Chilean system is that its replacement rate decreases rapidly and is of short duration, the aim being to avoid disincentives and leakages. This limits the possibility of smoothing consumption enormously. It would therefore be a good idea to consider the possibility of making credit accessible, rather than solidarity funds, with the aim of increasing the worker’s income, but at his/her own expense. The credit system does not normally lend to someone who is out of work, and public credit might be difficult to recoup.

This is why Bravo, Larrañaga and Ramos (2003), inspired by Stiglitz and Yun (2002), suggest taking advantage of the person’s pension funds and those of his/her guarantor, as guarantees for a credit from the private banking sector, before having recourse to the FS. In point of fact, every worker is a creditor of the pension system. What is more, not only can his compulsory savings not be used in case of need, but neither can they (currently) be used as guarantee for a credit. The idea, then, is not to make a withdrawal on the pension funds, but to use these (those of the individual or of his guarantor) as a last-resort guarantee to recoup the credit. But in the first instance the credit would be recouped by means of an additional contribution to be paid by the individual when he/she gets another job, or by his/her guarantor if he/she does not find one, and by automatic deduction from the payroll. Only in the case where neither the individual nor his/her guarantor is paying contributions would the credit – equivalent to the additional contribution - be charged out of his/her pension fund or that of his/her guarantor. But this would be the case only for the small percentage of cases where neither the individual nor the guarantor were paying contributions. In this way, a private credit market would be created to finance the job search, with a guaranteed way of recouping the credit.

The credit would be drawn on, once the severance pay and individual accounts had been used up, for the unemployment period allowed by those resources (and at a much higher replacement rate – say 80%). The credit would be allowed for a limited period, say up to five months (including the time financed by the severance pay and individual accounts) at a decreasing replacement rate of, say, 75%, 70%, 65%, 60% and 55%, to be followed by the FS for, say, up to 3 months more at decreasing rates of 50%, 40% and 30%. In that way, between severance pay, individual accounts, credit and solidarity fund, it would be possible to finance a period of unemployment of up to 8 months at a decent average replacement rate. But the bulk would be at the worker’s expense, using the solidarity fund only when all the individual funds and credit have been exhausted.

\textsuperscript{14} See the excellent paper by Robalino, Vodopivec and Bodor (2009) on this subject.
This would have the effect of placing most of the cost of the unemployment on the worker, while making it possible to smooth his/her consumption more effectively at a higher replacement rate and, if necessary, for longer. Since the FS would not come into operation until the 6th month of unemployment (because first would come his/her severance pay, then the individual account and then the credit), despite having a higher replacement rate, the incentive to postpone the search for work would be enormously reduced.

b. Replacing severance pay with individual accounts

Most developing countries have no unemployment insurance, but do have a system of severance pay, which acts as a fairly imperfect unemployment insurance. The typical severance pay is one month of salary per year of service in the company. Since the typical duration in a company may be 4 years, this means that the person being dismissed would receive 4 months’ wages, which would allow him/her 6 months to look for work (more than the normal work-search period) with an income equal to 2/3 of his/her normal wage. This means that the severance payment serves as a good unemployment insurance for the average worker.

The problem is that many workers are dismissed before the first year is up (so cannot claim severance pay) or after one or two years, when the severance payment is much lower. These workers are either not covered at all or have very imperfect coverage. This means that severance pay is a very imperfect method of insuring against unemployment. Furthermore, since severance pay makes the cost of hiring labour more expensive for the company, this reduces employment. Voices have therefore been raised in favour of replacing severance pay with a deposit in the worker’s individual unemployment account. This is particularly relevant in countries like those in Latin America, where the severance pay is the main instrument defending the worker who has been dismissed.

Colombia converted its system of severance payment into a better insurance by means of individualaccounts, reducing the distortions associated with the severance payment.

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15 This without adding that the lay-off frequently occurs in situations of company crisis, the very moment when the company is not in a position to fulfil this commitment, so the dismissed worker is paid “what the company can manage” and not what is really owed. At the same time, other companies get “sharp” and attempt to negotiate less severance pay than is really due by threatening to sack the person on some grounds that allow them to escape the obligation to pay severance money. The worker who does not want to face a long court case may accept this offer rather than insisting on his/her rights.

16 See, among others, the work of Vodopivec (2009).
system and avoiding the (frequent) defaults on such payments. The new system requires companies to deposit one month’s salary in the workers’ individual accounts (for new employees). By so doing, the “insurance” changed from one month of salary per year in the company in case of dismissal, to one month of salary per year “in all cases”, whether for dismissal or voluntary withdrawal.

This reform met with no political objection at all from workers, because an indemnity payment of 1 month per year in the event of leaving voluntarily was added to the 1 month per year of severance pay. This meant that a payment that depended on dismissal (a payment that was also uncertain in practice, due to frequent default) was exchanged for an unconditional indemnity, certain and payable in all cases. This would have meant a steep rise in costs for companies, if it were not that 80% of the costs were absorbed by the workers in the form of lower wages, according to Kugler (2002). This eliminated the distortions of the severance payment system and, according to the same author, smoothed consumption compared with what it had been like with severance pay. However, because no solidarity fund was set up and everything was converted into individual accounts, the scheme does not provide sufficient protection for the person dismissed in his/her early years with the company. In fact, the “insurance” is not one at all, because it depends entirely on length of service in the company and not on the occurrence of the event (unemployment).

However, the conversion of the severance payment system chosen by Colombia is not the only reform of this nature that has been carried out, nor, of course, the only conceivable one. In fact, severance payment is normally only applicable in cases of dismissal, meaning that the actual cost to the company of such severance payment is around half of it (assuming that half the people leave voluntarily), in other words, it is equivalent to approximately 4% of the salary. Therefore, if severance pay were

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17 The oldest reform in Latin America in this direction is that of Brazil. The previous system of a month per year was changed in 1966 for one based on individual accounts, for 8% of salary, but this is only paid in case of dismissal and not for leaving involuntarily. Although the worker bears its cost, because the money is his/hers, this has allowed “phantom dismissals” to occur, in which the worker colludes with the employer in a mock dismissal, to enable the worker to receive these deposits ahead of time. Austria also reformed its compensation system in 2002, see Hofer (2006). However, this reform was far less dramatic than the Colombian one. In fact, in Austria the former severance payment was only applicable to workers who had more than 3 years’ length of service when dismissed. The conversion from the old system to the new was therefore done with a contribution of a mere 1.5% into the workers’ individual accounts, and these accounts can only be accessed if the worker loses his/her job after 3 years of service, or, if not withdrawn earlier, on retirement.

18 This is the apparent cost for the company. I say apparent, because although the company makes this severance payment, to the extent that the worker values the severance money and is prepared to work for 4% less in order to have it, then the real cost of the severance pay is absorbed by the worker
to be converted into a better unemployment insurance for the worker, the company should contribute 4% of the worker’s salary to the insurance, in some combination of individual account (compulsory saving) and solidarity fund (the part that is most truly insurance, because it is independent of the length of time in the job). For example, if one follows more or less the proportions of the Chilean insurance, ¾ or 3% would go to the individual account. The part in the individual account would be certain money for the worker, because it can be withdrawn whether he/she is dismissed or leaves the job voluntarily. This improves his/her position compared with the current one and facilitates labour mobility. However, it reduces the amount that the worker would receive if dismissed with severance pay. However, since with this reform the dismissed worker might possibly have access to the Solidarity Fund, the position of such a worker might be an improvement on that of severance pay, especially for workers with little length of service in the company.

The effect of converting severance pay into a better unemployment insurance is far from trivial. For example, the contribution for the new unemployment insurance in Chile – for the employer and the worker – amounts to 3%. If all severance pay were converted into better insurance, the income (as insurance benefits) would more than double. Nevertheless, if the political economy of the matter were to be difficult, intermediate solutions are also possible. For example, severance pay could be replaced, say, after the fourth year (the most questionable and distorting part of the indemnity19) by a deposit of ½ month per year in all cases as of the fifth year, in such a way as to improve the insurance at the expense of the latter years of severance pay. Obviously, like any insurance of this type, it runs the risk of discouraging the job-search. The country considering this option therefore needs to think seriously about how much risk it is prepared to run in terms of disincentive, in order to provide better insurance in the event of unemployment.

by way of a lower wage. This is not just a theoretical point. Heckman and Pagés (2000) estimate that 75% of the cost of severance pay in Latin America tends to be absorbed by the worker through receiving a lower wage. Therefore, the increased costs to the company and consequent disincentive to take on labour, is considerably less than appears at first sight.

19 The indemnity is valued highly by the workers, especially in the early years, because it provides good income protection in case of dismissal. However, after a certain length of time in the company (4-6 months), it over-insures the worker, because with that indemnity he/she can easily cover a reasonable job search. As a result, indemnity payments are increasingly less valued by the worker after the 4th year. It becomes a cost for the company which is not absorbed by the worker through a lower wage. This makes it attractive to focus any reform of the system of indemnities especially on those accruing from the 4th or 5th year onwards, because it seems likely that the 25% of indemnity that Heckman and Pagés (2000) find to be unabsorbed by the worker corresponds mostly to indemnities from the 4th or 5th year onwards.
In any case, whatever the combination chosen, it is important to point out that conversion of severance pay into a better unemployment insurance, as indicated above, would be for new contracts and for people with old contracts who wish to change voluntarily to the new scheme as from the enactment of the new legislation. It is in fact important to recognise rights already acquired and operate only on the basis of new contracts.

V. The political economy of such reforms and Conclusion

In synthesis, individual capitalization accounts offer interesting possibilities to serve as unemployment insurance where this does not exist, or to replace traditional unemployment insurance where it exists already. Their main benefit lies in the fact that they strongly reduce the disincentives involved in unemployment and its prolongation, which are associated with traditional insurance, because the worker absorbs the costs of most or all of the job search. These new systems can be made up of individual accounts alone, or in combination with credit systems or solidarity funds (the part most representative of true insurance).

Although developing countries tend to have poor systems of unemployment insurance, if they exist at all, they do usually have severance pay, which acts as a kind of imperfect insurance to cover unemployment. It is therefore possible to convert this severance pay, partially or totally, into individual accounts and a solidarity fund, improving protection for the unemployed worker and reducing the distortions typically associated with the severance payment system.

Obviously, any reform must proceed gradually; in other words, it must be mandatory only for those newly employed, and voluntary for the rest. Otherwise the acquired rights of the parties are not respected and there is consequently a risk of producing implacable resistance to the reform.

At the same time, any reform faces the dilemma of deciding between being more generous with benefits, thereby giving those affected better coverage, and risking “leakages” towards lower-priority groups and discouraging the search for work. Chilean experience suggests the merits of starting initially with minimal protection for the most needy groups, giving priority to minimising leakages, and then expanding the benefits. For it seems more prudent from the social and political point of view to proceed from “less to more”, rather than starting with many benefits and then having to cut them back because of financial problems.
**TABLE 1**

EXPENDITURE ON UNEMPLOYMENT INSURANCE IN DEVELOPED COUNTRIES (AS A PERCENTAGE OF ANNUAL GDP)

<table>
<thead>
<tr>
<th>Country</th>
<th>Insurance</th>
<th>Training of the Unemployed</th>
<th>Job creation</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>1.2-3.6</td>
<td>0.6</td>
<td>0.7</td>
<td>2.6-4.9</td>
</tr>
<tr>
<td>Germany</td>
<td>2.0-2.1</td>
<td>0.4</td>
<td>0.4</td>
<td>2.9</td>
</tr>
<tr>
<td>Spain</td>
<td>1.4-2.5</td>
<td>0.3</td>
<td>0.3</td>
<td>2.2-3.1</td>
</tr>
<tr>
<td>France</td>
<td>1.4</td>
<td>0.7</td>
<td>0.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

### TABLE 2

**SIMULATION OF BENEFITS DEPENDING ON LENGTH OF SERVICE IN THE FIRM AND INCOME (YEARS OF SERVICE IN THE FIRM: 1, 2 AND 3 YEARS)**

(BENEFITS EXPRESSED AS % OF NET WAGE; IN BRACKETS, THE BENEFIT FROM THE UNEMPLOYMENT SOLIDARITY FUND)

<table>
<thead>
<tr>
<th>Salary (S) = 1 minimum wage</th>
<th>S = 3 minimum wages</th>
<th>S = 5 minimum wages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits</strong></td>
<td><strong>1 year</strong></td>
<td><strong>2 years</strong></td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Month 1</td>
<td>67 (30)</td>
<td>67 (0)</td>
</tr>
<tr>
<td></td>
<td>48 (12)</td>
<td>48 (0)</td>
</tr>
<tr>
<td>Month 2</td>
<td>56 (56)</td>
<td>56 (50)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>43 (43)</td>
<td>43 (19)</td>
</tr>
<tr>
<td>Month 3</td>
<td>50 (50)</td>
<td>50 (50)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>38 (38)</td>
<td>38 (38)</td>
</tr>
<tr>
<td>Month 4</td>
<td>44 (44)</td>
<td>44 (44)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>34 (34)</td>
<td>34 (34)</td>
</tr>
<tr>
<td>Month 5</td>
<td>38 (38)</td>
<td>38 (38)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td></td>
<td>29 (29)</td>
<td>29 (29)</td>
</tr>
<tr>
<td>Mean</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Benefit/S*</td>
<td>71</td>
<td>91</td>
</tr>
<tr>
<td>Benefit + Comp/S*</td>
<td>58</td>
<td>78</td>
</tr>
<tr>
<td>Benefit without law*</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>FS Benefit/S*</td>
<td>44</td>
<td>36</td>
</tr>
</tbody>
</table>

**SOURCE:** PREPARED BY THE AUTHOR.

* THE BENEFITS SHOWN IN THE TABLE REFER TO THE PERCENTAGE OF THE MONTHLY NET WAGE THAT THE WORKER WOULD RECEIVE FOR 5 MONTHS DURING A PERIOD OF UNEMPLOYMENT OF THAT LENGTH. OBVIOUSLY, IF THE UNEMPLOYMENT PERIOD WERE LONGER, THESE PERCENTAGES WOULD DECREASE AND, INVERSELY, WOULD INCREASE IF THE DURATION OF THE UNEMPLOYMENT PERIOD WERE SHORTER.
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Voluntary Pension Saving

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Since traditional pension systems are not providing an acceptable replacement rate for their members, it is becoming increasingly important for workers to have voluntary pension saving mechanisms (APV) to enable them to complement their mandatory pensions. It is also held that the Pension Fund Administrators (AFPs) have the opportunity to contribute in a special way towards the target of improving pensions by offering APV products, given the synergies that exist between the management of voluntary savings and that of mandatory savings, among other factors. Participating in this business allows AFPs to have benefits that are associated with those they obtain by managing the mandatory funds.

In the first place, we shall briefly describe the reason why it is important to encourage APV today and then, in the light of experience, highlight the basic conditions that must exist if the APV market is to develop well. Then we shall identify the AFPs’ opportunities for developing APV products and then end with some conclusions and closing remarks.

1. Why is it important to encourage APV from the point of view of public policy?

The problem

In many countries of the world, the total replacement rate (pension over salary) that the workers obtain from the pension programs that form part of the social security system represents an insufficient proportion of the wages received during the years of active life.

For example, in a country such as Germany, a worker who earns twice the average income receives a pension from social security that represents 30% of his/her wage. In Mexico, what a worker with an average income receives is about 35.8% of his/her wage. In the case of Poland, this indicator is estimated at 61.2%. The situation is worse in the case of women, because they tend to retire earlier and have lower contribution density, which means lower pensions in both the individually-funded and pay-as-you-go systems (see Table Nº 1).
At this point in time, the pay-as-you-go systems cannot cope with this situation. On the contrary, demographic pressures and the economic crisis are forcing them to reduce benefits and impose more restrictive conditions to gain access to them.

In the case of some mandatory individually-funded programs, the amount of the pensions is also below the level expected at the time when they began to operate, as a result of low contribution densities (a reflection, in turn, of the conditions of the labour market); ever-increasing life-expectancies; maximum ceilings on the wages on
which contributions are paid; and, in some countries – especially in Central Europe – insufficient contribution rates (in these cases the new individually-funded systems exist alongside pay-as-you-go schemes; when the new programs were introduced, the total contribution rate was divided, with one part going to those programs and the other to the pay-as-you-go scheme, meaning that the contribution for capitalisation was left at such a level that the pensions that can be financed by those systems are inevitably low). The greatest obstacles to improving pensions in the individually-funded schemes are political in nature, because the solutions involve increasing contribution rates, assessable ceilings or retirement ages, all of them unpopular measures which encounter fierce opposition in any circumstances.

Possible solutions

As we were saying, the current options for improving pensions in a pay-as-you-go system are practically non-existent. And in an individually-funded system the alternatives have considerable political costs, or lie beyond the scope of pension policy.

In these circumstances, voluntary pension saving (APV) offers a particularly promising and effective way of improving pensions.

The impact of APV on pensions may be significant. Table Nº 2 shows, in the case of an individually-funded scheme, the impact of APV on the total pension, depending on the age at which voluntary saving begins, and assuming that the contribution concerned is equal to half the mandatory contribution. The conclusions of the exercise are simple: APV can significantly increase the pension obtained from the mandatory system; the earlier APV begins, the greater its effect; women have more to gain from APV than men.
2. Development of the APV systems

Experience shows that there are seven key factors for the development of the APV market:

i. **The level of the pensions in the mandatory scheme.** The higher the pension level (as a proportion of salary) that people expect to receive from the mandatory system, the lower their interest in APV. For example, if we had a mandatory system that offered a replacement rate of 100% for those who contribute throughout their lives, then it would be difficult for the voluntary system to reach a significant size.

ii. **Tax incentives.** APV needs tax incentives that help to “offset” the lack of liquidity of this type of saving and serve as a sign to improve its attractiveness compared with other kinds of saving. The most common schemes allow APV

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2 This exercise assumes: (i) Mandatory Contribution equal to 10% of the worker’s assessable income; (ii) Voluntary Contribution equal to 5% of the worker’s assessable income; (iii) Assessable Income of 1,000 Monetary Units (MU); (iv) Start of mandatory contributions at 25 years of age; (v) Worker retires at age 65; (vi) Contribution density is 80% of the working life; (vii) RV-2004 Chile Mortality tables are used.
contributions to be tax-free (while withdrawals are taxed), or give people the option of choosing between this scheme and one in which contributions are taxed, but not withdrawals.

In some cases the APV is given not only tax benefits, but also the offer of subsidies. This policy could be justified where the Social Security systems include a non-contributory component (“social pensions”) guaranteed by the State, because in these cases the subsidy helps to reduce future expenditure on support for pensioners in a straitened economic position.

iii. Liquidity of APV. The lack of liquidity in APV makes this form of saving less attractive, especially among the younger segments of the population, who have a high preference for present consumption and less access to credit. For this reason, there is more demand for APV schemes that include some possibility of withdrawing the funds early, even at the expense of a penalty or “exit price”.

iv. Competitive supply of APV plans. As in any other market, rivalry between various APV suppliers helps to improve the products and reduce prices. However, the existence of bodies that use multiple channels for distributing the product and struggle for the preference of potential savers also helps to educate workers and make them more aware of the product and, in this way, to expand the market.

v. Employers’ contributions. The role of employers is very important for informing workers about the characteristics of the product and awakening their interest in it. Furthermore, the distribution costs of APV fall considerably (helping to make the product more wide-spread) when this is done collectively through the employers.

vi. Operating schemes that simplify the process of contributions and withdrawals. Particularly in the case of under-developed, low-income markets, it is very important to ensure that there are efficient, low-cost processes for collecting APV and paying the corresponding benefits. This is a considerable obstacle for the development of APV in Latin America. On average, between 40% and 50% of the workforce in Latin America corresponds to informal workers, who have some saving capacity but do not participate in the financial market (they are not “bank-ified”) or in the pension systems, partly because of the high transaction costs involved in gaining access to them. The aim then is to reach these segments with products that are simple and have low fixed costs.

vii. Adequate pension education. This is essential in order to produce awareness of the need to save for a pension and to tell people about the advantages and incentives of APV.
Given appropriate conditions, the APV market can achieve a very considerable size. Table N° 3 shows the development of the volume of APV funds in six countries, from the year 2001 to 2009. Table N° 4 shows the importance of APV in these same countries, in relation to the mandatory savings funds, as of December 2009.

While in Chile, in December 2009, APV represented about 2.6% of the funds accumulated in the mandatory pension funds, in Colombia it reached over 10% and in Costa Rica, over 14%.

**TABLE N° 3**

**VOLUNTARY PENSION SAVINGS FUNDS**

(THOUSANDS OF USD AS OF EACH DATE)

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>60,995</td>
<td>103,726</td>
<td>163,164</td>
<td>226,669</td>
<td>252,106</td>
<td>333,469</td>
<td>503,774</td>
<td>347,245</td>
<td>387,184</td>
</tr>
<tr>
<td>Chile</td>
<td>n.d.</td>
<td>435,127</td>
<td>787,311</td>
<td>1,004,369</td>
<td>1,471,986</td>
<td>1,990,057</td>
<td>2,647,688</td>
<td>1,940,749</td>
<td>3,072,365</td>
</tr>
<tr>
<td>Colombia</td>
<td>813,775</td>
<td>880,536</td>
<td>1,128,465</td>
<td>1,526,119</td>
<td>2,540,292</td>
<td>2,729,507</td>
<td>3,038,093</td>
<td>2,966,862</td>
<td>3,957,880</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>450,348</td>
<td>633,292</td>
<td>723,726</td>
<td>318,639</td>
<td>365,701</td>
<td>441,125</td>
<td>450,730</td>
<td>320,152</td>
<td>305,806</td>
</tr>
<tr>
<td>Mexico</td>
<td>154,727</td>
<td>185,598</td>
<td>196,526</td>
<td>176,638</td>
<td>185,144</td>
<td>215,342</td>
<td>244,525</td>
<td>181,422</td>
<td>199,299</td>
</tr>
<tr>
<td>Panama</td>
<td>n.d.</td>
<td>26,466</td>
<td>34,632</td>
<td>57,519</td>
<td>69,465</td>
<td>82,558</td>
<td>113,400</td>
<td>135,900</td>
<td>161,900</td>
</tr>
</tbody>
</table>

SOURCE: PRODUCED BY FIAP ON THE BASIS OF STATISTICS FROM THE VARIOUS COUNTRIES.

