



INTERNATIONAL
FEDERATION OF
PENSION FUND
ADMINISTRATORS

THE ROLE OF DEFINED CONTRIBUTION PROGRAMS TO PENSIONS : CHALLENGES AND PROPOSALS

Presentations from the
International Seminar
“The Role of Defined
Contribution Programs to
Pensions: Challenges and
Proposals”, organised
by FIAP and AMAFORE
on 30th and 31st October 2017
in Mexico.

2017 FIAP
INTERNATIONAL
SEMINAR

Published and Edited by FIAP



INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS (FIAP)

The International Federation of Pension Funds Administrators, FIAP, is an international agency incorporated in Uruguay, bringing together the trade associations of pension fund managers of 15 countries (Bolivia, Colombia, Costa Rica, Curaçao, Chile, Ecuador, El Salvador, Spain, Honduras, Kazakhstan, Mexico, Peru, the Dominican Republic, Ukraine and Uruguay). The workers number of the FIAP member associations and institutes are more than 105 million as of December 2017, and accumulate more than USD 581 thousand million in their respective individual accounts.

FIAP aims to contribute to the improvement and consolidation of the private pension systems, in order to offer the best possible pensions to its members, within a financially sustainable system. For this purpose, it seeks to be a meeting place for the exchange of experiences between countries that have adopted pension systems based on privately managed individually-funded savings, providing information and support for the improvement of systems. In order to further these objectives, FIAP has organized 15 international seminar.

The Federation also brings together 16 "collaborating members", which are mainly companies that provide services and products to the pension fund management industry and currently include: ALFI (Association of the Luxembourg Fund Industry); Amundi Asset Management; BNY Mellon; Brown Brothers Harriman & Co; CEM Benchmarking Inc.; Compass Group Global Advisors; GAM (Luxembourg) S.A. Spanish branch; Heinsohn Business Technology; Inversiones Security; M&G Investments; Morgan Stanley Investment Management; Pictet & Cie (Europe) S.A., Spanish branch; Principal Financial Group; S&P Dow Jones Indices; State Street Global Advisors; and SURA Asset Management.

Published in Santiago, Chile, August 2018

© International Federation of Pension Fund Administrators (FIAP)

Av. Nueva Providencia 2155, Tower B, Floor 8,

Office 810-811, Providencia, Santiago, Chile

Phone: [56-2] 2381 17 23

E-mail: fiap@fiap.cl

www.fiapinternacional.org

Edition and Publication:

International Federation of Pension Fund Administrators (FIAP)

© The Role of Defined Contribution Programs to Pensions: Challenges and Proposals

1st edition: 50 copies (2018)

Cover design: Verónica Muñoz Zúñiga


ISBN: 978-956-8853-17-4

All rights reserved

No part of this publication may be reproduced in any form or by any means without due permission, except in order to quote or comment.

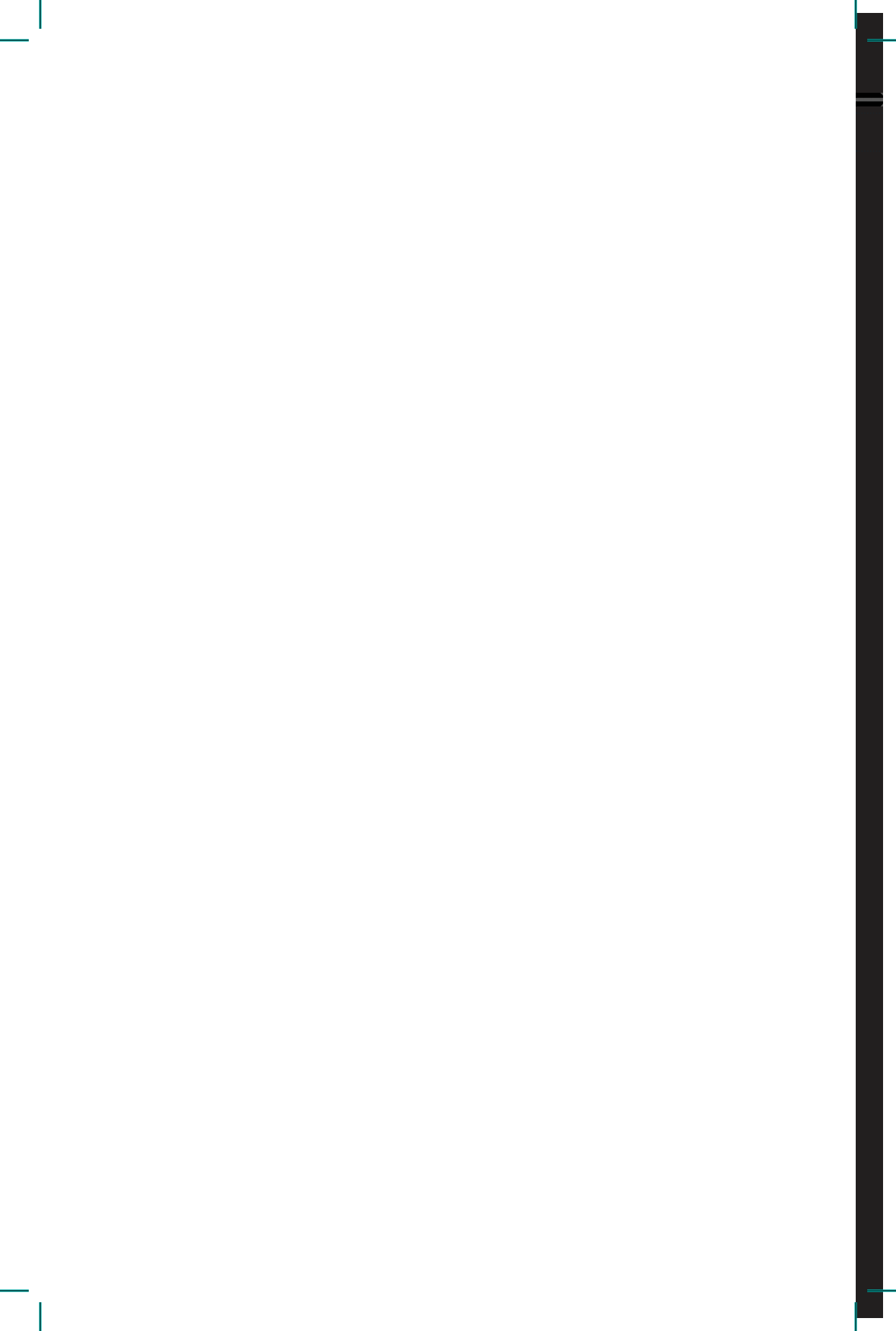
Each article is the exclusive responsibility of its author and does not necessarily reflect the opinion of the International Federation of Pension Fund Administrators (FIAP).

Printed in the workshop of Procolor S.A.



THE ROLE OF DEFINED CONTRIBUTION PROGRAMS TO PENSIONS: CHALLENGES AND PROPOSALS

Presentations from the International Seminar
“The Role of Defined Contribution
Programs to Pensions: Challenges and Proposals”,
organised by FIAP and AMAFORE on
30th and 31st October 2017 in Mexico.



INDEX

OPENING SPEECHES.

Guillermo Arthur.	9
Carlos Noriega.	13
Vanessa Rubio.	17

INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS (FIAP).	23
---	----

INTRODUCTORY LECTURE

Robert Kapito. Global Scenario: Demographic and Retirement Challenges.	25
--	----

CHAPTER I. ACHIEVEMENTS AND NEW CHALLENGES OF THE DEFINED CONTRIBUTION PENSION SYSTEMS.

35

Augusto Iglesias. Some reflections and viewpoints pertaining the current status of the pension systems based on individual savings throughout Latin America	37
---	----

VIEWPOINTS OF THE INTERNATIONAL ORGANIZATIONS, REGULATORS AND PENSION ADMINISTRATORS.

Carmen Pagés-Serra. Viewpoint of the Inter-American Development Bank (IDB).	49
Mathilde Mesnard. Viewpoint of the Organisation for Economic Co-operation and Development (OECD).	53
Osvaldo Macías. Overall vision of the Chilean Pension Superintendence.	59
Carlos Ramírez. Viewpoint of the Mexican National Commission for the Retirement Savings System (CONSAR).	67
Mariano Ugarte. Viewpoint of AFORE Principal, Mexico.	69
Juan Manuel Valle. Viewpoint of Afore XXI-Banorte, Mexico.	71

20 YEARS OF ACHIEVEMENTS AND THE CHALLENGES TO DEAL WITH IN THE COMING TWO DECADES

75

Eduardo Parra.
Luis Sayeg.
Eduardo Villarreal.
Rodolfo Campos.
Enrique Solórzano.



CHAPTER II. CHALLENGES OF WORLD'S AGING POPULATION.	89
Rafael Puyol. Current and future demographic trends.	91
Robert Boyda. Retirement decumulation strategies: next generation.	105
Aye M. Soe. Indexing solutions for retirement.	117
Francesco Sandrini. How to integrate a strategy with long term view today and be able to achieve proper retirement goals.	131
John Croke. Target-date funds: Laying a critical foundation for retirement success.	145
Rodrigo Acuña. Perfecting the decumulation phase in individually-funded pension systems.	161
CHAPTER III. SAVINGS HABITS IN THE REGION.	173
Richard Jackson. Voluntary pensions in emerging markets.	175
Dave Goodsell. The Millennial myth: what we don't know about the next generation of investors.	189
VOLUNTARY PENSIONS IN EMERGING MARKETS.	197
Leopoldo Somohano.	
Augusto Iglesias.	
Rafael Puyol.	
CHAPTER IV. THE INVESTMENT OF PENSION RESOURCES IN PRODUCTIVE PROJECTS.	205
César Estrada.	
Oscar Vela.	
León de Paul.	
Sergio Méndez.	
Alonso Díaz.	
CHAPTER V. PENSION FUNDS' SOCIAL RESPONSIBILITY.	221
Stuart Kirk. Slaying the three ESG dragons: inconsistency, hypocrisy and the beast of unintended consequences.	223

GREEN BONDS AS A BOOST TO THE MEXICAN SUSTAINABLE DEVELOPMENT. 231
José-Oriol Bosch.
Sam Gill.
Enrique Solórzano.
Juan Manuel Valle.