3 Only the voluntary savings managed by the pension fund administrators are included, without counting the voluntary savings managed by other industries.
3. Opportunities for the Pension Fund Administrators (AFP)

The Pension Fund Administrators are in a very favourable position to promote voluntary pension saving. Particularly because of their direct, on-going relationship with the workers, the AFPs can provide timely information about the level of the benefits from the mandatory system and the gaps between those benefits and people’s individual pension targets. Furthermore, that same proximity to the workers makes it possible for them to distribute information at a very low cost about the various mechanisms for doing APV and the characteristics of the products.

At the same time, APV represents an attractive opportunity for the AFPs. Together with representing a new activity that can be added to the income from their basic business, evidence suggests that, in competition with other providers, the AFPs have the possibility of attaining a considerable share of the market in this product.

4 Only the voluntary savings managed by the pension fund administrators are included, without counting the voluntary savings managed by other industries.
In addition, APV helps to build a closer relationship with the clients (“members”) of the administrators themselves, and contributes towards producing loyalty and faithfulness, an effect that is difficult to achieve with mandatory pension savings.

APV also contributes towards improving the AFPs’ business relationship with employers, who can see in this product an efficient mechanism for providing their workers with compensation and for planning retirement from the company.

In Chile, evidence shows that in December 2009 the AFPs had 65% of the APV management market, which is undoubtedly a large percentage (see Table Nº 5). At the same time, it can be seen that the AFPs’ share has been gradually falling over time in favour of other participants in this industry, who have been reinforcing their own offer.

TABLE Nº 5
SHARE IN THE VOLUNTARY PENSION SAVINGS MARKET IN CHILE (DECEMBER 2009)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Nº of Valid APV Accounts</th>
<th>Share</th>
<th>Total Accumulated Balance MCLP</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFPs</td>
<td>517,921</td>
<td>69.80%</td>
<td>1,556,251,708</td>
<td>65.10%</td>
</tr>
<tr>
<td>Mutual Funds</td>
<td>117,539</td>
<td>15.80%</td>
<td>511,959,582</td>
<td>21.40%</td>
</tr>
<tr>
<td>Housing Funds</td>
<td>1,686</td>
<td>0.20%</td>
<td>2,729,891</td>
<td>0.10%</td>
</tr>
<tr>
<td>Stockbrokers</td>
<td>22,685</td>
<td>3.10%</td>
<td>115,550,386</td>
<td>4.80%</td>
</tr>
<tr>
<td>Life Insurance</td>
<td>84,071</td>
<td>11.30%</td>
<td>205,430,628</td>
<td>8.60%</td>
</tr>
<tr>
<td>Total</td>
<td>742,216</td>
<td>100.00%</td>
<td>2,389,192,304</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

4. Final remarks

A lot of workers are going to need voluntary pension savings if they are to achieve a sufficient pension when they retire.

The mandatory Pension Fund Administrators, together with other institutions in the financial sector, have the opportunity to make a special contribution towards the aim of improving pensions, by offering this product.

In particular, it is not easy for the mandatory pension fund industry to find business opportunities that allow it to take advantage of synergies with its main activity, because it is characterised by strong barriers against integration with other types of business (resulting from the “single corporate purpose” restriction that generally affects it). However, APV specifically offers this type of opportunity.

The invitation is therefore open for those countries, industries and regulators that have not yet set up this type of voluntary saving mechanism, to do so. In this effort, where public and private interests coincide, the experience already gained in other countries represents a very useful starting-point.
PERSONAL MEDICAL ACCOUNTS: AN ALTERNATIVE TO COMPULSORY HEALTH INSURANCE

MICHAEL F. CANNON 1

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This article explains how personal medical accounts can offer a better guarantee against sickness and privation to the poor in the United States and all nations struggling under compulsory health insurance schemes.

This article proceeds as follows. The first section describes the advantages of personal medical accounts. The second and third sections draw on the experience of the United States to demonstrate the importance of innovation in saving lives and making medical care available to the poor, and how compulsory health insurance blocks such innovation. The fourth section describes how to design personal medical accounts, and a final section concludes.

I. Advantages of personal medical accounts

In November of this year, Chile will celebrate the 30th anniversary of its Social Security reforms, which privatized the largest single government program in Chile by creating a system of personal retirement accounts. I am reliably informed, by my Cato Institute colleague José Piñera, that those reforms have been a resounding success.

We in the United States, in contrast, face an enormous problem with our state-run pension system, known as Social Security. That program has an unfunded liability larger than our annual economic output (see Figure No. 1). The United States should follow the path Chile has blazed: personal retirement accounts expand human freedom, improve economic performance, and fund what are currently unfunded commitments to the elderly.
The United States’ state-run health insurance program for the elderly – known as Medicare – presents a much larger problem. Medicare’s fiscal imbalance is nearly six times greater than Social Security’s. As I will explain, Medicare creates additional problems for the sick, whether elderly or non-elderly, by increasing the cost of medical care and reducing the quality of care.

Reforming the U.S. Medicare program and other compulsory health insurance schemes with personal medical accounts offers a number of advantages. Personal medical accounts are advantageous for many of the same reasons as the personal retirement and unemployment accounts adopted in Chile. They respect the workers’ fundamental human right to control the fruits of their labor and the decisions affecting them and their families. Personal accounts expand the “investing class,” create new opportunities for financial institutions, and broaden the political constituency for sound economic policies. They help lift families out of poverty by letting workers pass unspent balances to their heirs.

See: http://www.cato.org/pub_display.php?pub_id=4556
Personal medical accounts are advantageous for another, equally important reason. The price controls and other regulations that inevitably accompany compulsory health insurance schemes block innovations that improve the quality of medical care and bring medical care within the reach of low-income workers. By eliminating these harmful government controls, personal medical accounts will enable better medical care for the average worker and the poor. Put simply, personal medical accounts offer a better guarantee against sickness and privation than any compulsory or state-managed system. Since this is perhaps the most important and the least appreciated benefit of personal medical accounts, it will be the focus of my remarks.

II. Innovation

To support this claim, I will draw from the experience of the United States. Let me be clear: I do not offer the United States as a model of how to design a health care market. Contrary to international opinion, the United States emphatically does not have a free market in health care. Before this year, the U.S. health care sector was more than half-socialized; President Obama has merely socialized the rest. But because the United States’ health care sector was perhaps less socialized than those of other advanced nations, it offers a glimpse into the marvelous innovations that a truly free market would create.

New Treatments

Patients worldwide suffer because there are no treatments for their illness. The United States develops most of the beneficial new medical treatments produced in the world because, more than any other nation, the United States allows innovators to profit by saving lives.
Figure No. 2 shows the top medical innovations from the past 40 years by country of origin. The United States has produced more than the whole of Europe. Some of these innovations include magnetic resonance imaging and computed tomography scanners (CT scanners); angiotensin-converting enzyme (ACE) inhibitors, used in the treatment of hypertension and congestive heart failure; balloon angioplasty; statins to lower cholesterol levels; mammography; and coronary artery bypass graft (CABG) surgery. These innovations were developed in whole or in part in the United States, and have been improving the lives of people around the world.

Error Reduction

Other patients suffer because medicine is too often unsafe. A leading research organization in the United States estimates that 20,000 Americans die each year because they lack health insurance. The same research organization estimates that as many as five times that number of Americans die each year due to medical errors (see Figure No. 3).
Entrepreneurs in the United States have developed private health insurance medical plans that discourage medical errors.

**Secure Health Insurance**

Decades ago, private health insurance companies in the United States developed innovative products that protect workers from the cost of medical care and protect them from high health insurance premiums when they become ill. The private sector is close to developing health insurance products that go further by enabling insurance companies to compete to cover the sickest patients, rather than avoid them.

**Greater Accessibility**

Entrepreneurs in the United States are developing new ways of making medical care and health insurance less costly, such as substituting lower-cost nurses for physicians and lower-cost general practitioners for specialists where appropriate. These innovations also include health insurance plans that keep premiums low by avoiding unnecessary services.
Electronic Medical Records, Coordinated Care And Effectiveness Research

Additional examples of private-sector innovation include: electronic medical records, which make medical care safer and more convenient; health systems where doctors improve quality by coordinating the services they provide to shared patients; and research on the effectiveness of medical treatments, which helps patients avoid unnecessary services and get the best available treatments.

III. Compulsory Health Insurance Blocks Innovation

Patients in my country and in yours suffer because the price controls and other regulations that inevitably accompany compulsory health insurance schemes block these and other innovations.

Price Controls

Research in the United States shows that having a high proportion of general practitioners reduces Medicare spending (see Figure No. 4) and increases the quality of health care for Medicare patients (see Figure No. 5).

FIGURE NO. 4

RELATIONSHIP BETWEEN PROVIDER WORKFORCE AND MEDICARE SPENDING: GENERAL PRACTITIONERS PER 10,000 AND SPENDING PER BENEFICIARY IN 2000

Yet the U.S. Medicare program’s price controls encourage doctors to become specialists, rather than general practitioners—even though research shows that a high proportion of specialists increases Medicare spending (see Figure No. 6) and reduces quality (see Figure No. 7).
Medicare is the largest purchaser of medical care in the world. These harmful effects of Medicare’s price controls therefore spill over into the private market place, increasing the cost and reducing the quality of care for privately insured patients as well.

Compulsory health insurance schemes guarantee access to medical care, but government price controls undermine that guarantee. A 12-year-old American boy named Deamonte Driver died in 2007 essentially because the U.S. Medicaid program set its prices so low that his mother could not find a dentist.

In nations with private insurance, governments impose price controls that force insurance companies to sell insurance for USD 5,000 even if a person costs USD 10,000 to insure. That creates a USD 5,000 incentive for insurers to avoid, mistreat, and dump the sick, often by denying them care. That is what happened to a 14-year-old girl in the United States named Shelby Rogers, who has spinal muscular atrophy. Shelby is so weak, she needs a nurse to turn her in bed at night and help her with other daily tasks. But her insurance company stopped paying for round-the-clock nursing care because that benefit attracted too many sick people. Those government price controls block the innovative products that would have private insurance companies competing to serve her.
Exchange Controls

The U.S. Medicare program’s payment systems are de facto exchange controls that penalize health care providers who innovate by coordinating care, or using electronic medical records, or conducting effectiveness research, or reducing medical errors. Medicare is the driving force behind the epidemic of medical errors in the United States.

These controls render medical care more costly and deprive societies of resources that could be used to provide medical care to the needy. President Obama has brought even more of the U.S. market under the dominion of government price and exchange controls, however, because they are necessary under his state-run system.

IV. Designing Personal Medical Accounts

Personal medical accounts offer a better guarantee against sickness and privation because they can avoid government price and exchange controls, and thereby permit innovation to make medical care of ever-increasing quality available to ever-increasing numbers of workers.

A well-designed system of personal medical accounts would reduce each worker’s tax burden by a percentage of income sufficient for the median wage earner to fund health insurance both now and in retirement. Those former tax payments would fund each worker’s account. Chile is an example: workers must pay seven percent of their taxable salary to either a state plan (FONASA) or to a private insurance company (ISAPRE). Workers would invest their savings under rules similar to those that exist for personal retirement or unemployment accounts.

Workers would use their personal medical accounts to purchase health insurance, or to purchase medical care directly. Withdrawals for non-medical expenses would be penalized or prohibited. The difficulty of delineating between “medical expenses” and “non-medical expenses” will inevitably be messy. In the United States, we have an analogue to personal medical accounts that we call health savings accounts (HSAs); President Obama has just moved some medical expenses from the favored to the unfavored category. But this regulatory process is less distortionary than having the state decide what services health insurance must cover.

The financial institutions that manage personal medical accounts could be the same institutions that manage pensions, which already have experience in this area. These institutions would have the additional duty, however, of verifying that withdrawals are for approved medical expenses.
Importantly, a well-designed system would not require workers to purchase health insurance. This feature is controversial, but crucial. Preserving the workers’ freedom to save their money, rather than purchase health insurance, is essential to make health insurance affordable for low-income workers. Preserving the freedom to save forces insurance companies to compete with banks and other financial institutions for workers’ savings. That places enormous pressure on insurance companies to reduce the cost of health insurance. The freedom not to purchase health insurance is therefore most important to the poorest workers, because it brings the price of health insurance within their reach.

Requiring workers to purchase health insurance increases the cost of insurance because governments inevitably force workers to purchase more and more insurance coverage. In the United States and other nations, the entire medical sector lobbies governments to require workers to purchase more comprehensive insurance, because such insurance channels more money to the medical sector. Specific health care providers likewise seek to force workers to purchase insurance that covers the goods and services that they provide.

The freedom to save ensures that workers will receive value for their insurance premiums, because it preserves the workers’ right to refuse insurance if they consider it a bad deal.

No doubt some workers will use this freedom to make poor decisions. Some will not purchase health insurance, and then will fall ill and not have enough savings to meet their medical expenses. I believe this problem will be small, for two reasons. First, health insurance will be less expensive, leading most workers to purchase it. Second, the very workers who might avoid health insurance will build up considerable savings in their personal medical accounts. They will want to protect those savings from the cost of illness. The way to protect those savings is to purchase health insurance.

Preserving the people’s freedom not to purchase health insurance will do far less harm than giving the state the power to force people to purchase health insurance.

V. Conclusion

In designing health care markets, perfection is not an option. Under any system, whether state-run or the free market, some patients will inevitably fall through the cracks.

Personal medical accounts can help fill in those cracks by enabling innovations that improve medical care and bring it within reach of the poor. Yes, some will not earn enough to provide for themselves. And when we are free to make our own decisions, a small number of people will make poor decisions. I believe we have a moral duty to
care for patients who could not or would not provide for themselves. Personal medical accounts will make it easier for us to meet that moral duty.

Under compulsory health insurance schemes, those cracks widen, and more people fall through. Price and exchange controls block innovation. Governments waste resources on low-value medical care. Some would describe these as the unavoidable costs of creating an equitable society. But those wasted resources do not purchase solidarity. They purchase sickness and poverty.

If we seek to save lives, if we wish to bring medical care within reach of the sick and the poor, if we want to lift the poor out of poverty, then our task is to restore the workers’ fundamental human rights and use personal medical accounts to let them control the fruits of their labor. Let the workers own what they have earned. Let them make their medical decisions free from coercive constraints, with all the benefits that innovation and competitive markets offer. Nations laboring under compulsory health insurance schemes should evaluate replacing those systems with personal investment accounts for medical purposes.
PART III

THE QUEST FOR EXCELLENCE

CHAPTER I. PENSION INFORMATION AND EDUCATION
CHAPTER II. IDEAS FOR IMPROVING OPERATIONAL EFFICIENCY
CHAPTER III. IDEAS FOR IMPROVING THE IMPACT OF INVESTMENT ON LOCAL ECONOMIES
CHAPTER I

PENSION INFORMATION AND EDUCATION

ROSS JONES. Pension Information and Organisation
DARIUSZ STAŃKO. Cases of information campaigns implemented by the industry
SOLANGE BERSTEIN. Pension information and education: cases of strategies and information campaigns run by the supervisory authorities
PENSION INFORMATION AND ORGANISATION
ROSS JONES ¹

¹ Ross Jones is currently the Deputy Chairman and Member of the Australian Prudential Regulation Authority (APRA). He is the President of the International Organisation of Pension Supervisors (IOPS), a group whose members include pension supervisors and regulators from more than 70 countries. He is also Vice Chairman of the OECD Working Party on Private Pensions and was a member of the Singapore Central Provident Fund Advisory Panel. Prior to joining APRA, Ross was a Commissioner of the Australian Competition and Consumer Commission. He was also an Associate Professor in the School of Finance and Economics at the University of Technology, Sydney for a number of years.
In this brief article I shall be addressing the way in which the pension supervisors have responded to the financial crisis and some of the solutions, including various elements of financial education.

The problem

During the year 2009, in response to the economic crisis, the Organisation for Economic Co-operation and Development (OECD) and the International Organisation of Pension Supervisors (IOPS) looked very carefully at the nature of the problems and tried to identify what the appropriate solutions to these issues might be. Particularly, it was recognized that, globally, the crucial element was related to the growth of defined contributions schemes, which shift risk to individuals, the problem being that individuals were not necessarily capable of assuming those risks.

Many people around the world have stopped saving as a consequence of the crisis, for all sorts of reasons, such as unemployment and/or a lack of confidence in the private pension system. This last reason appears to have occurred in a large number of countries, where confidence in private pension systems has been severely diminished. In Argentina the private pension system has been abandoned, but in many other countries there have been concerns about the future.

Some work has been done across a large number of countries, looking at what the next step might be to provide financial security in old age. Interestingly enough, there is very little support in most economies for higher social security payments, if social security is going to be funded by higher taxes. There is also very little support for compulsory savings. The consequence of this is that the greatest support in a political sense is in fact for continued private savings, but there is a substantial risk associated with this, because people’s financial knowledge really is still inadequate and they simply do not have the ability to make the right decisions in a defined-contributions environment.
The immediate policy response

In 2009 the IOPS and the OECD made some recommendations to governments, industry and to the pension funds in general. First of all, we told them to stay the course. There has been a lot of political pressure to access pension plans very early, for various reasons; these political explanations are entirely justified and we can certainly understand them, but the real dilemma is that the greater the amount of money that is taken from the pension system, for whatever reason, the greater the problem for a later stage or a later generation.

The idea that you can somehow dip into the savings now for immediate reasons and at the same time solve the longer-term problems doesn’t seem to ring true, so what we also suggest is to emphasize the long-term nature of the pension savings. Poor financial literacy has caused many members of funds to make wrong choices during the financial crisis and it is very important for people to understand that we are talking about forty or fifty years of wealth accumulation and another twenty or thirty years of decumulation, meaning that it is crucial not to focus on short-term movements. In particular, when emphasis is on the long term, members are less likely to make very severe mistakes. For example, in many countries we saw fund members switching to cash after the crisis. They suddenly said that they no longer wanted to take the risk. Now in many countries of course we saw the rapid growth in equities in the second half of 2009, but those people had moved to cash, suffering all the losses in the first period and picking up none of the gains in the second. Poor financial understanding can be expensive for fund members.

Other policy responses were to improve the design of the defined-contribution plans through the introduction of the life-cycle approach, and to improve disclosure, communication and financial education. Members need a better understanding of risk. In a number of countries, we are going to start looking at the idea of persuading funds to explain the correct and understandable notion of risk to their members. By improving financial education and emphasizing the long term, it is easier to move pressure away from quarterly returns results. In many countries there is too much emphasis on the fund’s return for the last quarter, due to the strong focus on marketing and various others factors, but from the longer-term perspective, how the fund did in the last quarter is irrelevant, because what really matters is how the pension fund did over twenty, thirty or forty years.

Good practices for financial education relating to pensions

First of all, it is necessary to define the problem in terms of what people need to know i.e. what are the risks that people need to know about?: risks during accumulation, risks of asset volatility at point of retirement, longevity risk, and inflation risk.
Second, to look at financial education on retirement products. One of the difficulties here is that people do not even read the information that is being sent to them, so how are we going to educate people in terms of what is appropriate for them?

Third, we need to consider the main stakeholders’ roles and responsibilities in enhancing public awareness and capability on retirement income issues. And fourth, if you are going to look at financial education you need to have some mechanism to evaluate the needs of the program.

Framework, definition and objectives

Any financial education program needs to emphasize the long term. I can’t repeat this enough: there is a very important need for people to understand that they should be looking at the longer term and not focusing on the short run.

People also need to have a very good understanding of investment products in order to evaluate the performance of financial intermediaries, but - a word of advice here - financial education is not a substitute for prudential regulation and consumer protection. Never assume that improving financial education on the part of consumers would remove the need for supervision by authorities. That is not going to happen; it will never happen. It is like saying “Well, if people are highly-educated you will not need consumer protection”, which is also completely incorrect.

Role of stakeholders and their responsibilities

Who are the principal stakeholders here? Who should be taking responsibility? Governments have a role via public awareness campaigns. Specialized agencies in many countries have adopted all sorts of very innovative models to try to promote financial education about pensions. We have seen a huge range of different approaches being taken, from some countries doing something as simple as providing cartoons for children, to more recent circumstances, where the Irish pension authorities went to agricultural fairs to promote financial awareness among farmers. There are lots of different models that have been adopted all around the world. In many countries, trade unions play a very important role. So trade unions, employers’ associations and pension fund associations should all make a contribution.

The funds themselves of course should supply timely accessible information. Funds are going to need to provide projections of the retirement incomes that they expect to provide, and the material should be comparable across funds. In competitive markets consumers should be able to look at comparable disclosures, comparable products and be able to make the best choice. One of the greatest dilemmas in many countries is that the type of information which is provided to consumers makes it very difficult for
consumers to do appropriate comparisons, and in many countries an attempt is being made to achieve a greater degree of consistency in the type of information provided.