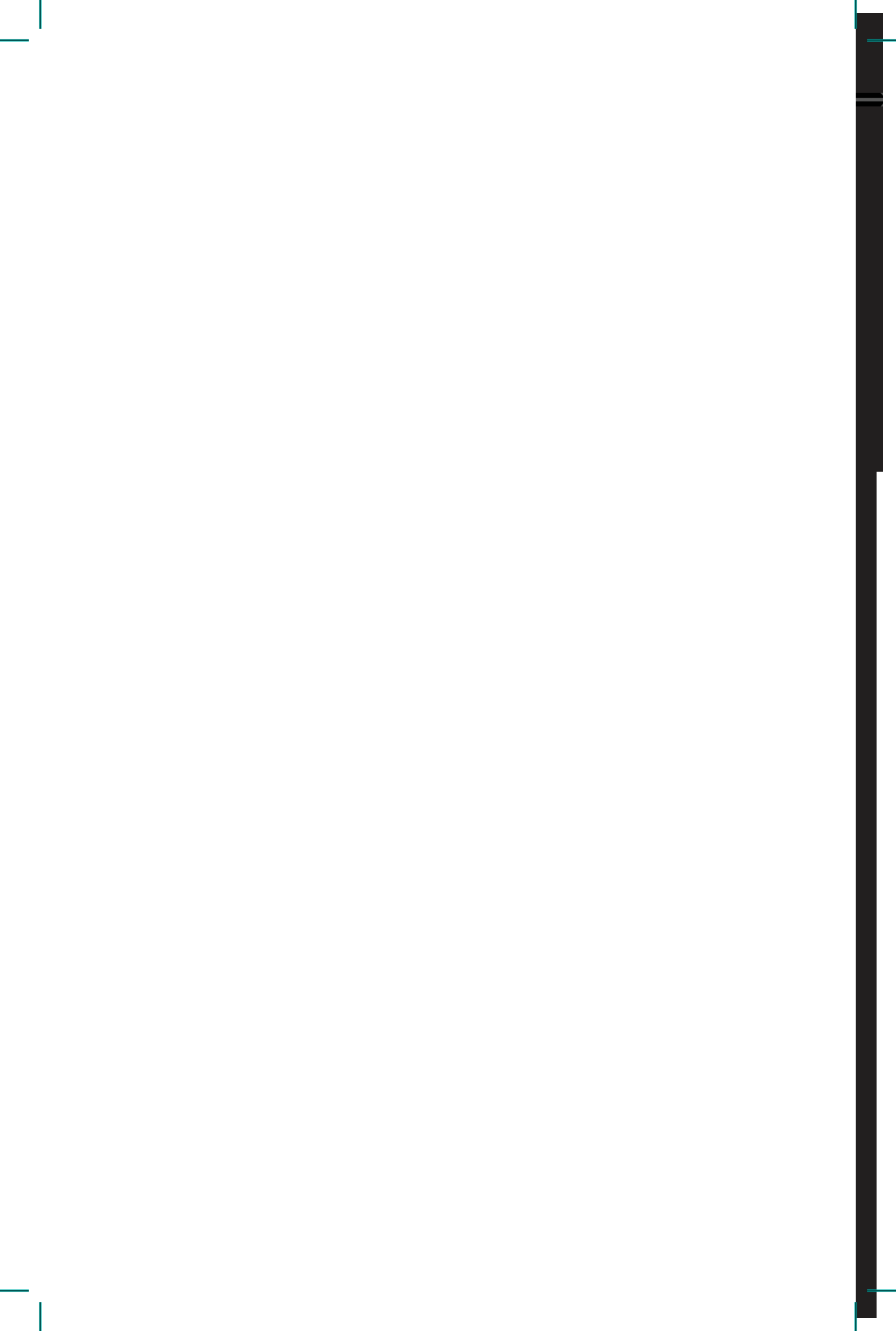
CHAPTER VI. HOW AND WHERE DOES AN EXTERNAL MANAGER ADD VALUE?. 251

Mariano Rabadán.
Gustavo Lozano.
Dan Waldron.
Carlos Costales.

CLOSING WORDS.

Guillermo Arthur. 265
Carlos Noriega. 267
Carlos Ramírez. 269

EARLIER FIAP PUBLICATIONS. 273



OPENING SPEECHES

I am pleased to note the presence of Mrs. Vanessa Rubio, Undersecretary of Finance and Public Credit, Mr. Carlos Ramírez, Chairman of CONSAR, Mr. Carlos Noriega, President of AMAFORE, Presidents of the AFP Associations and vice-presidents of FIAP, which are attending this seminar, as well as my many dear friends altogether.

These, my first words, are intended to give you all – and on behalf of FIAP – a very warm welcome to this seminar; and I hope it will be a fruitful occasion to discuss the pressing social security issues which lie ahead. I would also like to thank Mr. Carlos Noriega and AMAFORE for the magnificent organization of this meeting, which is the appropriate framework and background for the work that bring us all together.

Over three decades ago, a deep and far-reaching process of social security reform began in Latin America, aimed at replacing the distribution systems which were being affected by a deep crisis; by a system of individual capitalization managed by private companies, which had strict operational regulations and were subject to a State supervision.

In Chile, a pioneer in this process, in the past few years, a massive process of payment of pensions began, due to the fact the system had an implementation track record exceeding 35 years. The number of pensions paid, for different reasons which we are going to analyse here, have not responded to the



expectations of the affiliates and gave rise to a significant wave of protests, which have also contaminated the debate in other countries applying systems with similar features.

The diagnosis about the reasons why pensions do not necessarily respond to workers' expectations is clear and widely shared by us all. Life expectancy at the time of the worker's retirement has enhanced since the implementation of the system in Chile by 43.5% for men and 32.2% for women. In turn, the interest rate, through which savings are converted into pensions, was 6% at the time the reform was implemented and today is hardly exceeds 2%.

If only these two variables (life expectancy at retirement and the interest rate) had remained stable over time, pensions would have been twice as much as they are today. However, despite having a clear view on these matters, none of the most important parameters - the contribution rate and the retirement age - have been changed in 35 years; and neither of the countries which have similar pension systems have done anything to rectify the issue so far.

To these phenomena, we must add the informality, which in some countries is in excess of 60%, and also to the increase in salaries, which often ends up affecting the replacement rate, as savings are made throughout a lifetime and, therefore, the pension does not necessarily relate to the take-home payments received in recent years; but instead to the average remuneration of the worker's entire working life.

Despite the clear diagnosis and its main solutions, those which have been vociferous in stating the shortcomings are demagogic, short-term minded and do conveniently disregard the serious detrimental effects they may have on the future generations. Such damaging approach also encourages them - not to finger-point at the State as responsible for such pitiful state of affairs - but blame the Pension Fund Administrators instead; irrespective of the real fact the latter have been successful in their endeavours.

This assertion is clearly manifested in the profitability that in all Latin American countries has benefited the workers with an annual real profitability over 6%. While on this, it is fair to highlight the Pension Fund Administrators have made a real contribution to the economy of the countries - over 7% of the growth of the Gross Domestic Product (GDP) - and which, incidentally, they hold no responsibility for the causes which explain the current pension amounts.

A recent survey undertaken by Mercer indicates that Chile, Colombia and Mexico have the best and most solid pension systems in the world. However, there are those who advocate, as a solution to these problems, a return to the distribution systems - either totally or partially, - even though the demographic reality makes their financing a non-viable proposition in the medium term. Indeed, the figures recorded in developed countries do clearly indicate such fact. Likewise, we must not forget the fact such countries are ahead of us as far as the demographic changes are concerned.

Take the case of Spain, whose projections indicate that by 2047 the number of pensioners and contributors will be almost a match to each other. The increase in the dependency rate of the distribution systems caused by the foregoing demographic changes; has made its financing unviable. So, it is hardly surprising that between 1995 and 2017, 55 countries increased the retirement age ceiling, 76 increased the contribution rates and 60 adjusted the benefit formulations.

Despite these parametric changes, the distribution system has not been able to finance the workers' pensions; an obligation which ultimately fell on the Central Governments and seriously affected their sustainability. Thus, the debt as a percentage of the GDP, peaked in countries like Portugal at 491%, in Italy got to 364%, in Greece to 900% and in Spain to 255%.

Another of the populist solutions is the return of funds, that is, the early withdrawal of the same, in opposition to what is the essence of a pension system; which is to postpone the present consumption to later enjoy a calmer old age with the savings made beforehand.

This experience was already known in the United Kingdom, where annuities and other pension products fell by 80%. We see it now in Peru, where a law was approved authorizing the withdrawal of 95.5% of the fund saved by workers, with the result that 95% of the savings was withdrawn and only 1% was invested in some social security or pension product.

I believe the situation we experienced in Chile must be taken positively, as a warning and a further advocating for those changes required by the existing pension systems; so they can offer a better pension to their workers. Winston Churchill said that politicians become statesmen when they start thinking about future generations rather than the coming elections.



The Chilean experience should shake us from our passivity and give us the strength to work on the changes required by the system, in which there is a technical consensus, emphasizing that we cannot postpone an automatic adaptation of the parameters, an increase in the contribution rate and in the retirement age; all to be in line with the increase in life expectancy.

We must decisively promote voluntary pension savings, taking examples from developed countries which have established mechanisms such as the *matching contribution*, automatic enrolment and scaling, to name just a few.

We must also increase the long-term returns of pension funds by investing in alternative assets, accessing new instruments in economic sectors where pension funds have traditionally not been present and secure the liquidity premiums they have; giving us all the opportunity to invest in assets that have a low correlation with traditional assets.

It is also essential to establish that pension funds have the sole purpose of financing workers' pensions, avoiding any contamination for another purpose, as we have seen in some countries; while also aim to expanding the pension modalities.

Finally, it is necessary to establish a solidarity pillar to finance the pensions of the poorest and most vulnerable brackets of the population, which have not been able to secure steady savings throughout their lifetime.

Via seminars, round tables and technical surveys - which we carry out permanently at our Federation - we want to contribute to the pension debate while also putting at the centre of it those aspects which aim for a solution to the pensions problem in a sustainable way.

We do all this while being fully aware of the magnitude of the challenge we are up against. It would be unforgivable that solutions seeking short-term, gimmicky dividends could prosper and literally sentence future generations to poverty, homelessness and despair.

Thank you very much and I warmly welcome you again to this seminar.

Guillermo Arthur
President of FIAP

OPENING SPEECHES

Good morning to all of you and please feel welcome to this 2nd AFORES Convention and XV International Seminar of the International Federation of Pension Fund Administrators (FIAP). It is my pleasure for me to greet Ms. Vanessa Rubio, the Undersecretary of Finance and Public Credit, Mr. Guillermo Arthur in his capacity as President of FIAP and all the members of the Presidium, who represent institutions, associations, workers, employers and, of course, our AFORES; who are all closely associated to the Retirement Savings System (SAR).