**Financial education needs**

The long-term nature of the contract between the individual and the pension provider generates high levels of apathy in younger members. It is very difficult to provide appropriate levels of information for younger members. Unfortunately, governments in many countries change the programs on a regular basis. Pension reform is one of the popular topics in many countries. One of the consequences is that, for a person in his/her twenties, a lot of the financial information provided is irrelevant, so it is going to be very difficult to get any sort of commitment from young people.

We tend to find that financial education is often thought of as something that should be provided for children in schools. All the evidence suggests in fact that there are considerable financial literacy needs among the elderly and particularly among elderly women. What we find in many countries is that women have less understanding of financial products than men; in many circumstances they allow their husbands to take most of the financial decisions. When husbands die and women are left alone, they increasingly have to make highly complex financial decisions with very limited financial education: there is a need to target elderly women.

The complexity of pension products also makes things more difficult. The complexity of the products means that it is very difficult for consumers to understand them properly and consequently there is substantial asymmetry between the pension providers and the consumers. This means that there is always going to be a need for consumer protection because, unfortunately, there are still examples of products being mis-sold, where consumers do not have a good understanding of the product and the product provider has much greater information than the purchaser.

Pension language is often opaque and misleading. For example, funds in many countries talk about “balanced options”. But the term ‘balanced’ has no specific meaning. For example, in Hong Kong you can invest 70% in equities and it can be called a balanced fund. If you put 70% in equities in 2009 you would have been very concerned if you thought it was balanced. In Australia many consumers thought that balanced meant they could not lose money. They had no real understanding of what the language meant, because the language of pensions is extremely difficult for people to understand.

In terms of financial education there are also major political, social and cultural elements. For example, many of us were surprised to find out from newspapers over the past few weeks that some Greeks retire at 52. There aren’t too many people in the world who retire on a very substantial pension today at the age of 52, but if that is the expectation
in the market, then maybe what you need to do is explain to people: “If you work for an extra two or three years, your pension will increase by X percent”. This is simple information. Part of the problem here is that consumers overestimate their financial knowledge. From a survey, in Australia 75% of pre-retirees will say that their financial knowledge is at least average or above average. If you then ask those same people whether they know how much money they need to live comfortably in retirement, less than 50% can give an answer to that question. Yet more than 75% of them will tell you “yes, we are in fact highly financially literate”, so consumers often overestimate the amount of information that they have. What is more, one of the results of this is that members now expect to be able to make investment decisions in many circumstances, so many funds respond by providing a very large number of investment decisions. We have some funds in Australia that provide hundreds and hundreds of investment options for members to choose. A lot of behavioural economic studies these days show that increased choice is not necessarily associated with improved decision making and in a myriad of circumstances what we find is that the funds have higher costs and the members make fairly poor decisions.

Financial education responses

It is very important to close the gap between what people want and what they can afford. And of course, explaining the consequences of different decisions is a key aspect (e.g.: if you work longer, what will happen?).

Another important element is to look at risk ratings for financial products. One of the most important developments in a number of countries over the next few years is going to be related with improved education, with the funds themselves providing some notion of the degree of risk. As I mentioned before, terms like growth, balanced or whatever, are fairly meaningless, but if we start to get consistency in terms of risk ratings, maybe we shall be able to get the message across in terms of a better understanding of the risks associated with financial products.

And lastly, we must provide disclosure at a level that people can understand. It is very easy to legislate for greater disclosure. However, providing page upon page of disclosure does not necessarily solve the problem at all. If fund members are going to take the risks associated with defined contributions schemes, they need information but also need financial skills.
CASES OF INFORMATION CAMPAIGNS IMPLEMENTED BY THE INDUSTRY

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This article will discuss the different cases of information campaigns implemented by the pension industry.

The methodology used to gather the data was a short survey and some conversations. The main target group consisted of FIAP members and Central and Eastern European countries. The participants in this survey were: Bulgaria, Chile, the Dominican Republic, the Dutch Antilles, Honduras, Hungary, Mexico, Poland, Romania, El Salvador, and Uruguay. The response ratio was quite successful, being about two-thirds.

Regarding the types of information campaign run by the above-mentioned countries, one can distinguish three general areas of activities:

- Campaigns that appeared prior to the implementation of the new system or to the introduction of a new element such as life-cycle funds (Multifunds in Chile, Hungary), new rules or updating of data in the system (correspondence addresses, choice of preferred way to receive information from pension fund administrators, etc.);

- Permanent actions aimed at:
  o Increasing pension awareness and/or knowledge of the system (rules for contributing and calculating benefits; obligations and rights of pension members; role of pension institutions);
  o Explaining the advantages of the funded pillar (differences between fully-funded and PAYG systems; explanation and interpretation of rates of returns; inheritance issues; safety of the system; possible choices and ways of implementing them; differences between public and private pension pillars; significance and consequences of demographic changes);

- Crisis management actions that were particularly important following the recent financial crisis (explanation of the financial losses incurred by pension members – Poland, Hungary, Mexico) and subsequent political actions aimed at downsizing (a partially successful attempt to increase taxes on voluntary funds
The introduction of funded systems has usually been done predominantly by government agencies, sometimes with the help of foreign institutions. For example, a campaign promoting the subsequent introduction of supplementary mandatory Universal Pension Funds in Bulgaria, run in 2000-2001, was organized by the US Agency for International Development. In Poland a great role in promoting the system was played by the government and its Social Security Reform Authority. Nowadays, the biggest “implementation” campaigns relate to the introduction of multi-funds. Such systemic modification requires a substantial effort to convey a completely new set of information, rules and possible consequences of social choices.

A typical campaign, run on a daily basis, attempts to deal with the issue of members’ deficit of information in terms of general knowledge about the system. It therefore aims to create some kind of pension awareness and pension literacy and to increase knowledge of how the system works. However, even more importantly, pension administrators and governments need to help pension fund members with taking informed decisions. Thus some ongoing educational effort is needed to increase members’ knowledge about how to participate in the system and what their rights and obligations are. In particular, matters concerning membership, choices of funds, choice of investment policy, inheritance and safety of resources have to be explained. To some extent, these actions have more to do with marketing, since they are performed on a daily basis by pension societies that are private entities. Nevertheless, one needs to stress that members’ pension knowledge decreases gradually over time, even after it is established, and the campaign needs to be repeated. This is the reason for launching more extended information campaigns from time to time, to reach new cohorts of members with the key messages.

Regarding the actions of pension societies that we have seen quite recently in some countries of Central and Eastern Europe (CEE) [unfortunately we do not have any data on the Baltic States countries in this regard], they are more like “crisis management”. They were precipitated by the situation in the financial markets in 2008 and 2009, but what we have observed, especially in the CEE region, is that some serious political action has been taken with a view to decreasing or even dismantling funded pillars there. The financial crisis became a good excuse for politicians to initiate some changes that are not necessarily in the best interests of the members. Proposals to abandon or seriously limit funded pension systems come not only from the need to find money to cover a public pension deficit, but also from a desire to appear as a defender of the people who have suffered financial losses. As a result, there is much populism in a “defence” against private, greedy institutions managing their money. The main justification for cutting the
funded pension contribution in Slovakia or Poland is the assertion that the part of the social security contribution directed to pension funds creates a deficit in public finances that consequently has to be covered by taxpayers. It has been argued that the existence of funded pillars increases public debt service costs and puts constraints on government policy. The pension association in Poland (IGTE) had to explain the concept of hidden pension debt to fund-members in 2009-2010 (a very difficult task to accomplish) and to persuade them that moving part of the pension contribution from the funded to the non-funded pillar will result in a subsequent increase of tax obligations in the future and therefore reduce economic growth. The industry argued that moving money to the non-funded pillar would not result in a decrease in the costs of financing pension obligations. It would only put part of the state’s future commitments back into hidden debt. It is simply a creative accounting measure to improve the outlook of current public finances.

Table 1 presents the general outcomes of the survey. The range of tools used in information campaigns is obviously very wide. Some are typical and relate to making personalised contacts (via letters, phone calls, SMS, e-mails or even organising visits to companies) or placing advertisements on TV, radio and the Internet. Pension societies or fund administrators have also organised general and specialised events such as seminars, conferences and press breakfasts, and issued joint reports with financial and educational institutions. Depending on the topic, scope and budget of the campaigns, these were run with the use of press, radio and/or TV (advertisements, interviews, and educational series). Internet communication (such as mailing, chats, websites) is becoming increasingly popular. An interesting example of a strong, personalised information campaign is the one carried out in Uruguay.

Chile’s campaign to introduce people to the idea of Multi-funds is a good example. The campaign was performed with the government and social partners and consisted of several waves of informative messages. In 2002 four types of radio message were broadcast, explaining the options to choose from and emphasizing the system’s feasibility, why it was needed and how it worked. In August 2002 a leaflet with basic information about the multi-fund system was circulated in the mainstream media of the country: in total 823,800 copies were distributed. The leaflet was called “Changing Pension Fund”. On Sunday 18th August 2002, an info-commercial was shown on TV, reminding people that on the following day, Monday 19th August, they would receive information on Multifunds in the insert. The information was broadcast in prime time on local television channels. To disseminate the main concepts of the multi-fund systems, the Chilean Association and a Public Relations (PR) agency designed an interactive CD which was circulated on August 1st 2002 to all television channels, to support the TV campaign conducted that year.

The Hungarian Association had bad luck with the introduction of life-cycle portfolios,
because it coincided with the financial crisis. Many members had switched to aggressive funds just before the financial downturn occurred. The Hungarian industry decided to act more quickly than the regulator and passed fund members the bad news about financial results, with the explanation of what the consequences of a return to conservative options might be. The main challenge was to prevent people in voluntary pension funds from leaving aggressive funds and thus sustaining losses. Uninformed people tended to run for safe instruments, even though it was too late to do so and better to wait. Otherwise, they would have to sell their assets at very low prices. Another problem that had to be solved by the Pension Association as a result of the crisis was the choice to opt out of the funded system, granted by the government to elderly pension fund members. The industry argued that such a decision would result in financial losses for the members. The outcome of these efforts was only moderately successful, since about 70% of members who were entitled to such a move decided to switch to the unfunded pillar and brought about EUR 0.377 billion to the budget.

Several respondents mentioned the impact of assessment as an important element of their campaign activities, whereas the majority of surveyed countries did not use any PR agencies or, if they did, it was only in the case of countrywide campaigns. On the basis of the information obtained from the survey, it can be assumed that most information activities are done in-house, either by pension fund associations or with the help of the marketing departments of pension fund administrators.

Bulgaria and Poland are examples of countries where strong initial campaigns preceding the introduction of the system resulted in excessively high public expectations. A “too good” marketing campaign on the part of pension operators and PR agencies gained great support from public opinion at the outset of the system; later, however, the exaggeratedly promising advertisements were verified by reality. In Bulgaria the campaign mainly reached people aged 55-60, whose access to the funded pillar was not a rational decision in most cases. Similarly, relatively too many people close to retirement age joined the system in Poland. What is more, private providers in Poland gained a negative reputation due to charging high fees, irrespective of the country’s economic situation. The recent financial crises created strong public discontent with both the financial results and the profits of the industry. This resulted in political actions that eventually lowered the fees charged in the system and initiated talks of a cut in the funded contribution. As has been already mentioned, this political action was motivated mainly by the need to improve the short-term outlook of public finances. Since 2009, the Polish Chamber of Pension Funds has had to strengthen its information activity to reach the public with key messages regarding the long-term character of savings and the long-term performance of the system, which remains extraordinary. Members were informed of the actions planned by the government and of their potential negative outcomes. The Chamber has also refuted false information, spread by the Ministry of Labour and Social Policy, that pension funds during the last 10 years had not kept pace with inflation. The
outcome of this campaign can be assessed as a success, since the majority of pension fund members objected to the proposed solutions and the government has so far not decided to implement the contribution reduction.

**TABLE 1**

CASES OF INFORMATION CAMPAIGNS PERFORMED BY PENSION INDUSTRIES COVERED BY THE SURVEY

<table>
<thead>
<tr>
<th>Country</th>
<th>Period</th>
<th>Subject (aim)</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>2000-2001</td>
<td>Introduction of supplementary mandatory pension funds in 2002.</td>
<td>To explain the three pillar system and to encourage members to choose their pension fund. Organised by the US Agency for International Development.</td>
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<tr>
<td>Chile</td>
<td>2002</td>
<td>Introduction of Multiunds.</td>
<td>Joint effort with the government and financial supervisor to explain the idea of life cycle portfolios, the need to choose a product, default choices and age constraints. Massive communication activity (radio, press, Internet). Key messages: how to make choices, need to be active, positive aspects of the change, tools available to improve pension). The info leaflet in the newspapers. TV commercial. CDs with information.</td>
</tr>
<tr>
<td>The Dominican Republic</td>
<td>Constantly ongoing</td>
<td>General information about the system (rights, obligations) plus specific ad-hoc issues (e.g. explanation of investments in treasury debt instruments).</td>
<td>Press communications, TV, radio, articles. Use of specialised economic journals and periodicals.</td>
</tr>
<tr>
<td>Country</td>
<td>Period</td>
<td>Subject (aim)</td>
<td>Details</td>
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</tr>
<tr>
<td>Hungary</td>
<td>2008 onwards</td>
<td>Explanation of financial losses suffered during the crisis.</td>
<td>Press conferences, interviews, educational series in newspapers. Press breakfasts. Annual conference. Use of a PR agency. Collaboration with trade unions and employers to oppose the proposed 95.6% tax on voluntary contributions. In result the tax was lowered to 25%.</td>
</tr>
<tr>
<td>The Dutch Antilles</td>
<td>Every year (excluding vacation period)</td>
<td>To increase voluntary participation in pension plan.</td>
<td>Direct marketing (researching companies that do not have a pension plan, presentations, seminars, mailing offers). Radio and newspaper ads.</td>
</tr>
<tr>
<td>Mexico</td>
<td>2009</td>
<td>Positioning of the system; post-crisis communication; general education on the system and its rules; personalised contact.</td>
<td>Two months’ campaign on the radio (126 spots) and in the press. PR agency used. Co-operation with financial supervisor and National Commission for the Protection of Users of Financial Services (CONDUSEF).</td>
</tr>
<tr>
<td>Country</td>
<td>Period</td>
<td>Subject (aim)</td>
<td>Details</td>
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<tr>
<td>Romania</td>
<td>Constantly ongoing</td>
<td>To pass key messages; demographic problem; instability of PAYG system; excellent results of pension funds; safety features of funded pillar.</td>
<td>No commercial advertisements. Communication strategy (press, TV, radio, online media). No PR agency.</td>
</tr>
<tr>
<td>El Salvador</td>
<td>2005, 2006, 2008, 2009</td>
<td>To pass key messages: ownership of individual accounts, characteristics of funded pillar, requirements and benefits in the system, role of system's institutions.</td>
<td>Campaigns in the press, radio and TV. Seminars, visits to companies, interviews (newspapers, magazines). Length of campaign 3 to 6 months. PR agency.</td>
</tr>
<tr>
<td></td>
<td>2010</td>
<td>Pension Education Programme</td>
<td>A programme to be run with the Superintendence of Pensions.</td>
</tr>
<tr>
<td>Uruguay</td>
<td>2004 onwards</td>
<td>Provide answers to FAQ.</td>
<td>Micro information broadcasted on TV and radio.</td>
</tr>
<tr>
<td></td>
<td>2007/2008 onwards</td>
<td>Need for retirement planning while young.</td>
<td>Short advertisement spots with use of famous journalist, sportsman, and singer. Slogan “Your future begins today”.</td>
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<tr>
<td></td>
<td>2005</td>
<td>Specific action to eliminate negative opinions and to generate positive attitude based on technical arguments.</td>
<td>Collaboration with academia and experts to produce specialised publications about the system. Information campaign for journalists, politicians and opinion makers.</td>
</tr>
<tr>
<td></td>
<td>From 1996 onwards</td>
<td>Personalised contacts.</td>
<td>Programme of Integral Advice, in 2009 over 200 thousand members were contacted (out of 850 thousand).</td>
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</tbody>
</table>

Regarding the co-operation of pension industries with governmental institutions, one notices that the situation seems to be better in the Latin American countries. There have been several cases of programmes run jointly with supervisors. The Multifund campaign from 2002 in Chile was the result of strong co-operation between all parties involved in the system. In Uruguay during 2007-2008 there was the National Dialogue on Social Security under the auspices of the president and in co-operation with governmental and social institutions. The Dialogue resulted in the presenting of several draft laws and improvements to the funded pension system. The Mexican financial supervisory office presents useful information on pension issues to the public, whereas the National Commission for the Protection of Users of Financial Services (CONDUSEF), apart from producing similar publications, organises one week of financial education each year, during which pension issues are also presented.

On the other hand, one cannot currently expect too much from the governments or regulators in the CEE region to help pension industries with information campaigns for their members.

The respondents indicated that the most important problems encountered during their informational activity were the public’s low pension awareness and its limited, if not non-existent, interest in the topic, especially amongst the young generation. This created a great problem with getting the message across to the pension members, especially in the light of little or no support from the government in organising an information campaign. Another very important drawback is the ideologisation of pension systems. Politicians tend to have a short-term horizon and populism is a typical issue here. This confuses public opinion and very often sets it against funded solutions. Finally, part of the target population is out of reach unless TV commercials are used.

**What topics should be addressed in the future?**

According to the survey, pension fund members must be informed about the need to save for retirement and educated on how to do so. Apart from creating general pension awareness, workers who are outside formal employment or whose salaries are low and interrupted with frequent spells of unemployment must be especially targeted. This problem is significant in the Latin American systems and of less importance in the CEE countries. Pension fund societies also indicated that members should be informed about the performance and safety features of funded systems. The notion of risk is quite a difficult subject to present and it seems that some special efforts must be made in this area. In view of recent political developments in the CEE region, it also seems advisable to educate the general public on the phenomena of demographic aging, so that they understand the need for individual retirement provision and the changes that are likely in the scope of pension protection offered by the State.
Several associations came to the conclusion that the message they were trying to deliver was too complicated. This means that pension industries should work very hard with a pilot group in their future activities, to make sure that the information to be conveyed is really simple. The Chilean colleagues mentioned that it would also be advisable to have better identification of the various target groups, because the recipients of the information are not homogeneous. Another conclusion based on the Polish case, but probably applicable to other countries, is that one should not wait until the problem occurs before spending money on information campaigns. The information campaign needs to be an everyday activity. It is a kind of investment in educating people. Saving on this can eventually bring about negative results in times of financial and political instability. This education should also cover media and opinion leaders, especially union leaders. It is generally quite difficult to persuade trade union leaders that private solutions are good for workers, but nevertheless, this effort must be made. If they do not understand the nature of the funded system, they simply will not support it. Another important target group is the young generation, which needs to be targeted outside the pension system (labour market): in cinemas, shopping centres and via the Internet, for instance.

It seems that pension issues should be a subject of regular financial education, to be covered as part of the curriculum in schools or universities. In the Dominican Republic, basic education on social security was approved in the law some 10 years ago, but it has not been introduced in schools. Implementation of such an education calls for strong government initiatives and obviously creates costs. Nevertheless, in view of the increasing complexity of daily activities and the problem of financial exclusion, such a proposal seems to be worth discussing. Part of such education should cover the topic of demographics. Members should be aware of this process. They should also be aware that savings accumulated in their pension accounts are not immune from political risk in the future and that the nature of social protection will be changing substantially as societies become increasingly aged. Such knowledge helps people to take better saving decisions during their working career. It also provides the best guarantee against populism.
CHAPTER I.
PENSION INFORMATION AND EDUCATION: CASES OF STRATEGIES AND INFORMATION CAMPAIGNS RUN BY THE SUPERVISORY AUTHORITIES

SOLANGE BERSTEIN

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Financial education in relation to defined-contribution pension systems, such as the one we have in Chile and in other countries, deserves deep reflection. This is one of the subjects that most concerns us in the International Organisation of Pension Supervisors, IOPS, the body to which the Superintendence of Pensions in Chile belongs and which brings together pension supervisors from different countries.

In this article, we look first at the context being faced in the pension system. In the next step we show some international evidence related with the financial education issue. In the third place we refer to the good practices of the Organization for Economic Co-operation and Development (OECD) concerning financial education on the subject of pensions. Then we describe the initiatives of the Superintendence of Pensions in Chile to improve information about the system and specifically the measures contained in the 2008 Pension Reform. Finally the document ends with a small evaluation of some of the things that have been done and, by way of conclusion, some of the challenges that are still pending in these areas.

I. Context

Financial education is a fundamental part of ensuring that the pension system operates well, especially if one considers the main characteristics of this system. The need for supervision, for example, is evident as long as there are important asymmetries of information between the Pension Fund Administrators (AFPs) and the members. The AFPs have better information and greater ability to make analyses, which the member is not capable of doing. The AFPs need the member to trust the decisions that they are taking on his/her behalf, though it is often perceived that there may be a conflict of interest between the AFP and the member. In that sense, supervision is a guarantee that should enable those participating in the system to trust that the decisions taken by the administrator are in line with what the member requires.

Because this is a mandatory system, the quality of the information available to members is of fundamental importance for the decisions that they take and for the correct performance of the system in general. Nevertheless, the level of financial education is
generally low and people lack the ability to process the information provided for them, even though there is plenty of it.