I am also happy to see among those in attendance our friends; ranging from legislators, businessmen, academics to young students. I also wish to highlight the presence and participation of our friends in the media, who are the ones which allow us to enjoy a crucial communication link with the workers. My warm welcome to all of you.

This Convention coincides with the twentieth anniversary of the reform which set in place our current pension system and the creation of the AFORES. For this reason, and in this dual context, nowadays we reaffirm our commitment to the objective and purpose of this reform.



I am certain all the papers submitted to this seminar will allow us, among other things, to review the progress we have secured in the past 20 years, analyse the challenges we perceive for the short and medium term ahead and also undertake a sound thinking on the path to follow.

Which is the most important objective of the reform?

Without a doubt, and on which we all agree, the most important objective is to achieve adequate pension standards to be in line with the expectations of all workers, regardless of their level of income, their employment status, gender or geographic location.

While being fully conscious of this objective, we are aware of the significant responsibility of the AFORES, but equally significant is the spirit which encourages us to face all these challenges.

In addition, we know that we are not alone in this endeavour. Indeed, we are part of a great team in which we have steadily participated shoulder to shoulder with our authorities headed by the Ministry of Finance and Public Credit and likewise; we have counted on the critical and constructive spirit of the workers and employers alike.

Over the course of these past 20 years we have built a solid and secure system, which undoubtedly constitutes a platform allowing us to go further ahead.

I wish to highlight here that in this way we have maintained a very productive exchange of experiences and capabilities for the openness and willingness to dialogue which we have always found in the Ministry of Finance and Public Credit. Also, here we recognize the contribution of the president of CONSAR, Mr. Carlos Ramírez.

In Mexico, the AFORES are already rated as the par excellence institutional investor, and although its directors will be the ones who will expand on the achievements and challenges they are facing, I wish to highlight now the important contribution they have made to the development of the country.

Mexico has undergone a deep and far-reaching transformation in the past two decades, and without missing out the fact that there is still much to be done, there is no doubt we are nowadays living in a more developed, more

prosperous and more modern country; with changes that are evident on the economic and social fronts. In this transformation drive, the AFORES have always been present, not as witnesses, but as active participants.

The pension funds, having as a noteworthy feature their long-term vision, have contributed to financing the infrastructure of the future, such as oil exploration and exploitation in deep water areas and are tackling renewable energy sources. They also have been investing in the most ambitious communication projects, in the construction of domestic dwellings, shopping arcades and industrial buildings. In short, in all key sectors where the generation of quality employment and economic growth are highly likely.

The AFORES have also contributed to the stabilization of financial markets whenever we have received shocks and setbacks coming from abroad.

Having the AFORES contributed to the macro level, they have also contributed to family-scale development. Suffice to say that for 25% of the families the AFORE account represents their only patrimony. Never in the economic history of the country had a family patrimony of this magnitude been generated.

The AFORES are also working towards the future, fostering a better environment for the personal development of the elderly and younger generations alike. In relation to this I wish to highlight only two actions implemented in recent months, the first one being the Advisory Council on Climate Finance (Full name in Spanish: Consejo Consultivo de Finanzas Climáticas), set up by the AFORES together with the Mexican Stock Exchange.

This Board has already issued guidelines for the Green Bonds certification, which is expected to give a strong boost to productive projects aimed at tackling the challenges posed by climate change¹.

The second action to be highlighted is the financial education course "Águila

1 This convention is carbon neutral, in line with the best international practices concerning the organization of major events. The greenhouse gas emissions of this convention due to the consumption of electric power, transport and food were measured and compensated by Mexico CO2, the Platform of Environmental Markets, attached to the Mexican Stock Exchange. The compensation was made by destroying the polluting emissions of the sanitary landfill of León, Guanajuato. We thank Mexico CO2 for this valuable support.



y Sol, this is not a flyer", jointly developed with the Interactive Museum of Economics (Full name in Spanish: Museo Interactivo de Economía). This course, endorsed by the Mexican Ministry of Public Education in the context of the new educational model, is already being taught in 12 Republic entities to more than 2,000 students altogether.

There is so much headway we have secured in these 20 years and I am convinced the work of this seminar will be very useful to continue furthering our horizons; and be able therefore, to better serve the workers and our country alike. Only with a humble attitude, with imagination, openness, and, above all, with nobility of spirit, we will listen and learn from all sectors. Again, I thank you for your presence today and ask you to feel very welcome to this convention and seminar. Thank you very much.

Carlos Noriega

President of AMAFORE

OPENING SPEECHES

Good morning. I am very pleased to be here with you. First and foremost, please accept my warm welcome to the incumbents and representatives of AMAFORE, CONSAR, FIAP, the Conciliation and Arbitration Board, the workforce and business sectors, the AFORES, my colleagues of the Federal Government and the media. It is an honour for me to participate in this 2nd National Convention of AFORES and the XV FIAP International Seminar.

Last year, I had the opportunity to be invited – while I was performing the role of Assistant Secretary in the Secretariat of Social Development (SEDESOL). I am now pleased to endorse and support these efforts to bring together all of us, as interested parties, towards improving and strengthening the Savings for Retirement System (SAR).

This 2nd Convention, as already mentioned, also coincides with the twentieth anniversary of SAR's launching and, of course, I would like to join and endorse the account which has been made regarding the achievements of this system and, of course, also point out what we consider - within the Ministry of Finance - are the main challenges it is facing.



The noteworthy fact here is that we, as Mexicans nowadays have a system in place which is sustainable and viable. We are very aware that with the previous system, due to the fact the population pyramid and its evolution was no longer viable, it was a matter of time for the public finances to have been unable to cope with the need to pay pensions.

Our population pyramid, for instance, in the forties of the past century could afford 26 active workers for each pensioner. Currently we have at the National Institute of Public Health (INSP) 5 active workers for each pensioner, at the Institute of Security and Social Services for the State Workers (ISSSTE) the ratio is 3 actives for each pensioner; with the next-10-year projection telling us there will be 2 active workers for each pensioner.

Such evolution of the population pyramid would have made it impossible to have a sound and sustainable system which did not represent a major blow to the public finances. That is why I believe the current system is one of the bastions of our financial stability.

Of course, we also have another main challenge, which is the increase in the average life expectancy. While half a century ago the average Mexican lived 60 years, today his/her average lifespan is 76 years.

So, at the end of the day we must bear in mind also the fact we are going to be using our pension for a much longer period than we did in past years. In short, we are bound to depend on our pensions for a considerable longer period.

It is also important to point out that this social security system generates a virtuous circle, which has translated into the most competitive returns within the entire financial system, now belongs to the overall workforce.

So, the workers' resources are growing and will supply them with a better future pension; whereas at the same time - with the investment of these resources - a noteworthy generation of productive development is being fuelled.

All the foregoing is crucial, because we have a projects portfolio in infrastructure, energy generation, farming industry, large scale technology projects and so on. It would be unthinkable to conceive the implementation of structural, telecommunications and power generation reforms – not to mention a similar drive in the education sector - if we did not believe that there are such important savings were being invested.

Here again, I reiterate, we are generating a virtuous circle with the competitive returns benefitting the workers; coupled with the investment of these resources in productive projects being arranged within Mexico.

All what I have said is very important for the overall national development and, of course, for the future and continued prosperity of all Mexicans.

An impact worth highlighting in this virtuous circle is the creation of jobs in our country. And if one looks at the SAR, it is hardly surprising to find a link between the creation of three million one hundred thousand jobs in this current administration, which has been the greatest achievement in the creation of jobs during any past government; and including the current overall period of 6 years.

The SAR has also contributed to the deepening foundations of the national financial system. The net assets of the AFORES represent 25% of our country's domestic savings. That is why we must keep thinking about products, services and financial mechanisms which should allow these savings to be conveyed onto promoting higher returns and, of course, a greater impact on the productivity and employment ratings in Mexico.

It is also important to highlight that the SAR is a pillar of strength for both our economic policies and macroeconomic stability. This stability is an asset to be preserved, and which we have fostered for decades of healthy public policies; and which has allowed us to face and weather a series of external shocks.

A simple recollection tells us that, a year ago, we started with very intense volatility periods due to the Brexit process; then followed by a two-way oil crisis and a subsequent oil prices' shock. It is also very important to mention that last year we witnessed a lower than expected growth amid the leading world economies (United Kingdom, United States, Canada, Japan, France).

The US-based industrial sector suffered a jolt and decreased by 1.2%. This setback, of course, hit the main engine influencing the exports of manufactured goods produced in Mexico. Then we had to deal with the uncertainty stemming from the US electoral process but then, once such election results were known, we came across another enigma which still lingers on.

This question mark is linked to the type of policies yet to be implemented in



the US; suffice to mention the negotiation process aimed at updating the Free Trade Agreement.

Should the foregoing be not enough, only a month ago, as you may also recall, all Mexicans endured natural disasters ranging from hurricanes to two very strong earthquakes.

The Mexican economy's capacity to withstand strains and be resilient can only be explained by good macroeconomic policies, sound/sensible economic foundations as well as having in place a strong sort of scaffolding structure backing us all.

Unquestionably, one of those scaffolds is to have available, on the one hand, reserves in the Bank of Mexico and a flexible line of credit with the International Monetary Fund (IMF) and, on the other hand, to have in place a well-anchored and strong pension system. Needless to say, and as regards the latter, we also want to continue strengthening it hereinafter; for the benefit of the workers who will start going on retirement in the next 20 years but, hopefully, enjoying far greater terms than their predecessors.

Our wish list also entails the SAR to be allowing for inclusion. This system turns into a sound fact the right to social security, and nowadays represents the second pillar of the Mexicans' patrimony after their own housing. At the end of the day, in this system there is a virtuous cycle between housing and the retirement savings, because it is not the same for the pensioner's welfare to enjoy access to own housing than without it. At the same time the welfare of the pensioner is not the same when he/she ends up allocating his/her housing resources to supplement his/her pension. We believe that this virtuous cycle for the workers is something we have to continue advocating and strengthening.

It is very important to talk also about the challenges we have yet to address in this system, and I will describe some of them straightaway. Undoubtedly, the first challenge is to achieve a widespread formalization of employment; so all Mexicans can be entitled to a social security fund and also to the SAR as one of the key pillars within this social security scheme.

Still on other issues to think about and because of their future beneficial effects - and this is something we have discussed already with the workers, employers and the authorities concerned - is the increase of the mandatory contributions

as well as further boosting the voluntary contributions - both coupled with an incentive package for these aims to happen. Last but not least, we are also thinking about gradually increasing the retirement age.

All these are issues that we have to bear in the agenda, albeit we are not defining or deciding on them today, but we have to keep thinking about them and how we can move forward with the relevant agreements on them.

Other issues have to do with improving the administration of resources which supplement the pension, such as housing and in making returns more competitive. Here we have already made important changes this year, particularly towards the reference portfolios and the life cycle funds. Such are already beginning to adapt each of the AFORES in their resource management structures and, of course, two very important elements: innovation and leadership.

Here I would like to congratulate the CONSAR institution and, of course, each of the AFORES since the AFORE Móvil has just been awarded the financial innovation prize granted by the Inter-American Development Bank (IDB). I believe this is a pride reason for Mexico, in the sense that with such kind of innovations we can continue generating incentives for promoting voluntary savings in these individual accounts owned by Mexicans.

I also wish to highlight here that Mr. Carlos Ramírez Fuentes has just been elected as Chairman of the International Organization of Pension Supervisors (IOPS), whose membership exceeds 77 countries. Carlos, please accept my congratulations; we are all pleased that for the first time Mexico is exercising a leadership in this important forum, and where we are learning about international experiences, best practices and standards.

I believe that we are all committed - beyond any doubt - not to give in with our endeavours to making the system more competitive and productive. We still have time to do so but at the end of the day, the future will always catch up with us; so the time to do our work now is crucial.

Now is the time to commit ourselves to strengthen this system and be able to continue generating better incentives; so that all Mexicans can enjoy a better pensioner well-being. I think this is a job which involves all of us here and I wish to congratulate this 2nd AFORES Convention and XV FIAP International Seminar because it is being held today.



And now on this day, Monday 30 October 2017, it is an honour for me to declare this conference open and to wish you all a remarkable success - which I am sure you will have in the working days ahead of you - in order to strengthen one of the pillars of the Mexican financial system and the key foundations of the Mexican workers' patrimony, which is the SAR, for whose prosperity we are all steadily working together.

Thank you very much.

Vanessa Rubio

Under Secretary for Finance and Public Credit, Mexico

INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS (FIAP)

The International Federation of Pension Funds Administrators, FIAP, is an international agency incorporated in Uruguay, bringing together the trade associations of pension fund managers of 15 countries (Bolivia, Colombia, Costa Rica, Curaçao, Chile, Ecuador, El Salvador, Spain, Honduras, Kazakhstan, Mexico, Peru, the Dominican Republic, Ukraine and Uruguay). The workers number of the FIAP member associations and institutes are more than 105 million as of December 2017, and accumulate more than USD 581 thousand million in their respective individual accounts.

FIAP aims to contribute to the improvement and consolidation of the private pension systems, in order to offer the best possible pensions to its members,



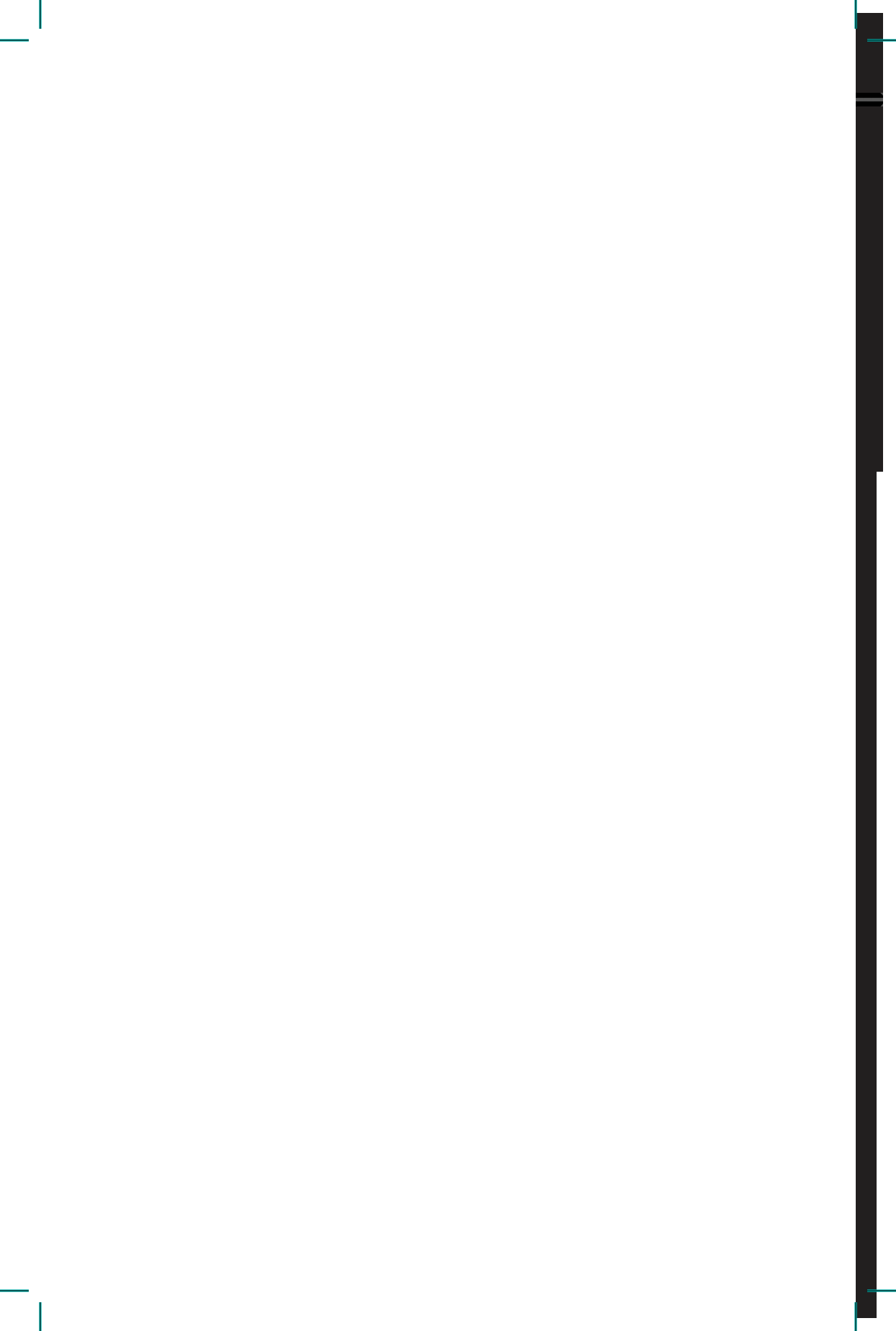
within a financially sustainable system. For this purpose, it seeks to be a meeting place for the exchange of experiences between countries that have adopted pension systems based on privately managed individually-funded savings, providing information and support for the improvement of systems. In order to further these objectives, FIAP has organized 15 international seminars

The Federation also brings together 16 “collaborating members”, which are mainly companies that provide services and products to the pension fund management industry and currently include: ALFI (Association of the Luxembourg Fund Industry); Amundi Asset Management; BNY Mellon; Brown Brothers Harriman & Co; CEM Benchmarking Inc.; Compass Group Global Advisors; GAM (Luxembourg) S.A. Spanish branch; Heinsohn Business Technology; Inversiones Security; M&G Investments; Morgan Stanley Investment Management; Pictet & Cie (Europe) S.A., Spanish branch; Principal Financial Group; S&P Dow Jones Indices; State Street Global Advisors; and SURA Asset Management.

Lately, FIAP also organized seminars on “Alternative Assets” and “Voluntary Pension Savings,” which were attended by experts and regulators of all the FIAP member countries. FIAP maintains fluid contact with the pension regulators of all FIAP member countries and international agencies dealing with pension issues (OECD, ILO, IDB, IMF and the World Bank).

Finally, FIAP is carrying out studies that are relevant for the individually-funded systems, also gathering statistics of interest to the member countries, which are available on the website: www.fiapinternacional.org. FIAP’s publications include the Pension Notes, which are brief documents addressing different matters of interest in the area of pensions, some publications being: “A longevity insurance to contribute to financing old-age pensions in the Individually-Funded Systems” (No. 18); “Demographic trends make the PAYGO systems unviable” (No. 21); and “As the pension systems mature, it has become essential to improve the regulation and institutional framework of the decumulation phase” (No. 23).

INTRODUCTORY LECTURE



GLOBAL SCENARIO: DEMOGRAPHIC AND RETIREMENT CHALLENGES

ROBERT KAPITO ¹

- ¹ Robert Kapito earned a BS degree in economics from the Wharton School of the University of Pennsylvania in 1979, and an MBA degree from Harvard Business School in 1983. Currently, he is President and Director of BlackRock, and member of BlackRock's Global Executive Committee and Chairman of the Global Operating Committee. He is responsible for the day-to-day oversight of BlackRock's key operating units including Investment Strategies, Client Businesses, Technology & Operations, and Risk & Quantitative Analysis. Kapito is also a Director of iShares Inc. Prior to assuming his current responsibilities in 2007, Kapito served as Head of BlackRock's Portfolio Management Group. Prior to founding BlackRock in 1988, Mr. Kapito was a Vice President in the Mortgage Products Group at The First Boston Corporation.



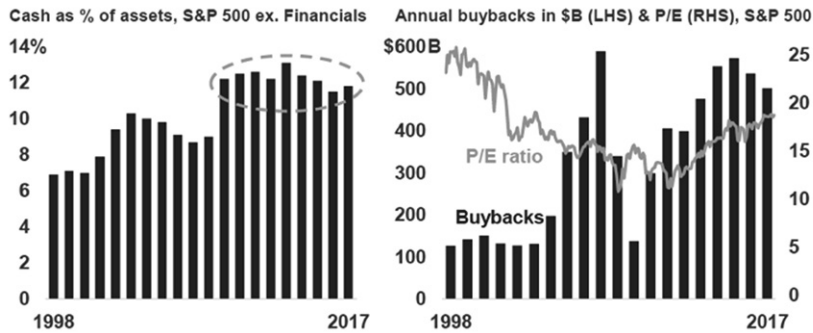
It is a very interesting world that we are living in right now. There are a number of trends that are greatly impacting the financial services industry and its clients. Particularly, investors are faced with:

- (i) The evolving market dynamics, marked by low interest rates and of course low returns.
- (ii) Demographic shifts, where people are living longer and the number of dependents is changing across various regions and that is especially relevant in Latin America.
- (iii) Political and regulatory changes that continue to reshape how we conduct business.
- (iv) Technological advances that are rapidly redefining consumer behavior and how we interact with our clients and the world around us.