When the pension systems are based on defined contributions, the members assume a considerable part of the risks (investment and longevity risk, for example), so they must be capable of understanding those risks, even though achieving this is by no means easy.

Therefore, although mechanisms exist to make it possible to safeguard the magnitude of the risks assumed by members (such as assignment by default or some prohibitions concerning involvement in certain types of multi-fund, etc.), financial and pension education play a vital role in defined-contribution systems to enable members to take their decisions appropriately.

II. International evidence

A check on international evidence reveals that the situation is not very encouraging, because even in developed countries the level of financial education is unsatisfactory.

According to an OECD study (2005), secondary students in Korea and the United States answered less than 60% of the questions correctly in a test to measure financial knowledge. Meanwhile 71% of adults in Japan had no knowledge about investment in shares and bonds; 57% lacked general financial knowledge and 29% knowledge about pensions, taxes and insurance. A relevant point is that those interviewed believe that they know far more than they actually do. This is a fact observable transversally in certain surveys that we have carried out in Chile. In the case of the OECD study, people interviewed in the United States, United Kingdom and Australia expressed confidence in their knowledge of financial subjects, despite the fact that when they were set a test on basic finance, it was clear that they had very limited understanding of the subjects.

In the case of Chile, the situation is similar. There is not much difference between us and other countries in the world in terms of our small amount of pension knowledge. In the context of the 2008 Pension Reform in particular, multiple publicity efforts were made, and even so only 31% said they were familiar with the Basic Solidarity Pension (PBS) in the Social Protection Survey (EPS) for 2009. The grant for every live birth turned out to be the star product, because this apparently achieved better penetration of the collective unconsciousness and 60% of those interviewed said that they knew of it. Now when we look at financial issues in particular, in the EPS of the year 2009, i.e. seven years after the implementation of the multi-fund system, only 24% of those interviewed said they knew how many types of fund there were to choose from. 34% of those interviewed

said that that they knew which fund their savings were in. 40% said that they knew which was the riskiest fund. Some do not know which fund their pension savings are in, but do know which is most risky. And less than 45% said they knew what the balance was in their individual funding account. Now all the data refers to what people “say they know”, so it still remains to be seen whether they really know what they say they do.

III. Good practices of the OECD

The principles of good practices in the OECD in financial education matters start by defining the problem in terms of the subjects which people need to know and understand.

We cannot provide documents with too many details or multiple types of information, but must give out what is specifically required: the basic tools that members need. In this sense it is important to identify the major risks very clearly – risks in the accumulation stage, investment volatility risks at retiring age, longevity risks, etc. – and transmitting and communicating these adequately to members is a highly complex task.

In this context, the main targets to be aimed at are the following:

i. To achieve an understanding of the need to save for the long term.

ii. To achieve an understanding of investment products and the performance of financial intermediaries.

iii. To understand that financial education is not a substitute for prudential regulation or for customer protection, but rather a complement to them.

iv. The government is responsible for providing information by means of public campaigns to encourage pension education.

v. The Fund Administrators must provide truthful, timely and accessible information.

Initiatives related with pension products must develop methods for evaluating customers’ needs and the effectiveness of existing programs.

IV. Initiatives taken by the Superintendence of Pensions in Chile to improve the system’s information

i. The Four-monthly statement

Constant efforts have been made on what is known as the “four-monthly statement”. This is a document which notifies members about the movements in their individual
accounts, the balance in their accounts, the fund in which their funds are held and the commissions they are being charged. This information arrives at their homes once every four months.

Unfortunately, the EPS in 2009 showed us that a very high percentage of people do not open the statement, even though they receive it. Very few people read it and even fewer understand it. Nevertheless, we have made permanent efforts to improve this instrument and the first barrier that we have to overcome is to make people interested in looking at the information they receive and trying to understand it. So we have included an appendix in that same statement: the Personalised Pension Projection (PPP), which should be of great interest and which has in fact made people take more interest in this instrument. The PPP is a tool that has been extremely useful and allows people to understand the “defined-contribution” concept and how their future pension is defined.

In a defined-contribution system, when the person is informed that he/she has a balance of so many million pesos in his/her account, it is very difficult for that person to work out whether it is an adequate amount of savings or not. That made us think that it was necessary to provide information on how to “translate” the information that they are receiving in terms of a pension projection.

Although carrying out this exercise had the potential risk that members would think of the PPP as a promise that specified exactly what they would receive as a pension, the benefit of providing this information was an advantage that outweighed this possible risk, so all precautions were taken to mitigate it and provide members with this projection. The PPP began to be sent out as from July 2005. It was especially important to get this information across in the case of young workers, because in a defined-contribution system, saving when young is crucial for obtaining an adequate replacement rate.

Given that it is very difficult to make projections when the whole of life lies ahead, with no salaries on which to base a forecast and no accumulated balance, the exercise was simply something fictitious, that bore no relation to the effort that the person was really making at that moment, and it did not allow us to make a point. So it was decided to provide all young members with general information about the importance of saving when young, in terms of the future pension that they would achieve. (See Figure N° 1).
For those people over 35 years of age, a PPP is shown that already includes their real balance and wage and forecasts the future pension (see Figure Nº 2). Here it shows the situation in which the person would continue contributing at the same level that he/she has been doing, according to the wages of the last few months, and the situation in which the person stops contributing until the point of retirement. The idea is to show the importance of continuing to pay contributions and allow the member to see easily if the position is such that he/she has no need to worry about his/her retirement future, or if he/she needs to embark on Voluntary Pension Saving (APV) for example, or take steps of some other type for old age.
In the case of people who are approaching retiring age, information is given on what would happen if they decided to postpone retirement, in addition to the personalised pension.

ii. Web tools
   a. “Compare AFPs”

Another of the initiatives undertaken by the Superintendence of Pensions, to improve information for members, aimed at including new elements and tools in the institution’s web page3.

In the first place, the tool called “Compare AFPs” was created, precisely as part of this effort to make comparable, transparent information available, which people could access easily.

In that sense, it was important to show the different variables that people need to compare when deciding on one AFP or another. Questions that are highly relevant when making a comparison include: the amount charged by each AFP, the yield and risk of the fund chosen, the AFP in which the person is enrolled, the location of the AFPs’ offices up and down the country and the quality of service that the AFPs are providing.

3 www.sensiones.cl
As regards what each AFP is charging, the Superintendence of Pensions has held numerous focus groups and surveys and we have discovered that people find it difficult to understand how commissions work and even have difficulty in understanding the concept of percentage. So, in the matter of pension cost, the method of showing it on the web page, and also on the four-monthly statements backed by this information, is annually and in pesos, so that people can easily visualise the difference between one administrator and another.

On the web page there is also a tool to make it possible to find out which AFP the member is enrolled in, and that is the tool with most visits. There is also a section that shows the location of the offices of each of the AFPs throughout the country, so that people can find out where they have to go in case of need.

An important requirement to enable members to exercise their right to choose an AFP is that of having adequate information about the service that each of them provides. For this reason, the Superintendence produced a methodology for measuring the AFPs’ quality of service and to compare this with the competition. The evaluation scale goes from 1 to 10, with 10 being the best result. The index is called the Administrators’ Service Quality Index (ICSA), an important effort that started in the year 2006 with the aim of becoming a useful tool for people when they need to take decisions.

The ICSA evaluates variables related with three areas at one and same time: (i) pension formalities; (ii) relationship with the member; and (iii) management of accounts. The pension formalities area measures the efficiency and effectiveness of the AFP in dealing with the formalities that have to be carried out by members and beneficiaries with a view to obtaining pensions. Included in this area are variables such as the average time taken to process a pension application; the number of pension applications with important delays; the processing of pension applications and the rating and reassessment of the degree of disability; and penalties imposed by the Superintendence in matters concerning members’ benefits, among others.

The area of relationship with the member measures the efficiency and effectiveness of the AFP in its ability to respond both to the consultations and queries raised by its members and the general public, and to provide relevant information. Some examples of variables included in this area are: delay in sending out four-monthly statements; staffing of the AFP over its total number of members; availability of the AFP’s website.

The area of accounts management measures the efficiency and effectiveness of the AFP in managing its members’ accounts and the resources under management. Some examples of variables included in this area are: average time for crediting personal accounts; percentage of resources credited to personal accounts; handling of contributions declared but unpaid; types of risk measurement carried out by the AFPs to analyse
the investments of the Pension Funds; penalties imposed by the Superintendence in relation to the financial area and the management of accounts.

In total there are 57 objective variables which we as a Superintendence are monitoring all the time in our supervisory role, and we make these available to the public systematically, in such a way that people can obtain this information and also include it as a variable in their decisions.

b. “Compare Funds”

However, members do not only need to compare AFPs; they also have to compare funds within a single AFP. In that direction, we have also made the tool called “Compare Funds” available on the Superintendence’s website, which has been published regularly since September 2007. Through this tool the member has four-monthly information available about the risk, the composition of each multi-fund in terms of fixed-income and equities, and the evolution of the yield.

The most important challenge for this tool was to include some information about risk that would be comprehensible to most members. Figure Nº 3 shows an example of what is shown regularly about the risk of each multi-fund, as of December 2009.

Considering accumulated savings of $9,000,000 and the historic yield of the pension funds, Figure N° 3 shows the ranges within which the monthly profits or losses in each multi-fund might be situated. It has no pretensions other than that people may really be able to understand that, in any given month, the fact of being in a risky fund may mean losing as well as winning. In order to show this table, various focus groups were held, to test whether people could manage to grasp clearly what was being shown.
c. **Consultations and complaints mechanism**

There is also a mechanism available on the Superintendence’s website for consultations and complaints through our various channels (via web, letter/fax, telephone and offices).


d. **Regulations being processed**

The drafts of all generally applicable regulations issued by the Superintendence of Pensions are published on the institution’s website. This is to allow interested citizens to send in their comments and suggestions about the regulation concerned, by electronic mail.


e. **Publications**

The Superintendence of Pensions has made a series of publications available on its website for the general and specialist public, dealing with analysis and study of the Pension System and Unemployment Insurance, books describing the systems and statistical and legislative information.
iii. Dissemination programs

There are various dissemination programs with talks for workers and for strategic
groups, specifically social workers and people in charge of human resources in both the
public and private sectors. These segments are important because they can multiply the
dissemination of contents afterwards in their respective companies or institutions.

Another important dissemination program run by the Superintendence of Pensions is
the one held in classroom sessions in the most isolated parts of the regions where we
have an Office, with a set program.

V. Measures contained in the 2008 Pension Reform
i. Resources – Pension Education Fund

Despite all these efforts that I have already mentioned, most of which were implemented
before the 2008 Pension Reform, the diagnosis stated that pension education was
insufficient and that we needed to make an even greater effort at government level
in this area. The Pension Reform therefore included an initiative called the Pension
Education Fund (FEP). This is competitive funding which makes it possible to finance
initiatives aimed at improving the population’s pension education. The FEP is funded
out of the government’s budget or with donations and contributions, and at least 60%
of these funds must be used for regions (outside the Metropolitan Region). In the first
competitive process, USD 2.7 million were already given out on 34 projects, in amounts
ranging between CLP 6.5 and 100 million, which was the maximum in that stage. Now,
in the second version of the competition, we have another USD 2.9 million in addition,
to distribute between the various projects. This allows for creativity of different types
from those contributing ideas to this fund. We shall have to evaluate each of the projects
being implemented, in such a way as to detect which are the most successful tools to
help us advance in this area.

ii. Citizen participation – the Users’ Commission

A Users’ Commission was also included in the Pension Reform itself, and this has played
a very important role in terms of financial education. This Commission follows the
model used for the Unemployment Insurance (2002) and is made up of a representative
of the workers, of the pensioners, of the public institutions and of the private entities in
the pension system, chaired by a university academic.

The main functions of the Commission are: (i) to channel evaluations on how the
system is working to the corresponding bodies; (ii) to propose education strategies and
ways of making the system more widely known; and (iii) to watch over the quality of
the information available to members for their decisions and propose the lines to be
followed by dissemination and pension education policies, on the basis of that data.
iii. Advice for members – Pension Advisors

The Pension Reform created the figure of the Pension Advisor, bearing in mind people’s need to take decisions on pension issues in a more informed manner. These pension advisors should play an active part, both in the accumulation stage and in the transition between the active stage and the passive stage. In the accumulation stage, the idea is that they can inform people about their position. For example, if they need APV, what are the tax advantages of one mechanism or another and what should the member be doing in order to make a better decision. In the same way, in the transition from the active to the passive stage, pension advisors replace insurance brokers. In the Chilean case, life annuities were handled through insurance brokers, who received a fee for every future pensioner that they persuaded to purchase a life annuity. This led to the existence of a conflict of interests, because the decision was often guided by the interest of the broker, and it might happen that the product was not the most suitable for that particular member. So now the pension advisor reduces those incentives to choose a specific pension option and has a ceiling on the commissions that are offered (a limit of 2% of the funds, with a maximum of 60 UF) because the transition from the active to the passive stage is an extremely important and critical decision in a worker’s life.

The pension advisors are supervised by the Superintendence of Pensions and the Superintendence of Securities and Insurance. In April 2010 there were 480 authorised pension advisors.

VI. Preliminary evaluations

i. Effects of the PPP on the four-monthly statement

We have some preliminary evaluations of certain products, in particular with regard to the PPP in the four-monthly statement.

There is a working document from the year 2009 published on the Superintendence’s website, where the authors analyse the impact of the information provided by the PPP on savings decisions, discovering that it increased the likelihood of paying voluntary contributions for pension by about 1.4 percentage points for people between 40 and 50 years of age. This is quite a significant result, in the sense that people are actually changing a decision as a result of receiving this information.

4 The Unidad de Fomento (UF) is an accounting unit used in Chile, which is re-adjusted according to inflation. It was created by Decree N° 40 on 20th January 1967, its main and original use being for mortgage loans, because this was a way of revaluing them to keep pace with variations in inflation.

Similarly, in an article that has not yet appeared in its published form, the author analyses the impact of that same information provided by the PPP on the decision to withdraw from the labour market (retirement). It finds that members who received the PPP have a probability of retiring in the year 2009 that is between 0.3 and 2 percentage points lower, in other words, they postpone their retirement a little as a result of receiving this information.

**ii. Effects of the ICSA**

Another aspect that we have been able to evaluate is the ICSA. The purpose of this index was to encourage the AFPs to make efforts to improve their service, by making the information available to the public. The findings show that response times have improved in various areas, from the year 2006 to the present. For example, the average number of days for crediting resources in individual accounts has fallen from 14 to about 8 days (see Graph N° 1); in the case of the average time for recovering non-payment declarations (DNP), this has fallen from over two months to slightly less than two months today (see Graph N° 2); the average time in days for processing an old-age pension has fallen from an average of 40 days to an average around 25 days (see Graph N° 3). So we have seen significant improvements in the industry. In an attempt to achieve a better ICSA rating, we have improved the quality of the service that the AFPs provide.

**GRAPH N° 1**

**Average Time in Days for Crediting Resources in Personal Accounts**

![Graph](image)

*NOTE: EA = JANUARY-APRIL; MA = MAY-AUGUST; SD = SEPTEMBER-DECEMBER
SOURCE: SUPERINTENDENCE OF PENSION, CHILE.*

VII. Challenges

The challenges are many. The first is to improve everyone’s financial and pension education by a joint effort with the Superintendence of Securities and Insurance and
the Superintendence of Banks. This has been a very important issue for the financial sector’s Superintendents’ Committee in recent years. We have realised that in terms of financial education we have various synergies of which we can take advantage, and the idea is actually to be able to put these into a joint financial education project.

The second lies in producing a pension risk index and designing a way of presenting this to members that means they really understand it, so that it contributes to their decision process. What we have done so far is to show the short-term risk (how much a member can gain or lose in a given month), but what should really matter to us is the risk that the members are taking in terms of their future pension, with this long-term view that we would like to get across to them and that is so difficult to achieve.

We have been working on this issue for several years and hope in 2010 actually to be able to take a concrete step in this matter by producing a pension-risk index, which is what members of the system should really be looking at, and presenting it in a way that is comprehensible for everyone.

The third point is to encourage people to participate actively in their decisions. Here one of the challenges is to improve the ICSA. The ICSA is a dynamic instrument; from the moment that it came out, it was thought that it would have to develop over time. We have already managed to get the AFPs to improve in certain areas and we need to incorporate new elements to this index in order to continue along that line.

A second task to be tackled in this area is how to give information in a way that makes the attributes of yield and risk easy to understand. And finally, a third way of doing it is to provide clear, easily-accessible information about pension cost.

What we would like to see in the industry is competition based on these variables, in other words, service quality, yield and risk and pension cost. Competition should lead to an efficient result and in that way to a better pension system.

However, providing more information is not enough, because there is little ability to understand financial information in general, so it is not simply a continual effort to provide information and attempt to make it didactic. Something far beyond that is required, namely to improve financial education. To do that, I believe that a long-term program is needed; it is something that we cannot do from one day to the next and it has to begin at an early age, possibly at school level, because markets are in fact becoming more and more sophisticated, and the financial sphere, which was something non-essential 20 or 25 years ago, is becoming essential in terms of what a person, an ordinary worker, has to be capable of managing today. What is really needed, therefore, is greater pension culture.
CHAPTER II

IDEAS FOR IMPROVING OPERATIONAL EFFICIENCY

LORENZO LARACH. PreviRed: the Chilean Model of Contribution Collection by Internet
MIGUEL GIL-MEJÍA. Centralised Social Security Models: Experience of UNIPAGO in the Dominican Republic
SERGIO BAEZA. Reducing the Transaction Costs of Retirement Annuities in Chile
PREVIRED: THE CHILEAN MODEL OF CONTRIBUTION COLLECTION BY INTERNET

LORENZO LARACH 1

1 Lorenzo Larach M. has a degree in Business Administration from the University of Chile. He is currently working as Commercial Manager of PreviRed, a company belonging to the Chilean Pension Fund Administrators (AFPs), which is responsible for the collection of pension contributions by Internet. His other activities include participation as a member of the Surveillance Committee of the Real Estate Investment Fund “Fundación” (Chile). He has also been a member of the Surveillance Committee of the Investment Fund “Compass Latin America” and acting director of Cintac S.A. His professional career has been focused on companies providing services in the financial and pension area, outstanding among these being the formation, development and consolidation of PreviRed.
This short article describes the distinctive characteristics of the Chilean model of contribution collection by Internet, known as PreviRed.

In the first place, we begin by defining what the system is about and how it has been implemented and developed. Subsequently the article refers to how the system operates in concrete terms and the business model used in order to expand. The next step describes the main benefits implied by PreviRed and also the volume and market share it has at present. Fourthly, reference is made to the system described as a supporting benefit for the Pension Fund Administrators (AFPs) as also for the operation of its technological platform. Finally the document ends by explaining some of the lessons learned from the experience, the conditions needed to enable a system like PreviRed to succeed and some conclusions.

I. What is PreviRed?

PreviRed is an Internet site, authorised by the Superintendence of Pensions, for paying the pension contributions of the whole Chilean pension system. It belongs to the five AFPs that are operating in the market.

The project began in the year 2000 and the first contributions were received in August 2001. Today, PreviRed operates with 65 institutions from all the social security industries. It also has an alliance with 11 banks for on-line collection, and with two credit cards issued by Department Stores to help those individuals and/or employers who are not in the banking system to pay their contributions.

II. Implementation and development

In order to launch a project such as this one, for carrying out collections by Internet, in the year 2000, the first essential step was to apply to the Superintendence of Pensions for authorisation. The next step was to ask the Superintendence of Health and the Superintendence of Social Security for authorisation, so that the institutions regulated by them could collect via Internet. Subsequently a framework of regulations had to
be prepared to regulate the manner in which this collection would operate, and the procedures to ensure its operation.

Once the aforementioned authorisations had been obtained, it was necessary to develop all the business rules for each of the various industries involved.

Then the Internet site\(^2\) was developed and connectivity with each and every one of the banks and institutions. Each of these institutions had to open a current account in each of the banks with which we had an alliance, in order to operate on-line with electronic payment transfer.

Later it was necessary to give validation to the payment spreadsheets paid by Internet. This is a very important issue for the countries that have not yet implemented a system of this type. It is very difficult to change the way a payment is perceived when the employer does not have a payment spreadsheet in his hands, which he/she has historically paid through a bank, with the back-up provided by the paper in the event of any formalities having to be done. Both the Superintendences and the Labour Office gave us authorisation, in the sense that a payment by Internet, through PreviRed, was to be considered as valid a payment as one made over the counter in a bank.

Finally we had to develop a business plan in order to include both institutional clients and employers. To do this it was necessary to offer the service to each of the institutions involved and to employers, pointing out the advantages and savings that they would achieve as a result of implementing the system.

From the year 2000 to the present, necessary adjustments have had to be incorporated into the system as a result of the reforms to pensions or in other areas, to ensure that the system is always absolutely up-to-date and that the employer is not going to make any mistake when paying his/her employees’ contributions.

### III. Operation

The way PreviRed works is really very simple (See Figure Nº 1). The employer enters the PreviRed website, loads his/her payroll, either from his/her wage system or manually. In smaller companies, this information is saved, so that the employer does not have to enter it afresh every month. He/she enters it once and simply makes changes the next month in the case of those workers who have undergone some modification. PreviRed calculates the variations in rates if such exist, as also the changes in assessable incomes that may exist in a particular month, leaving the payroll ready for payment the following month.

\(^2\) [www.previred.com](http://www.previred.com)
PreviRed validates all the data entered by the employer; the employer sees any errors and corrects them and then generates the payment-spreadsheets electronically, enters the bank’s site and makes the payment by bank transfer. This is a very important subject: in the system there is no direct transfer between the employer and PreviRed. The employer connects directly with his/her bank and loads his/her current account. Then he/she deposits the money to the institution on-line. In other words, the funds are transferred immediately from the employer to the institution, to each one of the 65 institutions that are currently operating.

The banks, once they acknowledge the payment, send those spreadsheets to PreviRed, indicating whether the employer paid a particular contribution, and PreviRed informs the pension institution about the data of all the spreadsheets that were paid. Then the corresponding pension institution reconciles the statement of the current account with the deposit and the data that back up that operation, up-dating its databases and depositing the money in the workers’ individual accounts. Once this process is complete, the employer is in a position to be able to print off, from the website, both the statement with the payment stamp and the time when the bank transfer was made, and the details of each of his/her workers. This information remains permanently on the website and the employer has no need to print or file the spreadsheets. When he needs them for any special inspection that may occur, the employer enters the website and downloads the spreadsheets of the institution that is requesting it, for the month in question.
IV. Business Model

We have two types of client: first, the institutional clients (65 in all, so far). This group includes the whole Chilean pension industry: the AFPs, the Social Pension Institute [IPS, formerly the Pension Standardisation Institute (INP)], the Mutual Insurance Societies, Compensation and Family Allowance Funds, the Unemployment Fund Administrator (AFC) and other industries that manage Voluntary Pension Savings accounts (Life Insurance Companies and Mutual Fund Companies).

Secondly there are the employer-clients. So far we have 411,530 employers operating through the website. These employers may be classified in three different segments: (i) Companies (242,399 to date); (ii) Employers of People in Domestic Service (119,495 to date); and (iii) Self-employed workers (49,636 independent workers to date).

PreviRed’s collection process is carried out via banks and department stores. There are currently 11 collecting banks in operation, representing practically 100% of the current accounts possessed by employers, and two credit cards issued by department stores for employers who do not possess bank accounts.

PreviRed operations can be financed, thanks to the commission per collection that the institutional clients are charged (this is fixed per spreadsheet collected and variable per reported worker). Employers in Chile pay absolutely nothing for this service, in accordance with the regulations issued by the Superintendence of Pensions.

V. Benefits of the system

PreviRed has meant multiple benefits, both for the employers and for the pension institutions, the workers and the country as a whole.

For the employers, PreviRed has meant at least six benefits: (i) Processing times are reduced; (ii) No spreadsheets are printed or cheques made out for payment; (iii) There is no need to queue in the banks; (iv) The data is validated on-line; (v) The system can be used on any computer with an Internet connection, which encourages the payment of contributions; and (vi) Physical spreadsheet records are eliminated.

For the workers, the following three benefits of PreviRed can be identified: (i) The quality of information is improved; (ii) The process of updating the individual accounts in the pension institutions is speeded up; and (iii) There are fewer hold-ups due to identification errors, thanks to on-line data validation.

Meanwhile, for the pension institutions, PreviRed has meant the following seven benefits, at least: (i) It reduces the cost of collection; (ii) Paper spreadsheets are eliminated; (iii)
The quality of the data is improved; (iv) Hand-typing of data is eliminated; (v) Hold-ups are reduced; (vi) Microfilming of spreadsheets is eliminated; and (vii) The periods needed to credit the accounts are reduced.

Finally, for the country this system has made it possible to: (i) Increase productivity; (ii) Improve the quality of information; (iii) Encourage the payment of contributions; and (iv) Contribute towards the modernisation of the country and the Chilean pension system.

VI. Volumes and market share

As may be seen in Graph Nº 1, PreviRed started out timidly with 204 employers in the year 2001, and had grown to over 411 thousand by March 2010. At the same time, as may be seen in Graph Nº 2, the contributing workers totalled 27 thousand in 2001, when it was mainly AFPs that were taking part, but that number has risen steeply, reaching something over 4.6 million workers by March 2010.

Of the total employers in March 2010, something over 242 thousand are companies, which include the bulk of the workers (just over 4.4 million), and almost 169 thousand are workers in domestic service and the self-employed.

The payment spreadsheets that PreviRed collects annually already amounted to almost 16 million in December 2009 (see Graph Nº 3), which implies that 1.4 million spreadsheets are collected each month. As of the same date, the annual amounts collected were already over US$8,600 million (see Graph Nº 4) and in the month of March 2010 alone, US$ 790 million were collected.

Our market share in March 2010 accounts for 76% of employers (all the employers included in the AFPs and employers that contribute monthly) and 76.2% of the workers contributing in the pension system.
VII. PreviRed as a support to the AFP business

What else does PreviRed do, apart from collecting contributions? Well, PreviRed creates a support unit for the AFPs’ business, so that they can concentrate the efforts that they were each making individually in a single joint action, in order to facilitate their work.

For example, PreviRed carries out joint processes for all the AFPs to notify, regularise and support claims against employers who are presumed to be in default or with delays in payment. So, instead of sending five letters to the same employer, for example, PreviRed sends him/her a single letter, stating that he/she is in debt or default with regard to particular workers.

PreviRed also consolidates the information of all the AFPs and the IPS for granting the subsidy provided by the State for hiring young workers. At the same time, the system coordinates, consolidates and validates the information from all the AFPs to the Superintendence of Pensions. It also supports the exchange of information between the various actors managing the APV. Finally, PreviRed also supports the exchange of information between the AFPs and Life Insurance Companies (CSV) which manage the Disability and Survivorship Insurance (SIS).

VIII. Technological platform

The infrastructure of PreviRed is sized for the peaks. In Chile, as in other countries, employers tend to leave the payment of their obligations to the last minute, so the PreviRed website has to be designed in such a way that it can receive large volumes of these last-minute payments.

For that reason, we have a Main Data Center and an outsourced Contingency Data Center. These are not in the company’s offices but are totally outsourced in another company. There are also eleven Web Servers, four Database Servers, four Internet Service Providers (ISP) for entering the website, two Direct Servers for communication with banks and a Contingency Site in IBM, so that within two hours of having a problem in our main site, we can access a mirror site, operating normally at any point of catastrophe, especially towards the end of the payment period when the majority of transactions take place.

As regards volumes, it must be said that PreviRed has about 7 million transactions going on in the Database at peak hours. At peak hour on the last day of payment, PreviRed receives some 40 thousand spreadsheets. Meanwhile, response times are under 2 seconds and the time during which the server is on-line (the so-called “up-time”) is quite high, with an effectiveness of 99.6%.
IX. Lessons and experiences

What are the lessons and experiences that can be gleaned from these 10 years of PreviRed’s operation? First of all, to work very closely with the regulatory and rule-making bodies. They must always work hand-in-hand, because the system is putting something that exists on paper and in the regulations onto the Internet, and both employers and institutions have to comply with it.

As the second lesson, it is essential to make alliances with public and private institutions in order to deliver added value and achieve growth. Here it was not just a matter of telling employers to stop using paper and pay by internet. It was necessary to show them some advantages, so that they would be brave enough to do the transaction by internet. That was achieved, in part, thanks to the alliances made with different institutions.

It was necessary to standardise the models of payment both with the various different pension institutions and the banks. There could not be 65 different models for each of the institutions. There is one model which is applicable for all the institutions and for all the banks in the same way, because otherwise it would be impossible to operate.

PreviRed also had to integrate directly with the Software Firms that deal with Wages. Currently there are certificates in over 50 Software Firms that provide companies with a wage-processing service. PreviRed certifies these Software Firms in such a way that the employer, when he/she has the wages, immediately generates a file that is uploaded directly to the PreviRed website, without any type of intervention.

In reality, what matters is to develop navigation flows that are easy to use and not complex, because this is an operation that is carried out every month and not every day, and often the employer, especially the small employer, forgets how to do it. So, the flow must be easy to operate.

PreviRed needs to become a point of reference for pensions, with the aim of winning employers’ loyalty. Ultimately, the system must achieve tangible benefits by law for the employers that use payment by Internet, such as extended deadlines for payment for example, and early reimbursement of benefits, among others. For example, in the 2008 Pension Reform we managed to extend the expiry of the payment deadline by three days for those contributions that were paid by Internet. The employer who pays using paper has until the 10th of the month to do so, while the one who pays by internet has until the 13th of each month, which also means that the employer, financially speaking, also generates an additional 3 days with his/her money in cash.
X. Conditions for success

The following points may be highlighted as conditions for the success of a system like PreviRed:

i. To have a single website for paying all the pension contributions that an employer has to pay, so that he/she does not have to visit a number of different websites and can meet his/her obligations in a single entry;

ii. To unite all the industries and companies in the pension sector. If one industry remains outside, the system would be weakened because the employer would have to go elsewhere to pay one specific institution;

iii. To have a network of banks for internet payment;

iv. To have the backing and support of the authorities of the pension sector. This has been fundamental in all the tasks and in all the success of reaching the percentages of market share that we currently have;

v. To have wide Internet coverage available in the country. Chile is a country with quite strong Internet penetration and, in the past few years, with an important level of broadband penetration. This has been a really basic factor in PreviRed’s growth;

vi. To develop a marketing force to train employers;

vii. To have the support of the banks to encourage on-line payment.

viii. To be a point of reference in pension matters and keep the site up-to-date on the basis of the regulations currently in force; and

ix. To have a service with good response times.

XI. Conclusions

As was stated earlier, collecting contributions by Internet reduces the Institutions’ costs and improves the quality and promptness with which information is received. Moreover, a system such as PreviRed collaborates towards increasing the country’s productivity, providing employers with a safe and efficient service. Another very important point: the system is faster and more convenient than the traditional paper-work and that encourages the payment of contributions by both companies and individuals.
Just as nobody today thinks of working without Internet, without E-mail or without a mobile phone, so nobody thinks of paying pension contributions without PreviRed.
CHAPTER II
IDEAS FOR IMPROVING OPERATIONAL EFFICIENCY

CENTRALISED SOCIAL SECURITY MODELS: EXPERIENCE OF UNIPAGO IN THE DOMINICAN REPUBLIC

MIGUEL GIL-MEJÍA

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1 Miguel Gil-Mejía studied Civil Engineering and received his Master’s Degree at the Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico. He is currently Executive Vice-President of UNIPAGO, the Database Processing Company of the Dominican Social Security System, according to Law 87-01, which belongs to the Pension Fund Administrators (AFPs) and the Health Risk Administrators (ARS). He has worked in high-level executive positions in financial institutions and in companies running networks and electronic transaction processors, where he proposed and developed new electronic services for payments and transfers of funds. He has also been a consultant and advisor in the development and organisation of technology projects in private firms and government institutions.
In this short article I shall be describing the distinctive characteristics of the centralised social security model in the Dominican Republic and explaining in broad terms the functions and benefits of the company operating that system, which is called UNIPAGO.

I begin with a brief description of the Dominican Social Security System (SDSS), explaining what the system is about and how it has been implemented and developed, and then go on to a full explanation of the characteristics of UNIPAGO, describing the collection process, the volumes of operation, the income and expenses, the benefits that it has meant for the system and the aims to improve it that have been suggested for the near future. Finally, the document ends with some lessons that can be learned from UNIPAGO’s experience.

I. Brief description of the Dominican Social Security System

Law 87-01, by which the Dominican Social Security System came into being, was enacted in May 2001, and the system began to operate in February 2003. It is based on a centralised operating model and is classified in three schemes and three areas of insurance (see Figure Nº 1). The Contributory Scheme covers workers who are in a contractual relationship, with a boss; the Subsidised Scheme looks after the extremely poor and its services are covered by the State; and the Contributory-Subsidised Scheme covers self-employed workers, from the fruit-seller to the free-lance doctor. The three areas of insurance are: pensions, health and occupational risks.

At present, there are five Pension Fund Managers (AFPs), twenty-seven Health Risk Administrators (ARS) and one Occupational Risk Manager (ARL), taking part in the SDSS. The system is supervised by two Superintendences: that of Pensions (SIPEN) and that of Health and Occupational Risks (SISALRIL).

The SDSS is compulsory for all public and private companies. Invoicing is centralised and there is one payment for all three types of insurance. The payments are decentralised and may take place in any bank, and the resources are managed with complete independence of the State.
II. UNIPAGO in the Dominican Social Security System

i. What is UNIPAGO?

UNIPAGO is the Database Processing Company of the SDSS, with its legal basis in Law 87-01 and a Franchise Contract [signed between the company and the National Social Security Council (CNSS)]. It was founded on 29th October 2002 and established as the only Private Institution involved in the operating nucleus of the SDSS. Its operations began on 1st February 2003.

UNIPAGO handles the processes and sub-processes of enrolment, payment validation and fund distribution in a centralised manner. This company has mixed capital because
it belongs to the AFPs and the ARSs\(^2\) (no other type of company is entitled to participate in its capital structure). UNIPAGO is a single company which has a monopoly in the good sense of the word, backed by law.

UNIPAGO is a company that is highly supervised, by the CNSS, by the two Superintendencies mentioned earlier and by the Social Security Treasury (TSS)\(^3\). The financial goals of UNIPAGO are self-sufficiency, efficiency, reduction of clients’ costs and non-profit for shareholders.

Figure Nº 2 shows the general scheme of the large Social Security network in the Dominican Republic. The central node is shared between UNIPAGO and the TSS, connected by lines with high capacity for information transfer. UNIPAGO has private network connection with the banks (collecting agencies), the AFPs, ARSs, the ARL, the SIPEN and other bodies involved in the system, the pay-as-you-go funds and the solidarity fund. The TSS is in direct contact with the companies, which connect to its database by Internet (a public network), but with security elements and user authentication of both the company and the user within the company, enabling the possibility of any type of anomaly to be reduced.

\(\text{FIGURE Nº 2} \)

\text{SOCIAL SECURITY SCHEME IN THE DOMINICAN REPUBLIC}

\(\text{SOURCE: PRODUCED BY THE AUTHOR.}
\text{NOTE: DIDA = DEPARTMENT OF INFORMATION AND DEFENCE OF SOCIAL SECURITY MEMBERS; CONDEI = NATIONAL COUNCIL OF CHILDREN’S FARMS.}\)

\(^2\) The capital of UNIPAGO is predominantly private. Two of the company’s shareholders are public companies: one public AFP and one public ARS.

\(^3\) In its functioning, UNIPAGO shares operating responsibilities with the TSS.
ii. The collection process

Figure Nº 3 shows the scheme of the SDSS collection process in which UNIPAGO is involved. The collection process described is typical of centralised systems. Employers have two ways of paying: (i) Personally at banks, by sending their messengers with the cheque and the number of the invoice that they are going to pay (they do not have to take payroll data nor anything of that kind); and (ii) By Internet, directly from their own offices. The banks process the payments they receive through all their branches nationwide, and send the information about them to UNIPAGO in the night. UNIPAGO processes these payments and validates the amounts of the invoices directly with the TSS Database, which is where this information is kept. In addition, UNIPAGO generates the electronic fund transfer operation and delivers it to the TSS, so that the collecting banks can make the payment through the Central Bank’s system of payment modes and transfer the funds that are in their accounts to the main Social Security accounts (managed by the TSS).

If payment day is T, on day T + 1 the funds that were in the bank are put in a single place and on day T + 2 those funds are distributed to their final destinations (the AFPs, ARSs and specialised funds). In other words, in the Dominican Republic’s model, final accreditation of the funds takes place in 48 hours, which is the period set by the Social Security Law itself.
iii. Operating volumes

UNIPAGO has been in the system since the year 2003 and has been gradually taking on the management of the services in production. One of the principles of the Law is precisely its gradual implementation. The system began with pensions alone in the year 2003; in 2004, occupational risks began; in 2005 the health services of the subsidised scheme were started; and in 2007 there was an important milestone, which was the beginning of health services in the contributory scheme, in other words, that of the workers included on a payroll or spreadsheet. Graphs Nº 1, Nº2 and Nº 3 show the development of the different variables that reveal the growth of the operations handled by UNIPAGO: the number of members, the number of services that can be invoiced and the quantity of contributions processed, respectively.

It is worth underlining that if the only service provided within the system by UNIPAGO were that of pensions, the volume of operations would have doubled between 2003 and 2009 alone. However, the gradual introduction of new services has allowed the volume of operations to rise, relatively speaking, from 1 in the year 2003 to 8.5 in 2009. This has been very important in UNIPAGO’s financial flotation and also, due to its non-profit vision, in the reduction of clients’ costs.

**GRAPH Nº 1**

SIZE OF MEMBERSHIP PORTFOLIO
31ST DECEMBER 2009

![Graph showing membership portfolio growth from 2003 to 2009](source: produced by the author.)
Graph No 2

Quantity of Services for Invoicing
31st December 2009

Source: Produced by the Author.

Graph No 3

Quantity of Contributions Processed
31st December 2009

Source: Produced by the Author.
iv. Income and expenditure

Graph Nº 4 shows the historic behaviour of UNIPAGO’s income and expenditure. Due to its goal of self-sufficiency and non-profit, the increase in income, especially all the increase due to the staged entry of new services, allowed the company to deal with inflation, gradually increase its size, cope with the increase in licensing and maintenance expenses, do more investment, and also cope with a role for which it was not originally designed.

In the Law, UNIPAGO is spoken of in generic terms as the Database Processing Company of the SDSS. The company, therefore, was only called upon to process, and this was so true that in the early days of the system, in 2002, the CNSS engaged a foreign consultancy firm to set up the operating model and also to develop the computing application needed to manage those operations. The system started up in 2003. From the very beginning the consultancy firm ran into very serious difficulties and the contract was cancelled in 2004. The country did not realise that the firm developing the application of the social security system had failed and left the country, and the reason it did not realise was that UNIPAGO took over its place and the TSS also took the place the corresponded to it, along with the modules that were under its responsibility. So UNIPAGO became not only an operator, but also a developer. In other words, since 2004 we have had the role of being the SDSS software factory.

**GRAPH Nº 4**

INCOME VERSUS COSTS AND EXPENDITURE IN UNIPAGO

![Graph showing income and expenditure](source: produced by the author. Note: DOP = Dominican Pesos.)
Now, because the volumes have grown so much, the margin between income and expenditure has always remained within relatively narrow, controlled limits. What are the reasons behind this result? Graph Nº 5 shows the development of the rates (current values) of the UNIPAGO services from the year 2003 to 2009, in relative terms compared with 2003. From 2003 to 2006 the rate was unchanged (value 1). In the year 2007 the rate was reduced by 20% (it took a value of 0.8) and that reduction was held during 2008 and 2009. One would like to know what service company, in any country, can produce a graph of rates similar to the one described.

Looking at the values of the rates compared with those of 2003, adjusted for inflation (real values) [see Graph Nº 6], we can see that in 2009 the impact of the costs of the company on the global costs structure of its clients is around a third of what it was in 2003 (a reduction of 31% in the real rate, relative to 2003).
v. Benefits of UNIPAGO for the system

The continuing reduction of the charge for UNIPAGO services on the costs of its clients produces the following benefits:

a. Higher yield for the AFPs and ARSs.

b. Less pressure to increase the AFPs’ commission percentages.

c. Less pressure to increase the monthly charges for the ARSs’ services.

d. Better utilisation of the contributions paid by companies and workers, for their own benefit.

Table Nº 1 shows the average duration (in working days) of four types of process (Enrolment, Collection, Transfers and Withdrawals) in the case of the Dominican Republic and Mexico, both countries that have centralised, franchised operating models.
The insertion of a new member on the system’s database (Enrolment), in both Mexico and the Dominican Republic, is a process that takes 24 hours (1 day).

Collection is Mexico is taking 6 days (the Law allows 13 days) while it has been taking 2 days in the Dominican Republic since the year 2003.

Transfers are processes based in some cases on deadlines established by the regulations themselves, to allow for rejection or to give the member time to change his/her mind. In the Dominican Republic the transfer cycle takes about 5 days, whereas in Mexico this cycle takes some 12 days.

In the case of withdrawals, since the system in the Dominican Republic is relatively new, these are not yet centralised and automated, but we understand that this process can be generated in about two days, as in Mexico.

In Graph Nº 7 it is possible to see the operating costs for various countries as a percentage of the collection and per member in the year 2008. It can be seen that in the Dominican Republic the operating costs of the AFPs compared with the volume of collection in percentage terms is only 2.2%, whereas in the countries referred to, the average level is around 10% with a peak of 15% (in the case of Argentina). The annual expenditure of the AFPs in the Dominican Republic amounts to approximately USD 4.2 per member, whereas the average expenditure in the region amounts to approximately USD 25-30 per member with a peak of USD 45 per member.

It should be made clear that the first measurement (operating cost as percentage of collection) includes the operating expenditure referring to the total amount collected, but the total amount collected is not, logically, income for the AFPs; the income for the AFPs is a part of that total amount collected, i.e. their commission. If we were to draw a graph of operating expenditure compared with commission, it is probable
that the relative order of the different countries would change, and we are sure that the Dominican Republic would cease having the lowest indicator, for one reason: the commission established in the Social Security Law for the AFPs is 0.5% of the gross wage, whereas the average in the other countries is approximately 1.5% of the gross wage. In other words, the ratio of operating expenditure to commission in Dominican Republic is really higher than in many, or possibly all the countries that appear in Graph Nº 7. This forces both the AFPs and the system to be efficient.