What we are currently seeing in financial markets has no historical precedents. Investors have often relied upon stocks to generate returns and income, but recently earnings have remained relative flat and companies have a lot of cash on their balance sheets. As can be seen on the left chart of the Figure No.1, S&P500 companies are holding around 12% of cash and that compares with around 8% of cash 10 years ago. It might not seem substantial until we realize that this means over USD 800 billion of cash on companies balance sheet. Now, as can be seen on the right chart of the Figure No.1, these companies are not investing in the future, they're using their capital to buyback their stock and raise their dividends. Before the 2000's, valuation levels were driven by investors demand during a strong bond market, but now we have a situation where stock markets have been strong but corporations themselves are contributing to a significant portion of that demand and management always have a tendency to buybacks at the wrong time, when P/E ratios² of S&P 500 and margins are high.

- 2 *The price-earnings ratio (P/E ratio) is the ratio for valuing a company that measures its current share price relative to its per-share earnings. The price-earnings ratio is also sometimes known as the price multiple or the earnings multiple.*

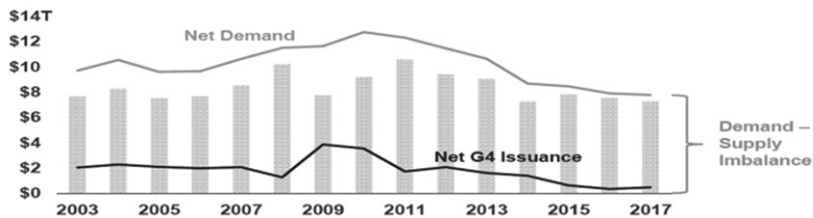
FIGURE NO.1
COMPANIES CONTINUE TO HOLD CASH AND BUYBACK THEIR STOCK



SOURCE: AS OF SEPTEMBER 2017. BLOOMBERG FOR CASH AS % OF ASSETS. STANDARD & POOR'S, HAVER ANALYTICS FOR ANNUAL BUYBACKS. THOMSON REUTERS, IBES FOR P/E RATIOS.

On the fixed income side, we can find that there is a great demand. As can be seen in the Graph No.1, the demand for fixed income investments remains high, overwhelming the lack of issuance.

GRAPH NO. 1
GROWTH OF SUPPLY AND DEMAND FOR GLOBAL FIXED INCOME IN USD \$TRILLIONS

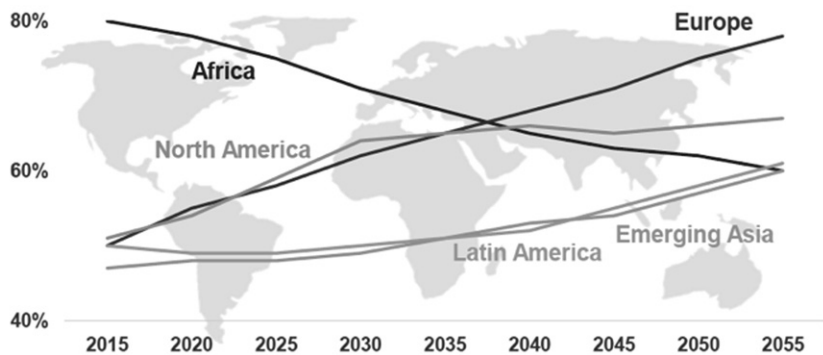


SOURCE: FOR NET DEMAND: BOJ, FED, ECB AS OF SEPTEMBER 2017. NET DEMAND INCORPORATES FIXED INCOME HOLDINGS FOR HOUSEHOLDS, CORPORATES, INSURANCE COMPANIES, PENSION FUNDS, SOVEREIGN WEALTH FUNDS, CENTRAL BANKS, FX RESERVES, HEDGE FUNDS, PRIVATE EQUITY, MUTUAL FUNDS AND ETFS. FOR NET G4 ISSUANCE: MORGAN STANLEY AS OF SEPTEMBER 2017. THIS ISSUANCE INCLUDES GOVERNMENT BONDS, CREDIT, (IG & HY), AND SECURITIZED PRODUCTS FOR THE U.S., EUROZONE, UK, AND JAPAN, NET OF CENTRAL BANK QUANTITATIVE EASING.

We all know that people are living longer, so we have to fund more years in retirement and that has become increasingly difficult. Many pension plans across the globe are underfunded and that is really sad because retirement isn't going to look the way people imagine it would. However, a larger working population relative to the total population creates a potential demographic dividend, providing an attractive window to accelerate economic growth. That is where there is a huge opportunity in Latin America, with the chance to play a part in turning that opportunity into real growth. If more workers are earning, saving and investing their income in a more dynamic economy, this ideally causes a ripple effect that helps increase standards of living and retirement readiness.

BlackRock has done substantial research on demographic dividends and potential opportunities, especially for Latin America. In fact, the BlackRock Retirement Institute partnered with the UN Population Fund just published a paper called "The Latin American demographic dividend". The research starts with dependency ratios (a measure showing the number of dependents, aged zero to 14 and over the age of 65, to the total population, aged 15 to 64). A lower ratio means fewer dependence per every working aged person and this means higher potential economic opportunity.

GRAPH NO. 2
PROJECTED REGIONAL DEPENDENCY RATIOS, 2015 – 2055



SOURCE: BASED ON DATA FROM: 2015 REVISION OF WORLD POPULATIONS PROSPECTS, UN POPULATION DIVISION, 2015, [HTTPS://ESA.UN.ORG/UNPD/WPP/DOWNLOAD/PROBABILISTIC/POPULATION/](https://esa.un.org/unpd/wpp/download/probabilistic/population/)

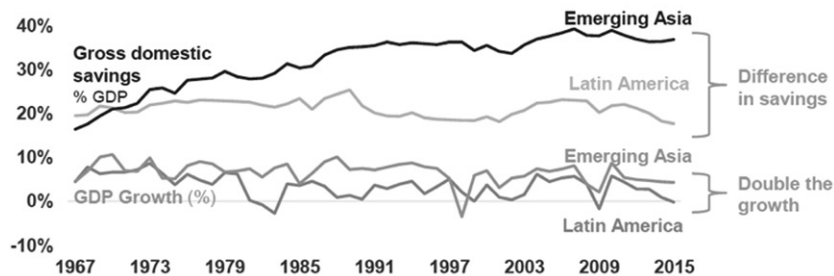
As can be seen in the Graph No.2, Africa has a higher dependency ratio, around 80% today, and is projected to improve significantly over the next 40 years. Countries

in Europe are expected to experience the opposite. And there are places like Latin America and emerging Asia, that are well positioned with lower dependency ratios and a slide of gradual increase.

The Latin American region overall, will experience favorable dependency ratios, compare to much of the world, through the next several decades, but in order to make the most of this opportunity, it is helpful to exam what happen since the demographic dividend begin 50 years ago. If we look little deeper, we can see that the countries within emerging Asia, which includes China, India, Indonesia, Malaysia and the Philippines, Thailand and Vietnam, provide an important comparison for Latin America, as these countries maintain a similar demographic profile. But despite these similarities, emerging Asia has experienced a stronger economic impact than Latin America, by better capitalizing on the demographic dividend (see Graph No. 3).

GRAPH NO.3

SAVINGS RATE AND GDP GROWTH RATE IN LATIN AMERICA AND EMERGING ASIA, 1967 – 2015



SOURCE: WORLD BANK DATABANK, GROSS DOMESTIC SAVINGS (% OF GDP), GDP GROWTH (ANNUAL %), 1967-2015, LATIN AMERICA & CARIBBEAN, EMERGING ASIA, [HTTP://DATABANK.WORLDBANK.ORG/DATA/HOME.ASPX](http://databank.worldbank.org/data/home.aspx)

The bottom portion of the Graph No.3 shows the GDP growth for both regions and while they might look similar, emerging Asia has consistently seen higher economic growth. In fact, emerging Asia average over 6.5% percent of GDP growth, over the 48 years showed, compared with 3.5% percent in Latin America, nearly the double. So, additionally, the two top lines of the Graph No.3 show a noticeably stronger economic impact, based on saving rates in emerging Asia versus Latin America. In emerging Asia, from the 1960's to today, the average savings rate grew from 15% of the GDP to about 35%, but here in Latin America, the savings rate stayed relatively



flat, around 20% of the GDP over the same period. However, if and though Latin America has struggled to translate demographic potential into economic savings, there's a lot of work that can be done today to improve those numbers. That work begins by increasing education and financial literacy. We need to educate and build trust with the people who live here. Today, less than 50% of adults in Latin America have an account within a financial institution, that number greatly impact all of us and it will be a large factor in increasing savings going forward. Further, about 25% of adults in Mexico feel they are financially literate, meaning there is a huge room for improvement in education.

The second task to improve savings and investments in Latin America is increasing women in the workplace. Making it more conducive for women to be in the work place is important; this not only helps with gender inequality issues, but also means there is a larger number of people that can save and invest in the local economy and for the long term financial savings. Having more working women could help prolong the demographic dividend and the benefits they come with it.

In third place, we need to shift to a savings culture in defined contribution (DC) plans. The experience has shown that if demographic shifts occurs, in countries with DC plans there are greater increases in savings rate that in countries with defined benefit (DB) pension plans. Automating savings and creating taxes incentives through DC plans also helps address some of the financial literacy issues and ease and shifting towards cultural savings. However, these DC plans require high enough contribution rates (in consideration of greater longevity and lower interest rates). For example, a mandatory contribution rate of 6.5% in Mexico is not going to do the job, especially considering the fact that not everyone consistently remains in the workforce for 40 years.

Finally, it is key revising policy and regulation and allow evolving investment solutions. This will allow to have better asset allocation options, offering citizens new type of products like lifecycle funds. These changes will allow people to better diversify portfolios and take more ownership of their financial future.

Ultimately, if people in Latin America know more about their finances and complain better for their future needs, it will help to trigger economic growth. There are a lot of different ways to encourage growth, and a combination of a few of this could really turn the demographic dividend into a meaningful economic growth.

That is why I am particularly optimistic of Latin America, there is so much that we can do, but we have to work together to move the needle. In order to be effective, we have to be aware of the other factors and trends. The world around us, which is affecting investors sentiments and behavior (and this includes political and

geopolitical headlines), has contributed to investor's uncertainty, particularly over the past years. The rise of populism has been seen around the globe, marking elections throughout the past 18 months from the US to Italy, France, Germany and many other countries, and from the investing stand point, the market responds to these political events, as often hard to predict. One thing we know for sure is that investors do not like surprises and there is often a temptation to react impulsively to big unexpected events. Therefore, no matter the outcome, it is our responsibility to encourage investors to stay invested for the long term. If investors goals have not changed, then they should not rush to make impulsive investment decisions because of a particular market event.

Additionally, new proposal regulations are driving significant change across the investment landscape. While the specifics of these regulations continue to evolve, we believe that fiduciary standards, greater transparency, lower fees and greater value are here to stay. This is because this shift is being driven by consumers expectations, just as much as by regulators, so ultimately, if regulations serve to enhance consumers confidence, promote more investing in the markets, reduce the amount of cash and setting in bank accounts, then this now should be viewed as very positive to everyone.

Today there is over USD 50 trillion in cash around the globe and a limited supply of stocks and very few bonds with the needed duration to buy. This should signal the environment that we are going in to, the need to have better investment abilities and the type of security we should buy, otherwise the returns that people need to retire in dignity will be affected negatively. Less but certainly not least, is the impact of technological investments and the rapid increase of what we call "big data" disrupting the financial services industry. The potential role that data plays in influencing financial markets is greater than ever before. There are 2.5 quintillion bytes of data collected each day, which is a really big number. But the real impact isn't driven by the amount of data that is out there, is all coming to how we use it and we interpret it. For example, today on average, there are around 4,000 broker reports produced every day, which equates to roughly 36 pages of material in 53 different language and now we actually have the ability to read all of this and we read it using technology. Artificial intelligence and machine learning have been hot topics for the last few years, not just on our industry. From Siri and Alexa, to IBM to Watson, analysis, X-rays, to call center support, to self driving cars, artificial intelligence is becoming part of normal life, more and more every day and while the spotlight continues to shine on this topic, it is critical for us to ask the right questions, so we are able to separate useful signals from noise.

Big data does not necessarily mean success, it just provides us with the bigger universe to test, which is why the combination of humans plus machines is so



important. I usually get asked if new technology is going to replace many workers jobs around the globe, but to me is more of an evolution of skills sets, knowledge and hiring practices, so while more tests will be done by machines, humans play a key role interning insights into meaningful actions, because despite the fact that our ability to collect data has come a long way, we still have significant improvements to make on how we are utilizing data effectively.

There are many examples of how the powerful is the combination of human plus machines. This combination has been impacting our lives for decades, to the point where machines have consciously become an extension of our own capabilities, and I'm not just talking about smartphones, so we're glad that airplanes have a pilot and an autopilot mode and when was the last time anyone has used a paper map to figure out where they are. We have accepted the use of machines in the past and we have to look at the future with the same kind of innovative lands and by embracing the combined use of technology and human skills, especially in investing, maximizing our potential to create better financial outcomes.

It is clear more than ever that we have to work together as partners, to push the boundaries and inspire innovation, so that we can take the financial industry to the next step. BlackRock is proud to collaborate with the leaders, asset managers, banks and regulators of Latin America, to help drive this change forward.

CHAPTER I

ACHIEVEMENTS AND NEW CHALLENGES OF THE DEFINED CONTRIBUTION PENSION SYSTEMS

AUGUSTO IGLESIAS. Some reflections and viewpoints pertaining the current status of the pension systems based on individual savings throughout Latin America.

VIEWPOINTS OF THE INTERNATIONAL ORGANIZATIONS, REGULATORS AND PENSION ADMINISTRATORS.

CARMEN PAGÉS-SERRA. Viewpoint of the Inter-American Development Bank (IDB).

MATHILDE MESNARD. Viewpoint of the Organisation for Economic Co-operation and Development (OECD).

OSVALDO MACÍAS. Overall vision of the Chilean Pension Superintendence (Chile).

CARLOS RAMÍREZ. Viewpoint of the Mexican entity known as National Commission for the Retirement Savings System (CONSAR, Mexico).

MARIANO UGARTE. Viewpoint of the AFORE Principal, Mexico.

JUAN MANUEL VALLE. Viewpoint of Afore XXI-Banorte, Mexico.

20 YEARS OF ACHIEVEMENTS AND THE CHALLENGES TO DEAL WITH IN THE COMING TWO DECADES.

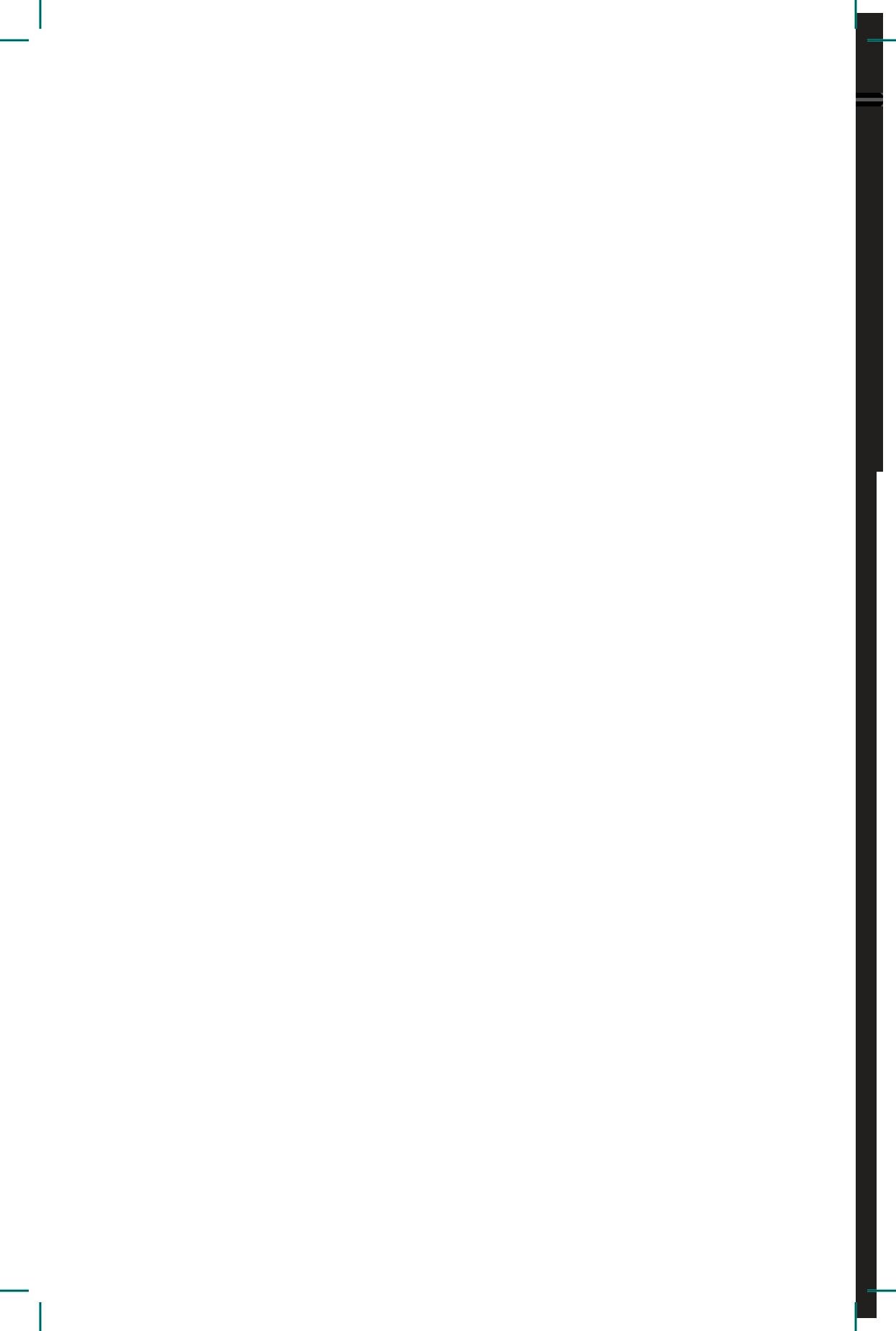
EDUARDO PARRA.

LUIS SAYEG.

EDUARDO VILLARREAL.

RODOLFO CAMPOS.

ENRÍQUE SOLÓRZANO.



SOME REFLECTIONS AND VIEWPOINTS PERTAINING THE CURRENT STATUS OF THE PENSION SYSTEMS BASED ON INDIVIDUAL SAVINGS THROUGHOUT LATIN AMERICA

AUGUSTO IGLESIAS¹

- ¹ *Augusto Iglesias is a Business Administrator, with an undergraduate degree in Economics granted by the Chilean Catholic University and a Master's Degree in Economics awarded by the University of California, Los Angeles, United States. He is currently a Partner and Director of PrimAmérica Consultores, a consultant company specialized in the areas of social security, insurance and finance. During his professional life, Mr. Iglesias has served as the Chilean Undersecretary of Social Security – in period ranging from March 2010 and March 2014 - also as the Studies Manager for the AFP Habitat pension management company, Research Fellow at the Centre for Public Studies (better known for its Spanish acronym CEP) and at the Institute of Economics of the Chilean Catholic University. He has also been a consultant to international organizations, including the World Bank, the IADB, ECLAC, and the United Nations; as well as serving with governments and private institutions alike. He has advised sundry governments on projects related to pension reforms. He was a member of the Presidential Advisory Council for Pension Reform in Chile during year 2006.*

In this paper some reflections are made, from a political economy perspective, focused on the current status of individual savings pension systems in Latin America. These are reflections based on my experience and track record of many years spent on the design and improvement of these schemes, and influenced by the way in which workers, their employers, political organizations and the overall public opinion do evaluate the first results of reforms, which culminated with the setting in motion of these systems.

Throughout the region, the individual savings pension systems are already coming of age. In fact, some have already reached and exceeded it (see Table 1).

TABLE 1
AGE OF INDIVIDUAL SAVINGS SYSTEMS IN LATIN AMERICA (UP TO YEAR 2017)

Country	The year in which the reform based on the individual savings approach was implemented	Number of years in which the individual saving systems have been enforced (up to year 2017)
Chile	1981	
Peru	1993	
Argentina	1993	Not applicable, the reform was reversed
Colombia	1994	23
Uruguay	1996	21
Bolivia	1997	20 (But undergoing a management nationalization process)
Mexico	1997	20
El Salvador	1998	19
Panama	2000	17
Costa Rica	2000	17
Dominican Republic	2003	14

SOURCE: THE AUTHOR'S OWN COMPILATION.