**Graph Nº 7**

**Operating Expenditure for 2008 in Selected Countries**

There are various indicators that make it possible to show the quality and security of UNIPAGO. As regards security, as of 31st December 2009, UNIPAGO finished with: (i) one delayed invoice for every 62 thousand processed, which is equivalent to a delay indicator of 0.002%; (ii) in monetary terms, 100 DOP delayed for every 182 million DOP processed, which gives a percentage indicator of 0.0005%; and (iii) a period of 24 to 48 hours for clarifying and reprocessing delays. We believe that all these quality indicators speak very highly of the system’s efficiency. We must point out that one of the reasons for those indicators, one of the most important ones, is the fact that the collecting banks have implemented an on-line validation process for the invoice, so that if the bank-clerk makes a mistake in typing in its number, the system will tell him/her that there is an error and he/she will not be able to process the transaction. This guarantees that one hundred percent of the invoices received at the banks’ cash-desks are valid, existing invoices. To this can also be added the fact that, on the basis of the payrolls up-dated by the employers with the data of all employees validated electronically against the
Citizens’ Master Register, the TSS produces the invoice, also electronically. Furthermore, the member’s official data is on the SDSS Database handled by UNIPAGO and is also validated against the Citizens’ Master Register, so there is no possibility of an employer making a mistake and putting the wrong name on someone’s ID, or the AFP crediting that contribution to a different person, because both the TSS and UNIPAGO would promptly reject the faulty transaction.

As far as security is concerned, it should be mentioned that UNIPAGO is certified with International Standard ISO-27001:2005 on Information Security (it is still the only company in Dominican Republic certified according to that standard) and also, the audits carried out (of review and re-certification) have been successful.

vi. Strategic goals of UNIPAGO for the period 2010-2012

We have identified five areas of improvement as part of the strategic goals for the period 2010-2012:

a. Re-formulating the Single Information and Collection System (SUIR).
   - 100% on-line technology via web.
   - Reduce processing times
   - Reduce process cycles (liquidation of funds within 24 hours)

b. Providing clients with value-added services
   - Transfer economies of scale
   - Generate new income
   - Generate financial self-sufficiency without increasing rates
   - Turn UNIPAGO into the clients’ back office.

c. Providing clients with services in their relationship with suppliers.

d. Penetrating other markets: providing services to UNIPAGO clients and their suppliers.

e. Generating new peripheral income to enable reasonable rates to be established in the future and, where possible, with a constant downward trend for the system’s basic services (Enrolment, Collection and Distribution of Funds).

vii. Lessons learned from UNIPAGO’s experience

In our opinion, the brief experience of UNIPAGO in these years makes it possible to point out some success factors for a system such as this. First, development must be carried out in-house and not imported. Second, it is vitally important to have human
resources of high quality and for there to be adequate motivation and integration. Thirdly, it is very important to take advantage of the services that already exist in the country, as also the support of the shareholders and authorities, and of course the trust of the latter and of the clients.

We can also identify some problems that need to be solved. First we must change clients’ culture with regard to the above model. Second, it is necessary to understand the dual role of clients and shareholders. Third, we need to take on board the fact that the system is unique and there is no know-how available in the market. The fourth point is that we always need to respond rapidly to the implementation of new regulations and try, even with all that pressure, to produce working conditions in which there is motivation and delight in belonging to the company and working for the public system that has most impact on the country.
REDUCING THE TRANSACTION COSTS OF RETIREMENT ANNUITIES IN CHILE

SERGIO BAEZA

1 Sergio Baeza is an Economist from the Economics and Business Administration School of the Catholic University of Chile. He is President of the Central Securities Deposit (DCV) and was present at its foundation in 1993 in his role of President of the Chilean Association of Pension Fund Administrators at that time. He has also been Chairman of the Board of the System of Consultations and Pension Offers (SCOMP) ever since it was set up in 2004: a company belonging to the Pension Fund Administrators and Life Insurance Companies of Chile. The author thanks Carlos Briceño, Managing Director of the SCOMP, for his collaboration in the preparation of this article.
I. Abstract

In the year 2004, it was made a legal obligation for every person who retired to request the market to offer amounts of pension, through the various options, by means of an electronic consultation system that would pass on the interested party’s request for information to all the suppliers simultaneously, both Pension Fund Administrators (AFPs) and Life Insurance Companies (CSV). In order to achieve this purpose, those companies organised a public limited company by the name of SCOMP (System of Consultations and Pension Offers), whose object was to design and operate that information system, to provide members with a set of firm offers on which to base their decision to retire.

With the arrival of SCOMP, there was a sharp fall in the intermediation commissions paid to agents and brokers. Through SCOMP, members received all the complex information about the available pension alternatives in a clear, quick and systematised fashion.

It is estimated that the savings benefiting pensioners under the life annuity option are US$2,400 per transaction, as a result of the fall in commissions, whereas the cost of operating the system, which is paid by the agents and brokers and by the life insurance and pension companies, is only US$35 per transaction, on average.

II. Conditions prior to the inception of SCOMP

Sales agents and brokers had a lot of influence in the individual decision to retire. Information about life-annuity offers was often unintelligible for potential pensioners and, since the comparison between offers was not transparent, the agents and brokers naturally leaned towards the company that offered them the best commission. Furthermore, since the pension funds paid no commission on the choice of programmed withdrawals, this alternative was rarely offered to clients.

The average commission earned by the sales agents, 4.4% of the premium of the life annuity between the years 1991 and 2003, was a strong incentive to find the client before
the competitors did. For this reason, information about people approaching the decision to retire became very valuable and the ways of getting it were less than transparent.

Some clients suffered harassment from intermediaries who explained to them the advantages of taking early retirement, which might well not be applicable for the clients, but were for the intermediary collecting the commission. In order to persuade their clients, determined agents even went to the lengths of paying them a fraction of their commissions, which rose to almost 6% in the years 1999-2000. That procedure, which in fact brought the pension payment forward, was very popular with pensioners who had a short-term view or a great need for cash.

This scenario was ripe for reform and as soon as the discussion of possible changes began, the market pre-empted them and commissions fell to less than 4% in 2001 and less than 3% in 2002-2003. When SCOMP began operations in the second part of 2004, it did so with commissions capped by law at 2.5%.

III. Goals of the reform

The aim of the new rules was to reduce commissions and so increase pensions.

In order to achieve this aim, it was fundamental to give clients appropriate, timely information, at low cost, to make them more independent of the agents in their pension decision. The pensions would also increase to the extent that the companies offering life annuities competed more among themselves to attract clients. This would be made possible if the information about clients were made available to the whole market at the same time and if the competitors had to make their offers simultaneously, in other words, without prior knowledge of the offers of the competition.

A further aim was to minimise the cost of the information about potential clients, to put all the agents and brokers on an equal footing and eliminate bad practices concerning access to that information. This would be achieved by having a public register provided by the regulators for easy consultation by the whole market.

IV. Organizational setup

The AFPs and the CSVs that offered Life Annuities formed a public limited company, called SCOMP, the purpose of which would be to provide the information system that future pensioners would be obliged to use.

The ownership of SCOMP was 50% AFP and 50% for the life annuity companies, and the company was made subject to the supervision of both the Superintendence of Securities and Insurance and the Superintendence of Pensions.
The cost of consultation is essentially free for retirement candidates and they can make as many consultations as they wish (though only three for each Balance Certificate). In practice, people make less than two consultations on average before retirement. The rates paid by the pension advisors, AFPs and CSVs are given in Table N° 1.

### Table N° 1

**FEES PAID TO SCOMP**

<table>
<thead>
<tr>
<th>Rate</th>
<th>Participant</th>
<th>Value in US$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed per Offer Request</td>
<td>AFPs, Insurance Companies and Advisors</td>
<td>2</td>
</tr>
<tr>
<td>Fixed per Closure</td>
<td>AFPs and Insurance Companies</td>
<td>7</td>
</tr>
<tr>
<td>Variable per closure on capital</td>
<td>AFPs and Insurance Companies</td>
<td>26</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>35</td>
</tr>
</tbody>
</table>

*Source: Prepared by Author.*

The person wishing to consult the system can do so through a pension adviser or directly at an AFP or CSV. They pay US$2 for each consultation or Offer Request. Later, when the person takes the final decision to retire, and what is known in the system as “closure” takes place, the pension provider pays SCOMP a fixed amount of US$7 for each closure and a variable amount, also per closure, which amounts on average to about US$26, depending on the amount of the balance in the individual account or the life-annuity premium.

**V. Processes**

The first step in the process of retirement is for the person to make a Pension Application at his/her own AFP and obtain an Electronic Balance Certificate from that AFP. The Electronic Balance Certificate, in addition to giving the balance in the individual account, identifies the member completely, with age, sex and marital status, and does the same for his/her beneficiaries (see Figure N° 1).
Once the member has his/her Electronic Balance Certificate, which is valid for 35 days, he/she may choose to make a Pension Offer Request. To do this, through an agent or pension provider, he/she enters the Offer Request to the SCOMP system. SCOMP transmits this anonymous information instantaneously to all pension providers, whether AFPs or CSVs. The Offer Request must indicate the type of pension for which the member wishes to receive offers.

The options are basically as follows:

- Programmed Withdrawal from the individual account.
- Immediate Life Annuity with or without a guaranteed period of 10, 15 or 20 years.
- Temporary Income (which is a Programmed Withdrawal for a given period) and then deferred Life Annuity.
- Immediate Life Annuity and Programmed Withdrawal at the same time, if the balance in the individual account is sufficiently large to finance both pensions.
With the information received through the SCOMP system, the providers make their offers within 48 hours, SCOMP processes them, puts them in a comparable format arranged from largest to smallest, adds the risk rating of the CSVs and sends the member the document, called the Offer Certificate, both by physical and electronic mail. The offers contained in this certificate are irrevocable for the providers and have a validity of 12 days (see Figure Nº 2).

The member is not forced to take a decision and can let the Offer Certificate expire, so putting off the decision to retire with a view to restarting the process later on (see Figure Nº 3).

However, if he/she decides to go ahead with retirement, he/she can select any of the offers received. In particular, if he/she chooses a particular CSV in life annuities, he/she can ask for an improved offer, called an External Offer. The CSV improves the offer that same day, normally charging the intermediary’s commission, and SCOMP issues that External Offer with validity for a further 15 days. The member can once again postpone his/her decision to retire, letting this deadline pass too.
If on the other hand, the member finally chooses a Pension Option, he/she notifies his/her own AFP of the fact, which in turn notifies SCOMP and closure occurs. If the option chosen is a life annuity, the AFP will transfer the required capital to the CSV.

**VI. Results**

As was mentioned earlier, the average commission perceived by the agents and brokers in the period 1991-2003 was 4.40%. In the years 2004-2009 the average commission fell to 2.07%.

Graph Nº 1 shows the behaviour of the commissions over time. This 2.33% saving of commissions can be applied to life annuity capitals of US$1,760 million per year, on average, for the period 2004-2009. Given that 17 thousand retirements occurred per year during that period under the life-annuity option, it is possible to calculate a saving per person of some US$2,400.

At the end of 2008, new rules came into force concerning agents and commissions. Their aim was to encourage agents to give good pension advice and, to achieve this,
The advent of SCOMP has been accompanied by savings on the annuity intermediation commissions to the tune of some U$541 million per year, which for 17 thousand closures per year represent individual savings of U$2,400. This has been achieved by putting an information system in place with a one-off, low initial development cost of around U$500 thousand.

The cost of operating the system is very reasonable, around U$35 per closure.

The efficiency per closure is very high: U$35 are spent to produce savings of U$2,400.

VII. Conclusions

The efficiency per closure is very high: U$35 are spent to produce savings of U$2,400.
Appendix

**TABLE A**

AVERAGE ANNUAL FEES ON LIFE ANNUITIES, 1991-2009

INTERMEDIATION FEES PER YEAR

<table>
<thead>
<tr>
<th>Year</th>
<th>Intermediation fees per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>3.40%</td>
</tr>
<tr>
<td>1992</td>
<td>3.62%</td>
</tr>
<tr>
<td>1993</td>
<td>3.47%</td>
</tr>
<tr>
<td>1994</td>
<td>4.67%</td>
</tr>
<tr>
<td>1995</td>
<td>4.66%</td>
</tr>
<tr>
<td>1996</td>
<td>5.58%</td>
</tr>
<tr>
<td>1997</td>
<td>5.33%</td>
</tr>
<tr>
<td>1998</td>
<td>5.45%</td>
</tr>
<tr>
<td>1999</td>
<td>5.84%</td>
</tr>
<tr>
<td>2000</td>
<td>5.91%</td>
</tr>
<tr>
<td>2001</td>
<td>3.89%</td>
</tr>
<tr>
<td>2002</td>
<td>2.67%</td>
</tr>
<tr>
<td>2003</td>
<td>2.68%</td>
</tr>
<tr>
<td>2004</td>
<td>2.47%</td>
</tr>
<tr>
<td>2005</td>
<td>2.13%</td>
</tr>
<tr>
<td>2006</td>
<td>2.13%</td>
</tr>
<tr>
<td>2007</td>
<td>2.19%</td>
</tr>
<tr>
<td>2008</td>
<td>2.05%</td>
</tr>
<tr>
<td>2009</td>
<td>1.47%</td>
</tr>
</tbody>
</table>

SOURCE: SVS.
CHAPTER II.

IDEAS FOR IMPROVING OPERATIONAL EFFICIENCY

TABLE B

OFFER REQUESTS, CLOSURES IN PROGRAMMED WITHDRAWAL OPTION, CLOSURES IN LIFE ANNUITY OPTION, TOTAL CLOSURES 2005-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Offer Requests</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>43,434</td>
</tr>
<tr>
<td>2006</td>
<td>37,310</td>
</tr>
<tr>
<td>2007</td>
<td>51,137</td>
</tr>
<tr>
<td>2008</td>
<td>44,173</td>
</tr>
<tr>
<td>2009</td>
<td>40,259</td>
</tr>
<tr>
<td>Total</td>
<td>216,313</td>
</tr>
</tbody>
</table>

SOURCE: SCOMP S.A. ANNUAL REPORT.

TABLE C

CAPITAL TRADED PER TYPE OF PENSION OPTION, 2005-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>AFP US$ thousands</th>
<th>Insurance Companies US$ thousands</th>
<th>Traded Capital US$ thousands</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1,123,552</td>
<td>1,718,468</td>
<td>2,842,020</td>
</tr>
<tr>
<td>2006</td>
<td>856,837</td>
<td>1,582,670</td>
<td>2,441,508</td>
</tr>
<tr>
<td>2007</td>
<td>1,688,726</td>
<td>1,936,677</td>
<td>3,625,405</td>
</tr>
<tr>
<td>2008</td>
<td>963,317</td>
<td>1,912,954</td>
<td>2,876,270</td>
</tr>
<tr>
<td>2009</td>
<td>914,632</td>
<td>1,636,821</td>
<td>2,551,653</td>
</tr>
<tr>
<td>Total</td>
<td>5,529,266</td>
<td>8,807,590</td>
<td>14,338,856</td>
</tr>
</tbody>
</table>

SOURCE: SCOMP S.A. ANNUAL REPORT.
CHAPTER III

IDEAS FOR IMPROVING THE IMPACT OF INVESTMENT ON LOCAL ECONOMIES

CARLOS HURTADO. Challenges for the regulations and policies of the public sector in infrastructure investment: the Chilean case
W. BRITT GWINNER. Residential Real-Estate – Value after the Subprime Crisis
HELGA SALINAS. Credit for Micro-Businesses
CHALLENGES FOR THE REGULATIONS AND POLICIES OF THE PUBLIC SECTOR IN INFRASTRUCTURE INVESTMENT: THE CHILEAN CASE

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The purpose of this brief note is to comment in general terms on Chile’s experience in the area of infrastructure. This is particularly interesting, for two reasons. First, an analysis of the history shows that it has been very variable, with dark periods when very little was done, and interesting, productive periods. Secondly, it is remarkable that from the year 1973 up to the present day, with quite dissimilar governments in terms of political world-view, a harmonious view finally prevailed in matters of policies directed towards infrastructure development, which ultimately emphasised the importance, in this sector where the State has such significant predominance, of applying reasonable policies in terms of investment, pricing and participation of the private sector, from the point of view of a market economy, open to the world.

I. Synthesis, short history and regulatory modernisations

Chile is an interesting experience of how infrastructure deficits occur and can be solved. Over the course of time there has been a whole long process, with ups and downs, of regulatory modernisations.

A central point, which is worth passing on with regard to successful public policies dealing with the privatisation of public services and infrastructure, is that it is absolutely essential to establish reasonable rules, both for investment and for pricing and protection against abuse of monopolies, if one wants to advance in investment intensification processes and take advantage of the potential for improving productivity that can be contributed by the private sector in providing and managing infrastructure.

Until the year 1940 there was a reasonably balanced approach in Chile, with respect for private rights in those areas where the private sector had a significant participation, such as telecommunications and the generation and distribution of electricity. In other areas, such as Railways, Ports and Irrigation, the State took the lead in major projects that would have been impossible without its participation. Between 1940 and 1973, price controls were introduced, many of them linked with anti-inflationary policies, there was a stagnation of supply, which fell behind the demands of growth, generalised nationalisation and huge deficits. From 1973 onwards, a successful revolution began...
to take place which, as mentioned at the beginning, was characterised by a truly remarkable continuity in terms of public policies.

In Chile the privatisations took place at different speeds in different sectors, depending on the sector involved. There were some that moved rapidly into quite efficient privatisation systems in the first decade of the military regime, as was the case of electricity, for example, with a highly sophisticated and practical regulation that produced very good results. The telecommunications sector was also one of the early ones. The ports sector was slower, but there were still very significant modifications in the labour aspect that made it possible to increase the capacity of the ports enormously and even withstand an earthquake that destroyed a large part of the docks in the central zone, without the need to rebuild them immediately.

Curiously enough, the privatisation of the ports was left until almost the end of the periods under the government of the Coalition. Now there are ports set up as Public Limited Companies, with docking berths handed to the private sector for improvement and operation.

To sum up: all the experiences have been interesting and have brought about very significant improvements.

Unfortunately, investment in roads during the Military Government was very weak and this produced a considerable delay in this sector. There were two causes that reinforced one another:

On the one hand there was genuine financial restriction. There was a complex fiscal situation for a long period. Within the development model that was established, the essential aspect was ensuring macro-economic balance, so the authorities preferred to postpone investment in roads, leading to a huge deficit in that area.

On the other hand, there was also what might be called a conceptual restriction of road development in urban sectors. There is a school of thought throughout the world that could be called the “enemies of investment in roads and of urban expansion”. In this view, cars are a beast that has to be kept under control (because they cause pollution, waste space and produce social segregation), so investment in roads should be reduced in favour of investment in collective mass transport. This control also makes it possible to limit the territorial expansion of cities, protect rural green areas and reduce pollution. These are issues that are hotly debated between town-planners and transport economists, with widely divergent and sometimes fiercely-defended positions.

Later on, as from the 1990s, there was an advance in road development, thanks to the acceptance of a wider and, in my opinion, more realistic view of territorial development,
looking at the issue from a comprehensive point of view and recognising certain hard and basic facts about reality. First, a car is a cultural aspiration that has a demand which is very elastic in terms of income and very inelastic in terms of restrictions. Secondly, population density in urban areas is decreasing (in fact Santiago is more concentrated than Tokyo, Paris and New York). From this angle, it is essential to achieve a harmonious and well-integrated development of the various means of transport, looking at urban centres as an inter-dependent network (for example, looking at the Central Macro-Region as a unit and seeing which types of infrastructure are required, rather than regarding Santiago as an independent entity). On the other hand, in this view it is of critical importance to ensure that cars pay all the costs that they generate, so that their users internalise the effects of using them.

II. Franchises: if it is possible to buy cars, why not roads?

In Chile there had been a Law of Franchises since 1980 but it was totally impossible to operate. As the driving forces behind the new Law of Franchises at the beginning of the 1990s, we put the essential elements of security and transparency into the regulations to make private financing possible. This Law was highly successful and the results are there for all to see. In particular, the Law of Franchises has given a strong boost to competition and to the financing of infrastructure on the part of private companies, both local and international. This has made it possible to build top-class highways within the Metropolitan Region itself and create the connection between it and the country’s main cities. This has revolutionised road transport in Chile.

The financial engineering called for successive improvements in the Law. In that context, the infrastructure bond appeared in 1996, which opened up the possibility of financing infrastructure projects directly with the Pension Fund Administrators (AFPs). The use of franchises has also been opened up for financing other types of public infrastructure, such as airports and prisons, and now the possibility of hospitals is being mentioned.

The law has been a great success and is seen from other parts of the world as an example.

III. Pending challenges

There are enormous challenges pending, bearing in mind that the systems that have been developed are showing signs of reaching their capacity. The correlation between income and infrastructure requirements indicates that in the next 10 years Chile will have to double its infrastructure capacity. This situation demands in the first place an enormous effort of imagination and study, to define the projects and have the ability to separate the white elephants from the black, in a herd of some size. In the second place, a gigantic effort is also necessary to obtain funding. This represents a great
challenge for infrastructure and a great opportunity for the AFPs. Finally, and above all, iron determination is called for to seize the opportunity represented for Chile by the availability of world-class infrastructure.
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Real estate, and housing in particular, constitute good business as an investment instrument for any investor with a long-term investment horizon and especially for Pension Fund Administrators (AFPs).

This brief article is arranged as follows: first it describes in broad terms some aspects of housing demand around the world, touching on matters related with growth and urbanisation, the size of the mortgage debt in various countries, financing for housing and the explanation of real estate as an asset class. Then there is a brief analysis of the recent subprime crisis. Finally, the article ends with some subjects for future reflection: why the private pension funds have not invested much in real estate and how to encourage this activity.

1. The basic picture: housing demand around the world

Growth and urbanisation

The data provided by the World Bank makes it possible to show that economic growth has led to a process of growing urbanisation in all countries since the 1960s. In Chile, for example, in 1962, the urbanisation rate (% of population in towns) was 69.4% and the annual per capita income amounted to US$ 600. The rest of the countries are in a different position, but the trend shows an almost linear relation between per capita income and urbanisation, since this latter constitutes the most efficient way of organising a country for active economic interests.

With the passage of time, if you measure annual the per capita income on the vertical axis and the urbanisation rate on the horizontal axis, countries as a whole have moved upwards and towards the right. In Chile, for example, in the year 2007, the urbanisation rate was 80.2%, as in other rich countries, and the annual per capita income was US$8,190, one of the highest in Latin America.

In many other countries, such as China, India and Indonesia, this urbanisation process has not stopped and is not over. In this, therefore, there is an opportunity for institutional investors, because when a country is becoming urbanised, it needs investment in infrastructure and any type of real-estate. Another issue is that this urbanisation process has been mismanaged in most countries, with the result that slums and shanty towns have appeared in large cities such as Bogotá, Rio de Janeiro, Bombay and Jakarta. Here there is another opportunity for investors to reconstruct the badly-built part of these cities.

*Real-estate: a tale of many markets*

In Figure Nº 1 it is possible to see mortgage debt as a percentage of GDP in certain selected countries, in the year 2009.

In general, there is no funding available in emerging countries to carry out this reconstruction and we can see that the developed countries have somewhere between 40% and 100% of their GDP in the form of mortgage credit. This is not subprime, but good-quality credit, with which a worthwhile home can be financed for people with medium-to-low incomes in countries such as Norway, France or the United States, using dividends or appropriate instalments. Meanwhile, in developing countries, the best have nearly 20% of their GDP in mortgage debt (Chile has 18%), but most of the emerging markets have less than 5% mortgage credit as a percentage of GDP, such as Peru, for example, with 2.5%.
Housing finance and growth

Given the process of urbanisation and the unsatisfied demand for housing, financing for homes is closely connected in emerging countries with new constructions and consequently with domestic factors of production such as labour and materials. Furthermore, in the initial stage of development, mortgage financing can add 0.5% of fixed investment as a percentage of the GDP for every increment in the size of the market.

In developed countries, on the other hand, financing for homes is more closely related with the marketing of existing homes and with economic cycles. In point of fact, in the United States there are seven million new loans every year, six million of which are earmarked for existing dwellings. In addition, in this same country, 8 out of 10 recessions were preceded by reductions in home investment.

Real-estate as an asset class

For investors, real-estate as an asset class has a long history in many countries. There is extensive literature in the United States on real-estate as an asset class to diversify the
income from a portfolio and also to protect against inflation. So this type of instrument is suitable for pension fund investment.

In many countries there is a wide range of instruments for investing in real-estate. In fixed-income, we can mention two kinds: first, Residential Mortgage-Backed Securities (RMBS) or Securitizations, which are a way of selling a portfolio to a legal entity that issues bonds; and second, Covered Bonds, which constitute debt issued by banks which is totally guaranteed by commercial or residential mortgage loans, and may take the form of a mortgage certificate when each mortgage is backed by a mutual fund.

There are also opportunities in shares (equities). For example, a large part of Manhattan was built with direct investments in large buildings from insurers' pension funds in New York.

Finally, there are also hybrid instruments like the Real Estate Investment Trusts (REITs), very common in the United States and Asia and increasingly used in emerging markets (Colombia, Mexico), and also Pure Funds.

II. What happened with the subprime crisis?

I would like to highlight two facts about the subprime crisis. One is that it was a classic crisis of a bubble in an asset class. Figure Nº 2 shows the developments in house prices in the United States and also the origins of mortgages between the years 1990 and 2007. A look at the developments in house prices reveals that there was very strong growth during the boom years, governed by strong momentum in finances. A part of this growth in finances, achieved with very low standards, was subprime, therefore this availability of credit, for people who were not in a position to afford it, was an all-important factor in this crisis. By contrast, in emerging markets there has never been anything like subprime; in most developing countries, the vast majority of mortgages go to people in the higher-income segments and are issued according to international standards. In short, then, for most countries it was an external crisis, connected with this segment. The great exception to this has been Mexico, due to its closer connection with United States.
CHAPTER III.

IDEAS FOR IMPROVING THE IMPACT OF INVESTMENT ON LOCAL ECONOMIES

Why have the private pension funds not invested in real estate?

There are various restrictions that are worth underlining: first, macroeconomic volatility [inflation, inconsistent policies, financial crises (Mexico '95, Russia '98, Argentina '01, among others)], which together with the high real interest rates, has made it more attractive to invest in public debt. A second restriction arises from the lack of long-term fixed-income instruments and lack of liquidity in the secondary market. Thirdly, investment has been channelled through personal rather than institutional means and finally, there has been a burgeoning of informal markets, due to shortcomings in the legal and regulatory structures.

FIGURE Nº 2

HOUSE PRICES AND MORTGAGE ORIGINATIONS IN UNITED STATES

SOURCE: S&P CASE-SHILLER, INSIDE MORTGAGE FINANCE.

III. Going forward

Why have the private pension funds not invested in real estate?
How can private pension funds be encouraged to invest in housing?

A first element to bear in mind is that lower real interest rates for government bonds makes private fixed-income more attractive. This has been the recent story of Chile, Mexico, Brazil, Colombia, Indonesia, India and China.

In the second place, it is essential to promote the existence of a wide range of long-term fixed-income instruments and also risk ratings, with the idea of moving away from the incentives for markets with triple-A ratings. Securitization, covered bonds, pure funds and REITs should be allowed, so that the issuer can choose the best method of execution. It is also vital to develop the mortgage-certificate market (using Chile as a model).

Thirdly, it is very important to encourage greater liquidity in the secondary bond market, reinforcing transparency and efficiency. One way of doing this is for governments to issue sovereign bonds with consistent terms, thus providing a benchmark or point of reference for setting the prices, liquidity and supplies of private sector bonds.

Finally, the legal and regulatory structures of the housing markets need to be improved, with more efficient planning concerning use of ground, registration of title deeds and contract enforcement.
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Chapter III.
Ideas for Improving the Impact of Investment on Local Economies

I. Introduction and description of the subject

This article seeks to develop a link between the big investors and the self-employed workers, the so-called micro-borrowers, covering the demand for resources and the supply of pension products. Micro-credit works with small loans, amounting on average to between US$300 and US$1,000, awarded to people who have no access to conventional banking. If a micro-borrower has no access to conventional banking, then he/she has no direct access to the capital markets either, and this article shows how financial vehicles (NGOs, finance houses, financial funds, cooperatives, mutual benefit funds and banks) have set aside resources for micro-credit and have entered the capital markets, tapping resources to continue funding their clients. These financial vehicles have had to improve their structure, capital, transparency and self-regulation and have also had to submit to the regulation of banking supervisors in order to qualify and be able to access these capital market sources.

The micro-credit is a financial instrument, an alternative to banking, that meets the need for funding on the part of groups that have the following characteristics in common: i) they are people with little access to conventional banking, ii) without real guarantees or financial information in standard format (balances, profit and loss statements), iii) they form part of the informal sector of the economy, and iv) cover all the economic sectors from artistic handicraft production to marketing and the provision of services.

As may be seen in Table N° 1, the development of the markets per region is uneven and this is true of the average credit too, based on the economic development of each region. The length of time that Micro-Finance Institutions (MFIs) have existed in each region is also variable, even within each region, and also at country level. However, a global portfolio estimated at US$39,400 million represents an investment opportunity for any institutional investor.
TABLE Nº 1
MAIN MICRO-FINANCE INSTITUTIONS (MFI) IN THE WORLD BY REGION²

<table>
<thead>
<tr>
<th>Region</th>
<th>N° MFI</th>
<th>Portfolio (MMUS$)</th>
<th>N° Borrowers (millions)</th>
<th>Average loan (US$)</th>
<th>Deposits (MMUS$)</th>
<th>N° Savers (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latin America and the Caribbean</td>
<td>397</td>
<td>15,400</td>
<td>12.8</td>
<td>838.2</td>
<td>9,800</td>
<td>13.3</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>374</td>
<td>10,000</td>
<td>3.0</td>
<td>2,015.0</td>
<td>6,000</td>
<td>5.2</td>
</tr>
<tr>
<td>Eastern Asia and the Pacific</td>
<td>233</td>
<td>4,600</td>
<td>10.9</td>
<td>299.7</td>
<td>2,000</td>
<td>4.3</td>
</tr>
<tr>
<td>Africa</td>
<td>281</td>
<td>3,200</td>
<td>6.7</td>
<td>207.9</td>
<td>2,800</td>
<td>16.8</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>65</td>
<td>1,300</td>
<td>2.7</td>
<td>373.2</td>
<td>100</td>
<td>97.4</td>
</tr>
<tr>
<td>South Asia</td>
<td>291</td>
<td>4,700</td>
<td>39.3</td>
<td>126.8</td>
<td>1,900</td>
<td>29.7</td>
</tr>
</tbody>
</table>

SOURCE: CONSULTATIVE GROUP TO ASSIST THE POOR, CGAP.³

Estimations from different bodies that study this industry, such as the Inter-American Development Bank (IADB), the Andean Development Corporation (CAF), the World Bank and others, consider that this funding generates direct and indirect employment and other non-financial services, such as training in the management of small businesses, education on various matters, health, housing, etc.

Over the last 40 years, these MFIs have gradually been setting themselves up, with donation funding via governments, bilateral donations from countries or foundations and international NGOs that have developed initiatives to generate employment. Different methodologies and combinations of these have been tried and finally an industry has taken shape which separates the granting of the credit from the non-financial services.

² The list presented by the CGAP does not include all the MFIs in the world, but rather some of the most representative ones. There are far more MFIs.

³ The CGAP is an independent centre of research and policy dedicated to advocating financial access for the world’s poor. The CGAP has the support of over 30 international development agencies and private foundations. Its work includes providing market information, developing the standards of the sector, developing new solutions and providing consultancy services for governments, MFIs, donors and investors.
Within the credit-giving sphere, the most wide-spread methodologies are: i) the solidarity credit in which 10 people form a society and obtain individual credits, each guaranteeing the others; ii) the individual credit in which each person obtains a credit with his/her own personal guarantee or that of a third party; and iii) communal banking, in which approximately 10 people form a communal bank, save, lend out of their savings and from the MFI, which at the same time trains them in the management of their communal bank and other social and health issues.

The main backers of these processes and of the portfolios have been the United States Agency for international Development (USAID), the World Bank, the IADB, the CAF, the governments of the European Economic Community (EEC) and European and American NGOs.

At the beginning, these MFIs simply applied the chosen methodology, without needing supervision. However, since about 20 years ago, their activities in Latin America began to be regulated, establishing a category that is additional to banking, but on the same principle as joint stock companies. They were allowed to commence activities with less capital than the banking minimum, but their activities were limited to depositing savings and providing micro-credits, with restrictions on their ability to handle current accounts, credit cards and international trading operations.

The rules applied for supervising these institutions have been governed by the Basle principles, and this has made it possible to achieve transparency of information and financial solidity. As a result of this, other actors have appeared to finance these MFIs, converted into joint stock companies.

II. **Characteristics of the micro-finance industry**

The issues to be described in this section include: i) How the industry developed; ii) How its funding has developed; iii) Regulation as part of the process; iv) Micro-finance products; v) Funding alternatives from the pension industry to the micro-finance industry; and vi) Pension product to be offered to the micro-finance market.

1. **How the industry developed**

Some 40 years ago, the MFIs were set up as non-profit-making NGOs, civil associations that tried out micro-credit methodologies and adapted them to the cultural environments, income levels and economic sectors in which self-employed workers were to be found.

The various cases show clear, fine-tuned methodologies, in terms of both groups and individuals. The poor, for their part, show that they pay, that their default is low and that they need more funding. The average growth of an MFI in this stage was 40%
per year on the portfolio. This growth has pressured operators to seek new sources of funding and it is at that point that they begin to see that the civil association structure of organisation limits the growth of their net worth, and even more because of their non-profit-making nature.

In Latin America, in the mid-nineties, industry pressure and legislation succeeded in including these institutions under banking supervision, and at that point the first joint-stock companies operating exclusively or mainly with micro-credit were set up. The change in this organisational structure led to the participation of other actors being allowed, such as international NGOs, foundations and others.

The conversion of civil associations into joint-stock companies has resulted in different organisational and management models. Local and foreign capital has been brought in and international or local risk-rating introduced. The inclusion of new partners has made it possible to access networks supported on financing and technological transference.

Today there are bank departments that work with micro-credit or banks dealing exclusively in micro-credit. This change in the company structure has permitted changes in the financial structure and in the financial markets to which they have recourse, and these are reflected in the following section.

2. How its funding has developed

The big international NGOs, mainly in Europe, have set up second-floor institutions which have invested as partners in some of these entities and continue granting them credits, thereby considerably expanding their portfolio. In Asia, second-floor banks have been registered, known as wholesalers, which tap resources from a variety of sources, including banks, and act as middlemen with the MFIs. This pattern has allowed small NGOs to have stable funding, which they would not have had if they had been obliged to go directly to the international provider.

The process carried out by the MFIs of converting themselves into regulated institutions - known as graduation - has allowed growth to take place in net worth values, portfolios, geographical coverage, development of new procedures, instruments and technology. In general, the issues of shares have been private and have been achieved with their former backers. In other cases, other NGOs or people linked with the area have intervened. Little by little, these shares have begun to be traded occasionally in private and in some cases on the stock exchange. The experiences achieved and the ongoing need for funding and net worth adjustment have led them to new issues of equity shares and in some cases to packages purchased by international bodies (like the CAF) or guaranteed by these bodies to local partners. Portfolio securitizations and issues of debt bonds and other debt and capital instruments have been seen.
There are currently financial institutions that specialise in providing funding for the MFIs, called *Micro-Finance Investment Instruments*, and concern themselves with tapping resources from different sources (international cooperation, institutional investors, social investors and others) and placing them in a variety of MFIs around the world. A lot of their work consists of monitoring the performance of the micro-finance industry in various countries.

Some of the main micro-credit backers worldwide which, in addition to granting credit, buy shares, debt bonds, subordinated credits and other financial instruments, are listed in Table Nº 2.

The MiGroF Fund is another multilateral institution that offers short, medium and long-term funding in dollars and local currency. It has US$ 50 million in capital and partners such as the CAF, the IADB-FOMIN (Multilateral Investment Fund), ACCION International, Blue Orchard and others.

The IADB in its annual MicAmericas report⁴, presents the 100 best MFIs in Latin America and the Caribbean, basing its rating on transparency, scope and efficiency, on the basis of a methodology that is known to the general public. Between the 20 largest, the portfolio includes US$7,580 million, with three MFIs in Mexico, one in Brazil, three in Peru, five in Colombia, two in Ecuador, four in Bolivia, one in Chile and one in the Dominican Republic.

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⁴ *MicAmericas* is a know-how platform in Spanish about micro-business and micro-finance, promoted by the Multilateral Investment Fund (FOMIN), part of the IADB Group. *MicAmericas* offers studies, analyses trends, articles and cases of businesses that include small and micro-enterprises in creating economic and social value. For further information, you can visit the website: http://www.iadb.org/micamericas
The Economist Intelligence Unit (EIU) in coordination with the CGAP, issues a bulletin which records that the countries with greatest development in terms of regulations are Cambodia, Philippines, Bolivia, Kenya, Peru and Kyrgyzstan. Meanwhile, investment has Chile on the podium, followed by Turkey, Bosnia, Morocco, Costa Rica, Mexico, Peru and Colombia, among others. Taking the countries where solid micro-credit regulations coincide with the presence of pension operators: these are Peru, Colombia, Bolivia, El Salvador, Georgia, Mexico, Nicaragua, Panama, Chile, Dominican Republic and Costa Rica, among others. It is an undeniable fact that the regulatory framework and the presence of a strong regulator contribute towards producing solvent institutions that can issue debt and capital instruments in their market.

The growth of the industry has not decreased over time. In Bolivia the micro-finance industry has grown 571% over the last 10 years (2000–2009). Its portfolio volume currently includes 900 thousand people, since 75% of the population lives in a municipality where micro-financial services are provided. In Peru, micro- and small businesses account for 84% of the Economically Active Population (EPA), and even though only a third receives funding from an MFI, over a million units received attention.

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**TABLE Nº 2**

**MAIN MICRO-CREDIT BACKERS**

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<thead>
<tr>
<th>Backer</th>
<th>Web Site</th>
<th>Country</th>
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<td>FINNFUND</td>
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<td>IFC</td>
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<td>ACCION Investments</td>
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<td>ABN Novib Fund</td>
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<td>BlueOrchard Private Equity Fund</td>
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<td>Oikocredit</td>
<td><a href="http://www.oikocredit.org">www.oikocredit.org</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>Oxfam Novib (Grants)</td>
<td><a href="http://www.oxfamnovib.nl">www.oxfamnovib.nl</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>Oxfam Novib Fund</td>
<td><a href="http://www.triplepump.eu">www.triplepump.eu</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>PlanNet MicroFund</td>
<td><a href="http://www.planetfinancegroup.org">www.planetfinancegroup.org</a></td>
<td>France</td>
</tr>
<tr>
<td>Triodos Fair Share Fund</td>
<td><a href="http://www.triodos.com">www.triodos.com</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>USAID Credit Guarantees</td>
<td><a href="http://www.usaid.gov">www.usaid.gov</a></td>
<td>United States</td>
</tr>
<tr>
<td>Hivos</td>
<td><a href="http://www.hivos.nl">www.hivos.nl</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>ICCO</td>
<td><a href="http://www.icco.nl">www.icco.nl</a></td>
<td>Netherlands</td>
</tr>
<tr>
<td>Working Capital for Community Needs</td>
<td><a href="http://www.capitalforcommunities.org">www.capitalforcommunities.org</a></td>
<td>United States</td>
</tr>
</tbody>
</table>

**SOURCE:** MIX MARKET.
3. Regulation as part of the process

The MFIs that start life as associations within the framework of the Civil Code and not the commercial one, are not originally regulated by banking supervisors. In the course of time they realise that self-regulation allows better competition within the market and a better image for obtaining funding, since it ceases to be donation and becomes mainly credit.

The main measures applied in self-regulation are: i) rating the portfolio according to the Basle rules, stipulations on the basis of local banking rules, taking the highest or lowest weighting of non-payment risk in the portfolio, graded from 1 to 5; ii) using risk centres to identify shared portfolio, portfolio rating per client, measures that have made it possible to weed out those in default; iii) application of debt limits according to the ratios approved by the superintendents for the banking system, one of the indicators that best reflects the need to increase capital5; and iv) the daily generation of consolidated information, an element that facilitates decision-making and improvements in managing liquidity and makes it possible to proceed more easily to regulation.

Self-regulation among the MFIs, mainly the Latin American ones, is done by following the Basle principles as a step towards full regulation and the possibility of intermediating resources effectively. A first result of self-regulation is the greater ability to attract credit, by obtaining risk rating from independent risk-rating firms. Part of this process involved transparency in providing financial information by means of nationwide networks, such as the Consortium of Private Organisations to Promote the Development of Micro- and Small Businesses (COPEME, Peru), the Associations of Financial Institutions for Rural Development (FINRURAL, Bolivia) and the Rural Finance Network (RFR, Ecuador), to name but a few.

The regulators have identified a growing market and have begun to issue rules. Bolivia and Peru are the forerunners in this sense, incorporating a type of joint-stock company with fewer powers than the banks and a legal form that can be used by associations to convert themselves into shareholders of the new joint-stock company.

The most important changes in regulations have been: i) to generate new categories of joint-stock company that do not require a capital equivalent to banks and have limited activities (they do not deal in overseas trade, credit cards and current accounts but deposit savings and allocate micro-credits; ii) to make the NGOs comply with all the regulatory conditions of banks, granting periods for adaptation and improving transparency; iii) to accept the individual guarantee, with a limited amount of credit as counterpart and very close supervision of the client by the credit officer (the MFIs have

5 Since they are unregulated, the MFIs can exceed this ratio and adapt little by little, building up capital for the moment of regulation.
an average of 300 credits per credit officer, which allows very close supervision but at the same time creates more costs); iv) to accept differentiated timetables per region; and v) to accept differentiated cash closures for the most distant branches.

In the early days the MFIs had no risk rating. First with self-regulation and then with regulation, they have applied for ratings, and these have been gradually improving due to transparency, the effect of supervision and corrections, and the meeting of deadlines and conditions, which have resulted in cleaner financial statements and produced substantial improvements in rating, many of them having risen to Investment Grade. Table N° 3 shows some of the most important MFIs in the South American markets.