Although most of the new systems are already showing significant achievements, there are also linked to two noteworthy worrying weaknesses. The first one is that they are paying few pensions. Furthermore, the amounts of these pensions - and if reforms are not implemented soon, those that will be payable in future - are below the expectations of many workers; not to mention the fact the pensioners will become exposed to risks that are not inherent to any social security system. The second weakness is that such systems are being managed by companies whose value offer, paradoxically, is not valued by the customers.

Achievements of the new pension systems

Most of the individual savings pension systems in the region can already boast about important achievements. Among these outstand:

- *Its greater long-term financial sustainability* (in comparison to the "distribution" alternative). The financial adjustment mechanism of the new pension systems vis-à-vis the changes in life expectancy or the changes experienced by the country-specific economic conditions, does ensure their sustainability and long-term viability to a greater degree than any alternative solutions, chiefly the distribution-based systems.
- *Lower cost of pensions.* Nowadays, the production of each pension currency costs the reformist countries less than producing that same pension currency via an alternative pension system in which no saving funds are accumulated.
- *Its contribution to economic development.* In Chile, 8% of the economic growth observed between 1981 and 2011 (the last date for which a study of this type was produced), is explained by the pension reform implemented in 1981. In Colombia, in period 2006 - 2010, 12% of the economic growth is explained by the effects associated with the pension reform of year 1994. In Mexico, 13% of its economic growth in period 1998 - 2012 is due to the pension reform. In Peru, 6% of the economic growth from 1993 to 2011 is, again, accounted by the pension reform.
- *Better protection of pensions against political risks.* The transparency of the new systems and the close relationship they establish between contributions and benefits do represent a barrier against the manipulation of pension rules.
- *Greater equity and solidarity.* The new pension systems offer a greater degree equity and solidarity status than the traditional pension systems. As we all know too well, the individual accounts compel the financing of the necessary transfers aimed at improving the pensions of the poorest population brackets.

This is now arranged via the public budget and not - as was traditionally the case - by taxing labour. I am afraid the latter option taxes the lower-income workers.

Criticism to the new systems

Despite their important achievements, the new systems are currently facing strong criticism. So much so that in some countries the reform proposals which put in jeopardy their future development have gained strength. Moreover, in Argentina the pension reform has already been reversed (and a surprising fact is that this happened without much opposition from the public). Bolivia also is taking steps towards reversing an earlier pension reform. Indeed, a law has already been passed in Parliament which nationalizes the management of the cumulative pension funds; albeit the law still has to be implemented.

El Salvador came very close to reversing the pension reform (although finally, and with a huge effort, a few weeks ago a reform was approved which, together with the introduction of key changes to the system), still maintains its central elements. Finally, in Chile very radical reform proposals have been put forward, and which have attracted a significant popular and political support.

In part, this background-change situation is due to the political context of Latin America, which at the time gave impetus to the reforms but now is less favourable for them. In addition, many governments in the region are under strong pressure to improve the pensions currently undergoing payment; hence they are seeking to securing access also to the resources accumulated in private pension funds as a source of income for their own financing requirements.

But there is more to it. In my opinion, in most Latin American countries which have implemented pension reforms, the new systems have not managed to convince public opinion that they can pay good pensions and provide valuable services to their membership.

Why it has not been possible to convince people that the savings systems can pay good pensions? First and foremost, because very few people are being paid pensions (the effective coverage is low); and because the pensions which are being paid are below what people expected. In third place, because pensioners have become exposed to unnecessarily high risks.

Why are the affiliates not satisfied with the quality of the services they receive? Because they cannot identify/recognize what is the value being added by the pension fund management industry. Many of the advantages of the new systems vis-à-vis the

alternatives are not perceived by the workers, because they are essentially economic effects at an aggregate level.

The latter are readily identifiable by the experts who are customarily analysing comparative systems; or by those people who have followed the historical development of the pension systems and can appreciate the positive moves forward. However plausible, such positive steps still do not manifest themselves in a "pension experience" which meets the pensioners' expectations.

In the following paragraphs I will elaborate further and deeper on these comments.

The challenge of the old-age pensions

Low coverage

As I said beforehand, few workers are receiving pensions. This is due to a number of reasons.

1. *Low population coverage.* The labour markets in many countries throughout the region show a high degree of informality. In Colombia and Peru, which are the two countries with the oldest reforms and following the Chilean one, pensions are being paid to no more than 1% of the affiliates. In Chile, the pension system has been in place during the same period of time than those systems in Colombia and Peru but pays pensions to 5% of its affiliates' complement.

The new Mexican pension system - which has been operating for 20 years - is hardly paying any pensions. A widely held opinion is that the pensions' policy can do nothing to reduce informality, as this would be the result of a combination of cultural factors plus labour and tax policies.

However, in my opinion - and as I will try to demonstrate it later on - the pensions' policy does have an impact on informality, and the low coverage level recorded so far in many countries is explained, at least partially, by errors in the design of such pensions' policy.

2. *In most of our countries, the pension regulations impose conditions absolutely decoupled/ disconnected from the reality of the labour market.* For instance, in Colombia to be entitled to a pension, the would-be pensioner must contribute to the system during 22 years altogether, in Mexico during 24 years and in El Salvador and Dominican Republic the requirement is 25 years. In other countries, together with imposing the years of contribution requirement for accessing the pension, the accumulated funds to finance a pension must reach an equivalent to the minimum wage; otherwise the right to a pension is not granted.

3. *In sundry countries throughout the region, regulations allow for the withdrawal of funds for purposes other than a pension. Although workers are required to save for their pensions, they are still allowed to use the funds to finance other outlays ranging from unemployment, housing, sickness or marriage benefits. The extreme illustration of this type of regulation applies in Peru where, upon reaching the pension age, all workers are allowed to withdraw up to 95.5 % of their total accumulated funds, in a single payment.*

The old-age pensions do not meet expectations

The overall level of pensions paid during the first years of the new systems is low. That said, also the replacement rates (pension/salary) projected for the next few years work out lower than expected, even in the case of would-be pensioners with complete working careers (more than 25 years of contributions altogether).

Their projected replacement rates have reached, on average, between 25% and 40% of the last take-home salaries (for instance, in Chile, the future pensioners' expectations regarding a pension to be payable to them is, on average, equal to 70% of their last salary). This result is explained mainly because:

- i. As regards the pension objectives, with no exception the level of the key parameters of the systems (contribution rate and pension ages) is not consistent with the evolution of life expectancies of pensioners, the fund profitability rates, stock density and salary growth alike. For instance, in Chile, although the pensioners' life expectancies have increased by more than 40% since 1981 and the projected return rates have fallen by 45% in the last 25 years; the quotation rate has remained unchanged and so has the retirement age set when the operation of the new system began in year 1981.
- ii. In some countries, the investment portfolios are not well diversified (there is a high investment concentration on government securities and other documents issued within the country). Therefore, the investment regulation does not allow pension savings to be reversed in such a way so as to maximize returns.

However, the problem is much more serious in countries that have very low contribution rates (less than 10%), or very early pension ages (less than 60 years) and where there are no other relevant sources of retirement income.

Old-age pensions are exposed to unnecessarily high risks

Due to the condition of "defined contribution" status, in the new pension systems the workers do not know what level of pension they can finance with their accumulated

savings. This happens because some values which influence the pension's amount - and which do not depend on the worker's behaviour - are subject to steady/constant changes. In fact, the level of pension received by different generations of workers, whom may manage to accumulate the same level of savings, will be different.

Generations that enjoy higher rates of return will receive better pensions than generations that were punished by lower rates; the longer-life generations will receive lower pensions than the less long-lived generations. Thus, the generations retiring at a time when the "pension prices" are more favourable, will receive a higher pension compared to those who do so in worse circumstances.

On the other hand, as a result of imperfect regulations, pensioners in our region are exposed to unnecessarily high longevity, investment and solvency risks. Thus, pensioners under the pension mode of "programmed withdrawal" are exposed to the risk of the funds running out. Because of the characteristics of the portfolios where their funds are invested, these same pensioners are exposed to relevant investment risks. At the same time, a pensioner receiving life annuities is exposed to solvency risks of the companies concerned, because in many countries the regulations do not guarantee that they have sufficient assets to face adverse changes. Indeed, the conditions of longevity or return of assets which are very likely are altered when the administrators must pay pensions for periods of 25, 30 or more years.

In other cases, pensioners do not have access to pension modes which are better suited to their preferences and reality. Thus, in some countries pensioners are compelled to acquire a life annuity. This limitation can have regressive effects on the distribution of income, because higher income pensioners have a higher life expectancy.

In many cases the charging systems of this type of pension and the conditions of competition in the respective market, do not allow these differences to be reflected in the price of the product. In these circumstances, lower income pensioners end up paying for a longevity insurance cover which they may not need.

Other countries are forcing pensioners, in practice, to retire only under the modality of programmed retirement, leaving them unnecessarily exposed to investment and longevity risks which, eventually, they may wish to be protected against.

In many cases, state guarantees for pensions are also lacking. After the workers were compelled to contribute throughout their lives, the pension time arrives and, due to the lack of adequate protection instruments - as we have stated elsewhere in this paper - they become exposed to the solvency risk in the case of annuities or to the risks of inadequate management of funds in the case of programmed withdrawals.

The service challenges

Many pension fund managers maintain that their duty and responsibility is limited to "investment management" issues. But most affiliates do not understand the scope of this service which, for them is almost invisible. In the context of a mandated pension system, in real life the "portfolio management" grants workers no type of "service experience". They can only have a glimpse of this when they are offered information on the performance of their contributions, but even in this case, it happens only if they are able to interpret correctly what they are informed.

At the same time, the complexity of the pension systems and the decisions which remain under the responsibility of the affiliates, together with the risks they must assume, generates in them a sense of uncertainty and helplessness which the industry has not been able to cope by providing a proper answer. That feeling increases exponentially as the pension age gets closer. A young affiliate probably does not understand the system, although he/she does not have the feeling of helplessness, chiefly because his/her pension is a circumstance that is too far away in time.

But a 50-year-old worker, at 55 is already getting ready for retirement and begins to see that his/her pension may be half the income he/she was used to getting. That worker is afraid and needs support and advice that he/she is hitherto not receiving.

As a result of the two previous elements, the evidence suggests that throughout the Latin American region the workers do not value sufficiently the services offered by the administrators. It seems to me that this is a structural weakness of the new pension systems.

What should be done when responding to the pension challenges?

We identify three objectives and twelve specific actions which should be developed in response to what we have called "the pension challenge".

A priority objective should be to increase the benefit coverage of the new pension systems.