<table>
<thead>
<tr>
<th>MFI</th>
<th>Country</th>
<th>Risk Rating</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mi Banco</td>
<td>Peru</td>
<td>A</td>
<td>2.8%</td>
<td>32.8%</td>
</tr>
<tr>
<td>Banco Compartamos</td>
<td>Mexico</td>
<td>AA</td>
<td>18.04%</td>
<td>44.46%</td>
</tr>
<tr>
<td>Banco Sol</td>
<td>Bolivia</td>
<td>AAA</td>
<td>1.52%</td>
<td>21.73%</td>
</tr>
<tr>
<td>FIE</td>
<td>Bolivia</td>
<td>AA</td>
<td>1.74%</td>
<td>16.95%</td>
</tr>
<tr>
<td>CRECER</td>
<td>Bolivia</td>
<td>A</td>
<td>3.6%</td>
<td>9.8%</td>
</tr>
</tbody>
</table>

SOURCE: SUPERINTENDENCE OF BANKS IN BOLIVIA, MEXICO AND PERU.

The regulation of these new institutions is beginning to bear fruit, improving their systems, rules and procedures and obtaining better results because of the incisive control of default and the close relationship with the client. In a very short time, they will have taken on all the Basle rules and have rules, systems, procedures and corporate governance similar to those of banks.

The process is differentiated in the various countries and regions according to the cultural environments and greater or lesser development of the financial system and regulatory capacity.

The most important challenges as far as supervision is concerned are to control portfolios that are shared between MFIs and may reveal an excessive level of debt; to adapt to the need to extend branches in rural areas with little communication, which causes problems in daily closures; the need for capital increases versus the incorporation of new shareholders into the MFIs; the need to reconcile the growth of the MFIs with the technological adaptation needed to keep up standards of transparency; and to regulate rates and/or control industry agreements that limit competition.
At this point in time, the high passive interest rates, combined with the fall of the asset/active rates in the MFIs’ borrowing, are offering very positive levels of yield, over 15%, which look like favourable opportunities for the AFPs and their members. It seems that the rates are not about to fall in the near future and will therefore continue to be favourable investment opportunities.

4. **Micro-finance products**

The MFIs work with products such as Individual Credit, Solidarity Credit and Savings and Credit from the Communal Bank and have penetrated the market with new pilot products such as remittances abroad, micro-insurance and micro-pensions.

The Solidarity Credit is the oldest and has a large number of MFIs and clients, as does the Communal Bank which works on a group basis. Nevertheless, clients’ needs grow independently of one another, their requirements as regards capital and financing are different and this has led to an individual demand for individual credits.

Solidarity Credits offer the payment guarantee of the micro-entrepreneur and the solidarity group, in addition to the MFI follow-up methodology which is very close and which delegates a limited number of credits to each credit officer, on condition that he/she carries out very direct, close follow-up.

In the Communal Bank product, the guarantee lies with the micro-entrepreneur, the group that makes up the bank and the savings produced in each communal bank by the micro-entrepreneurs themselves, in addition to the follow-up of the officer, who holds training sessions with them on the management of the bank and other related topics. The guarantee is therefore very high.

The Individual Credit product, which has existed in some countries since the beginning, in other countries is generated in response to the demand of the solidarity groups or the communal bank, which need to hold clients who are asking for more or greater credits.

In many of the MFIs that have been working for over ten years, the clients have gradually evolved into Small and Medium Businesses (PYMES) on a larger or smaller scale, and are demanding larger credits. The MFIs’ ability to adapt their capital growth and financing has enabled them to penetrate a new market stratum with bigger clients who are already known, with low default, whose administration has a lower cost and allows the MFIs to offer a lower rate of interest.

The credit products are the best known, and the various operators manage them with efficiency and long practice, which results in low levels of default, market depth and monitoring of the demand, both in individual amounts and in terms and guarantees. The mortgage credit is starting to be a relevant product within this process.
However, the MFIs have also penetrated different spheres. The new products introduced in some Latin American markets are:

a. **Remittances.** These came into being as a result of the presence of non-banking institutions in developed markets with ability to perform the money transference function, a fact used by migrants, many of them without papers, who have limitations on entering a formal bank, but need to send remittances to their relatives. These institutions join forces with MFIs, usually regulated, and are carrying out this function very successfully. The amounts involved are large and although they have fallen as a result of the financial crisis, they continue to be a considerable amount. According to the latest report from FOMIN/IADB, they total US$58,800 million, a figure which, though lower than 2007, is still significant, and the commission that they produce is not negligible. They also allow the MFIs a rapprochement with a market stratum that receives income and can complement this with credits and other services for its regular activities.

b. **Debit cards**. These allow clients the possibility of moving around inside the country without the risk of carrying their money and with zero cost, by using their card. It is another benefit that regulated MFIs can offer their clients and is marking the difference between regulated and non-regulated MFIs.

c. **Micro-insurance.** In general, micro-insurance policies placed by the MFI in conjunction with credit have a very low administration cost because of the small number of sales agents needed for this purpose. The most widely-used products are *desgravamen*, health and accident insurance.

The *desgravamen* insurance or portfolio insurance covers the risk of non-payment, given the average amounts of credit – about US$500 on average –, personal guarantees, and low default because of the direct, very close follow-up. The risk of the death of the principal is a possibility and coverage for it started with preliminary figures to estimate the premium and this has been regulated each year on the basis of the real number of claims. This insurance is generally the most wide-spread and although it has no re-insurance, the local companies have taken part in this new niche where regulation allows them to do so, with a very low administration cost.

The health insurance covers basic care and, because it covers significant communities and offers a limited product in terms of coverage, periods of grace and others, it is generally being tried and adjusted relatively easily, with positive

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6 Some MFIs are not allowed to issue credit cards.
7 Desgravamen products are compulsory coverages associated with credit loans and mortgages offered by banking institutions.
margins for the insurance industry, as a plus for the MFIs, which compete better with a benefit at a lower rate which is requested by clients who have no social security or other benefit.

The accident insurance is a less widely-known product. Some markets have been trying it out with coverage that does not exceed twice the average income, and the results have been very good for the insurers. Multilateral bodies like the IADB, the World Bank, the CAF, the CGAP and others have developed platforms to enable experiences to be shared, methods systematised, and new products and markets publicised. The solidarity network of rural micro-insurance (REDSOL, www.microseguros.org) is the most widely used and is organising events and other instances to facilitate the exchange and development of technology and products.

Other types of insurance such as agricultural or loss of stock insurance, etc. are more at the drawing-board stage and in pilot programs. The results cannot be considered as widespread.

d. Micro-pensions. These are micro-finance products of recent design and creation that include a component of retirement savings, being developed mainly by MFIs. They are a kind of restricted account that will serve solely to meet the economic needs of beneficiaries, both women and men, when they reach old age.

Unlike traditional financial pension products, micro-pensions have the special feature of being designed for the informal employment sector, which has traditionally been excluded from mandatory pension schemes, either because of its informal nature, or because of situations of poverty.

This product does not cover the risk of growing old; it is not designed with life expectancy tables, investments, reinsurance policies, etc. but just as a medium-term savings product that may or may not cover the client’s needs. Typically it means saving a fixed amount for a period of 5 or more years, after which a fixed amount is received for another period of years.

5. Funding alternatives from the pension industry to the micro-finance industry

At the beginning, the MFIs were financed with donations that came through governments, directly from foundations, NGOs and other sources. Since they did not have to distribute dividends, they capitalised their profits as they grew, thereby increasing their net worth. The pressure of the growth of the portfolio led them to seek other funding options and
they began to attract local and international loans, with second-floor banks appearing, formed by international NGOs, multilateral banks or local banks. The different MFI networks gradually formed second-floor financial institutions which lent to the MFIs.

Regulation and their transformation into joint-stock companies facilitated their leverage capacity, but the growth of the portfolios led them to seek new products in the capital markets. This was how the first subordinated credits began, with multilateral bodies capitalising these institutions. These instruments were then sold to other financial operators, in private sales for the most part.

The quality of their portfolios allows them to securitise these, obtaining fresh funding by this mechanism.

Finally, issues of shares and debt bonds have appeared on secondary markets. Because of the duration of these, the AFPs and insurance companies become natural providers of these instruments. The most notable cases are in Bolivia, Colombia, Mexico and Peru, where various of these operations have taken place.

The potential of these instruments is very high and their limit is still not known. The credit operators have shown that they have solvency, transparency and the ability to take part as reliable operators in the capital market.

International or local risk rating is the guarantee that pension regulations require for authorising pension investments, according to the investment rules, and many of these instruments fully comply with them. They have the follow-up of the banking supervisor and the risk-rating firms, which issue an average of two ratings per year and in some countries more, but in general carry out regular and periodic follow-up.

a. Special features of the debt and capital instruments

The AFPs face issues of diversification and currency-matching in their investments. In medium-term investments, the problem of obtaining investment grade instruments that meet these conditions is often not very easy to solve. The rated MFIs offer them this possibility and, at the same time, attractive rates of return. For the MFIs, the possibility of having medium and long-term financial backers is a plus when it comes to choosing investors.

In each country the combination of factors is important: factors such as regulatory framework, transparency, the investment climate, the rating of issuers and issuance, financial indicators (portfolio, net worth, net worth adjustment, debt, default, yield, solvency, etc.), private and public issues, debt and capital issues.
The main instruments used are the following:

i. **Debt instruments.** Bonds have been used in local markets and occasionally in New York, with *investment grade* rating. This allows the AFPs to invest in these instruments. The issues have been conventional: the issuer (MFI) has appropriate risk rating, the issue is guaranteed by the portfolio, the levels of default and the general performance of the MFI, and an independent risk-rating firm.

Other debt instruments such as promissory notes, instruments that have been guaranteed in some cases by the stockbroker, who rates the whole issue and guarantees it with his draft, the MFI’s rating or the promissory note itself, have been instruments with which funding has been obtained.

The funds that include MFI Bonds are instruments that have been used by stock-brokering firms.

ii. **Capital instruments.** Noteworthy are the shares in joint-stock companies that operate micro-credit, issued on the primary market: private issues in which the AFPs may be contacted or may seek such issues with the brokers in the respective markets. In some cases buyback arrangements have been made, and in others not; in some cases there have been issues that make the approval of the shareholders’ meeting a condition of sale and in other cases issues have taken place with no conditions whatsoever.

Subordinated Loans, which can be converted into ordinary or preferred shares, have been another method used by the different financial backers, the same that have allowed formations and increases in capital for MFIs which are becoming, or already are joint-stock companies.

The CAF and the International Finance Corporation (IFC) are important actors in these processes. Their basic aims are the mobilisation of external resources, achieved as a result of investment, the impact for the region’s development, its strategic character, the mechanisms for withdrawal and yield. The CAF has 85 operations currently up and running in this segment, distributed in fourteen Latin American countries, with total resources of over US$160 million.

There are also some cases of shares in the secondary market, depending on the development of the market per country and also on the MFI. For example, the CAF has a fund that guarantees many of these issues, in order to encourage them.

The CAF and other institutions and banks that finance micro-credit have also
used share-convertible Subordinated Credits, which have had different clauses depending on the internal policies of each body. Some of these Subordinated Credits have been converted into shares and the backer has then negotiated them with other financial institutions. In some cases the clauses have included prior consultation with the other partners before selling; in others there has been greater freedom.

b. Successful cases

According to the J.P. Morgan Report of Microfinance, about 43 capital transactions were estimated in the year 2009, the majority of them being private issues, with two well-known public offerings, namely those of the Banco Compartamos in Mexico and Equity Bank in India in 2010.

The CGAP quotes 8 of the main MFIs that have carried out share transactions in local and/or international stock exchanges (See Table Nº 4). The aforementioned study shows the indicators of the offers concerned and considers that they have been successful.

<table>
<thead>
<tr>
<th>Date of the offer</th>
<th>BRI</th>
<th>Equity</th>
<th>BRAC</th>
<th>Comparto</th>
<th>Findep</th>
<th>IPF</th>
<th>Capitec</th>
<th>Blue</th>
</tr>
</thead>
<tbody>
<tr>
<td>31/Oct/03</td>
<td>08/Jul/06</td>
<td>11/Dec/06</td>
<td>23/Apr/07</td>
<td>31/Oct/07</td>
<td>13/Jul/07</td>
<td>18/Feb/02</td>
<td>13/Oct/06</td>
<td></td>
</tr>
<tr>
<td>Total shares in circulation (millions)</td>
<td>11,785</td>
<td>91</td>
<td>12</td>
<td>428</td>
<td>680</td>
<td>257</td>
<td>83</td>
<td>485</td>
</tr>
<tr>
<td>Total shares in Offer (millions)</td>
<td>489</td>
<td>91</td>
<td>5</td>
<td>128</td>
<td>118</td>
<td>257</td>
<td>67</td>
<td>320</td>
</tr>
<tr>
<td>Price of Offer (LC)</td>
<td>933.1</td>
<td>67.7</td>
<td>172.6</td>
<td>40</td>
<td>24</td>
<td>1.7</td>
<td>n.d.</td>
<td>1</td>
</tr>
<tr>
<td>Primary Offer (MMUS$)</td>
<td>191</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>103</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Secondary Offer (MMUS$)</td>
<td>298</td>
<td>87</td>
<td>0</td>
<td>474</td>
<td>167</td>
<td>773</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>Total Offer (MMUS$)</td>
<td>489</td>
<td>87</td>
<td>13</td>
<td>474</td>
<td>270</td>
<td>773</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>Quoted on Stock Exchange</td>
<td>JSE</td>
<td>NSE</td>
<td>DSE</td>
<td>Stock Exchange</td>
<td>Stock Exchange</td>
<td>LSE</td>
<td>JSE</td>
<td>JSE</td>
</tr>
<tr>
<td>Mnemonic</td>
<td>BRI</td>
<td>EQBNK KN</td>
<td>BRAC BD</td>
<td>COMPARTO</td>
<td>FINDEP</td>
<td>IPFLN</td>
<td>CP/SJ</td>
<td>BFS SJ</td>
</tr>
</tbody>
</table>

According to the CGAP report for the year 2010, despite the crisis, the MFI financial backers have reported an increase in the share portfolio of 54%, for over a trillion dollars.

The introduction of these papers into the secondary market is a process that is moving forward, but for the time being most of these transactions take place in the primary market. The reasons for this are to be found in:

i) **The expansion of a bank towards micro-credit sectors: the following transactions correspond to banks in expansion:**

- MFI MiBanco in Peru, which sold shares to the ACP Group of Peru. The latter now has controlling shares.
- Edificar was bought by the Banco de Crédito in Peru and the Banco Solidario by One Bank in Africa.
- Purchases by BBVA in Latin America in some cases.

ii) **Investment in shares that are solvent and have good yield.** This corresponds to investments of various private investors, such as J.P. Morgan and other funds or local investors in MFI.

iii) **Investments of second-floor banks specialising in micro-credit.** These correspond to investments of second-floor banks specialising in micro-credit, such as: European Banks Triodos Fair Share, Oiko Credit, INCOFIN; other financial backers such as: Hivos Working Capital for Community Needs and FINNFUND, which have bought MFI shares both in Latin America and Africa.

The structuring of shares has different characteristics, from the controlling percentages, to the percentages for a seat on the board of directors, preferred or ordinary shares, shares with a withdrawal clause and other options.

The structuring of the debt papers has only one common factor. They are instruments rated as investment grade in their regulations, but then they differ in terms, type of currency (local or dollars) and interest rates, depending on the market and the currency. In general they do not have liquidity funds or collateral guarantee funds, but in some cases the CAF has stepped in with backing of this type.

6. **Pension product to be developed**

Micro-entrepreneurs and their families are usually part of the informal market. This means that they do not have regular incomes in terms of amount or periodicity and their working life is different from that of workers in the formal market. In some cases their income is seasonal, which means a demand for seasonal financing and the possibility of contributing towards a pension seasonally rather than monthly. Their life-expectancy is also different and calls for life-tables that are specific to the particular group. This, added to the fact that, in many countries, workers do not have accessible, preventive
public health care, but only treatment in case of emergency, has a significant influence on life expectancy.

The challenge for the formal systems remains and the generation of new products is still waiting, so the micro-finance industry has stepped in to develop its own products.

Although in the matter of micro-insurance, it is clear that it is the insurance companies that know how to manage risk, in the case of micro-pensions, the pilot cases, of which there are very few, are being managed by the micro-finance industry, with products that are medium-term savings for a specific purpose: financing emerging expenses of old age. The micro-pensions are not linked with life-expectancy and do not cover the risk of aging, but they are savings that may mitigate that risk.

This group could undeniably benefit from having a specially designed product to cover the predictable risk of old age and death. The granting of these benefits through the MFIs makes it possible to save on administration, collection, promotion and other costs. The marketing is carried out through the MFIs, with a small contribution linked to income, and with the benefit limited to a life-table that is specific to the group and to a foreseeable amount during an expected period of life. For this group it would be easy to introduce a new pension product that would cover risk, not only savings for old age.

**7. Main conclusions and/or recommendations**

The growth of the micro-finance industry in terms of coverage, portfolio quality, technology and solvency represents a safe, cheap opportunity to approach a poor stratum of the population, using financial vehicles such as funds, savings banks, mutual benefit funds and specialised banks, and with debt and capital instruments in the primary and secondary markets, making it possible to stabilise flows and yield and project better interest-rate conditions for these groups in the medium and long term. On the other hand, given the solvency characteristics of the industry, the pension funds may have a medium and long-term investment opportunity with a double effect of working with the most vulnerable strata of the different countries and obtaining an attractive return for their members.

In each country the MFIs are issuing debt and capital instruments and many of them have investment grade risk rating, meaning that the AFPs can invest with limited risk and an important multiplier effect.

The coverage and penetration of these market strata by the MFIs permit important economies of scale when marketing a pension product. The design of these is a challenge in each country, given that, just as the average individual credits in each country are different, so are their incomes and their ability to acquire a pension product.
Nonetheless, they constitute an unexplored and attractive market in terms of volume and the possibility of expanding coverage.
In just a few words I want to express my gratitude for the brilliant expositions we have received from all the speakers who have taken part in our FIAP International Seminar 2010. I firmly believe that we have absolutely achieved our purpose.

It has been made perfectly clear, through the dialogue we have had with the regulators, and with the professors who have accompanied us, especially in the lectures given by Professors Sebastián Edwards and Robert C. Merton, that our system has great strengths with which to face economic crises and solve the pension problem, while the pay-as-you-go systems, which some people still view with nostalgia, have clearly been left behind.

However, we have been presented with some challenges, especially on the matter of investment and the need to diversify. There are still countries that keep investment strictly controlled within the domestic economy and in fixed-income government securities. I believe that this is a challenge we must keep before us. The same is true of exploring new products. Here we have had an interesting debate on infrastructure and housing, two products that correspond very adequately to long-term saving such as that of the Pension Fund Administrators (AFPs) and at the same time produce a closer relationship between the people and their pension system. It has also been put
to us, especially by the Minister of Planning, Felipe Kast, and by Wenceslao Casares, that there is a need to extend the system’s coverage to sectors that are not paying contributions today for reasons of poverty, exclusion or informality, and good ideas emerged which I am sure will be debated by us all.

We also spoke about the growth in the population’s life-expectancies, which, added to the irregular incomes that are a general feature of our economies, make it necessary to have Voluntary Pension Saving (APV) and to search for other tools to enable pensions to be improved. Finally, I believe that our regulators, both Ross Jones and Solange Berstein, were very clear in the challenge that we face in creating a better pension culture. I am sure that we will achieve that better pension culture, but that also depends on extracting this subject from the ideological trenches, to repeat what I said on opening this seminar. I believe that debate on the return to pay-as-you-go systems should cease to exist. Therefore I am sure that the subjects we have dealt with during this Seminar will be of use to us in the reflections that we have to make in order to continue improving this system every day, for the benefit of the workers and the benefit of our economies. I am sure that we shall arrive at our next FIAP International Seminar 2011, in the Dominican Republic, with far more knowledge about these issues.

I wish you a very good return journey to your respective countries and repeat my thanks for your presence and the contribution that you have all made to the debate during this Seminar.

Guillermo Arthur
President of FIAP
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, we have published five 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 (Seminar held in Lima, Peru, December 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 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 yield 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 leveled 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 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 yield 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 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 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 so 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, investment 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 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 an obligatory pension system. Chapter six analyzes the market of annuities and scheduled 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, which reviews the future of mandatory pension funds in Europe and beyond, describing the financial crisis
implications for the private pension funds, commenting on the lessons derived from the crisis for the funded pension systems and stating the medium-term challenges to reform the mandatory pension funds in Europe and other industrial countries.

For your information, these publications are available in an electronic version on the FIAP website, <http://www.fiap.cl>, in the “FIAP Publications” section. Copies of these publications may be obtained by writing to e-mail: <fiap@fiap.cl>.
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Countries with reforms (1)

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Year</th>
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</thead>
<tbody>
<tr>
<td>Latin America</td>
<td>Chile</td>
<td>1981</td>
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<td></td>
<td>Peru</td>
<td>1993</td>
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<td></td>
<td>Colombia</td>
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<td>Mexico</td>
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<td>El Salvador</td>
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<td></td>
<td>Costa Rica</td>
<td>2000</td>
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<td></td>
<td>Panama(*)</td>
<td>2002</td>
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<tr>
<td>Central and Eastern Europe</td>
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<td>1998</td>
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<td></td>
<td>India(*)</td>
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<td>Armenia(***)</td>
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<td>Egypt(**)</td>
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<td>Czech Rep.</td>
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<td>Slovak Rep.</td>
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<td>Romania</td>
<td>2010</td>
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<td></td>
<td>Ukraine(**)</td>
<td>2012</td>
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</tbody>
</table>

The year given correspond in each case to the beginning of operations of the mandatory funded pension system.

(1) Information updated on July 30, 2010.

(*) Reform for civil servants.

(**) Approved reform, not yet implemented.

(***) Proposed reform, not yet approved or implemented.