For this, it is essential to incorporate self-employed workers onto the pension system. This, in turn, will force our countries to set in place the pension contributions' collection mechanisms, chiefly via the tax system. Next comes the setting in place of the Voluntary Pension Saving (VPS). This can become an effective mechanism to save additional pension money, to the benefit of those workers who otherwise would not do so.

By the way, to achieve this goal we must think about a different approach to the VPS. In particular, we will need more flexible, low-cost saving programmes allowing people to receive benefits in advance of the pension. For example, a voluntary savings program allowing funds to be freely available, but also reserving, as the individual grows older, part of what has been saved exclusively to serve his/her retirement pension needs.

The third requirement is to remove the existing retirement hindrances. Removing the requirement of a large number of years of contributions must be accompanied, however, by both an increase in the contribution rate and the pension age alike. The fourth need is that using the mandatory funds for purposes other than the purchase of a pension must be limited.

A second objective is, of course, to improve the level of pensions. For this, it is necessary to increase the contribution rates and postpone the pensioners' retirement age. In this regard, I wish to emphasize that the great majority of the countries in the region must take these decisions as soon as possible. With the current parameters it will prove impossible to finance the pensions which many countries have promised and the population expects to receive.

Since it seems to be more difficult (politically) to postpone the retirement age than to raise the contribution rates, I am afraid the full weight of the adjustment cannot be charged onto the contribution rate. We must simultaneously advance in the development of incentives to postpone the age of retirement. Prior to the decision on the level of pension rates and ages, I believe it is necessary to set in place the replacement rate objectives.

However our systems, being a defined-contribution type, do not guarantee the payment of a defined amount pension type. That said, this does not prevent having an open discussion regarding what level of pension each individual wishes to have, conditional to the density of his/her contributions. Finding an agreement on what is the "pension ambition" helps to explain the costs of the possible objectives and, therefore, moderate the expectations.

A third objective should be to reduce the pensions risk. The quality of the regulations is the best protection against the pensions risk. Thus it is time to pay special attention to the regulation of the pensions schemes.

For many years the priority attention has been focused on the regulation of the different aspects of the pension system, but particularly related to the accumulation stage. Thus, today we know what features should be encompassed by a good set of investment regulations.

However, we know much less about the features of good regulations aimed at transforming accumulated savings into a pension flow during the de-accumulation stage. However and fortunately, there are some lessons we can resort to, and stemming from the experience of countries with more mature pension systems.

In the first place, in order to lower the pensions risk we must guarantee competitive and efficient pension markets, which should offer pensioners the possibility of choosing more than one type of pension. Next, we must ensure that updated life expectancy tables and "market rates" are used for both calculating the pensions and the constitution of reserves of the relevant life insurance companies.

Thereafter, it becomes necessary to develop mechanisms for protecting the longevity risk posed by the pensioners (in the case of programmed retirement schemes). In my opinion, it is not justified, in a compulsory pension system, that a worker who regularly paid during his/her working life becomes subject to the risk of early depletion of his/her savings during the pension period. Most pensioners are not able to individually manage this type of risk and, therefore, need the support of the regulation framework.

The fourth requirement calls for life cycle investment strategies to be implemented. Finally, we must begin to evaluate new pension designs which must allow us to offer basic guarantees of replacement rates, conditional to being in line with the contributions paid. Products of this type could help to significantly reduce the perception of pension risks.

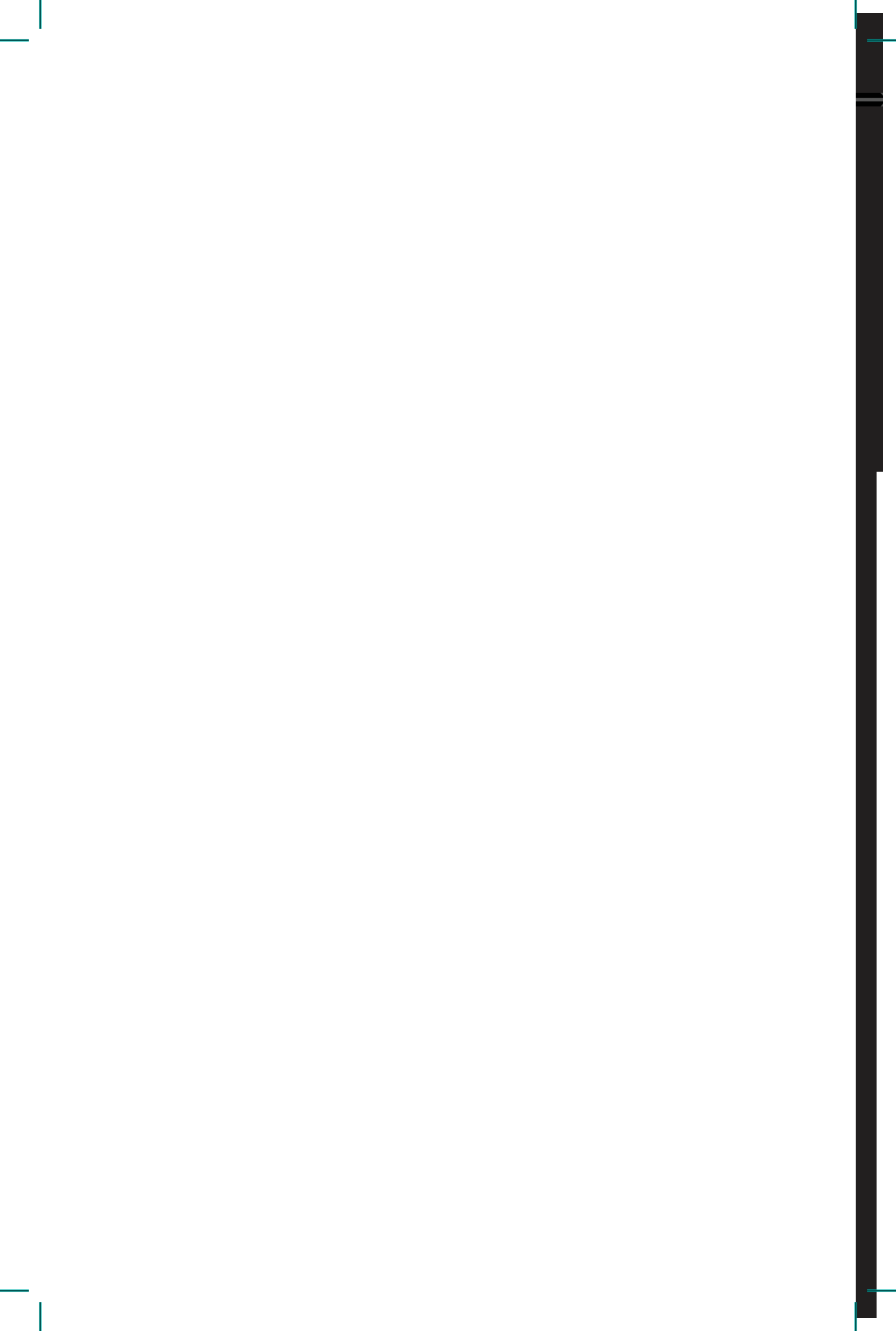
What should be done when responding to the service challenges?

As regards the quality of the service that the administrating entities are offering, my view is that it is not going to achieve a people's better perception if they persist in not supplying their affiliates with an "experience of tangible services". In other words, it is necessary to enrich the service experience of the affiliates and, therefore, increase their closeness with the administrators. One option is for the administrators to find ways for increasing the services' supply, by adding them to the existing ones in the pension area, for instance, a set of services for the elderly coupled with a health insurance coverage.

Along with the foregoing, the industry has the responsibility to devise and implement a process of changes aimed at improving the quality, timeliness and coverage of pension education. Also they administrators must improve the quality and timeliness of the information given to its affiliates, with a sense of "walking together" and "guidance" throughout their working life and not only in the years right before the pension age; while also creating reasonable expectations about future pensions.

Closing remarks

I have no doubt that we must continue advocating and defending the new pension systems, because they have done well to the countries that have adopted them. However, for this defence to be effective, we also have to ensure that these systems extend their existing coverage, pay pensions adjusted to expectations, do not leave pensioners exposed to risks they cannot avoid and be managed by companies that are prepared to build – together with their affiliates - a relationship of trust and values.



VIEWPOINT OF THE INTER-AMERICAN DEVELOPMENT BANK (IDB)

CARMEN PAGÉS-SERRA¹

- 1 Ms. Carmen Pagés-Serra holds a Master's Degree in Economics from the Spanish Autonomous University of Barcelona and a Doctorate in Economics awarded by the Boston University. Nowadays she is the Head of the Labour Markets and Social Security Unit of the Inter-American Development Bank (IDB). Prior to this position, Carmen was a senior economist serving with the IADB's Research Department. Before joining the IADB, Carmen worked - from 2004 to 2006 - as a senior economist on labour issues at the World Bank. She has published extensively in leading academic and policy journals, chiefly in the areas of labour markets, social security and productivity.*

I would like to begin my presentation by stating that at the IDB we are about to launch an analytical survey, which we hope will provide some insights of the diagnosis concerning the current status of pension systems and which we expect it will serve as a guide and yardstick to future pension reforms.

The most important message I would like to leave reflected here is that - without questioning the enormous achievements of the defined contribution systems - and while bearing in mind that for many workers, the pension funds are their main source of wealth; they are also an important contribution to the growth of the country - chiefly through project financing.

Because of the foregoing factors, it is very important we continue promoting reforms aimed at giving greater coherence to such systems; so as to ensure both they allow an increase in coverage and the average pension alike together with a guaranteed sustainability.

This is important because we at the IDB are very concerned about the current status of the pension systems. As part of the foregoing survey study, we have collected evidence on the three variables with which the success or failure of a pension system is bound to be judged: the coverage offered by the systems, the average pension which does guarantee/offer and the systems' sustainability along a protracted period of time.

As regards their coverage, such are very low. Indeed, 52% of the workers in the region are not contributing, and in Mexico the position is even worse since the number of contributing workers is only 37%.

How many people actually receive a fixed amount during their retirement? Very few, many people receive reimbursements of what they have saved during their working life but not a pension.

As for the pension adequacy, we also see imbalances. The defined benefit systems

pay on average 66% of the last salary, a percentage which could be rated as a good amount in international terms, but I will argue immediately that this amount is highly subsidized by the State; a fact we must consider. In doing so entails our ability to continue having these amounts as very committed now that we are witnessing a phenomenon entailing a very significant demographic change.

Nowadays it is easy to calculate the average replacement rate within the defined benefit systems because the rules are already in place, and it is a bit more difficult to calculate it in the defined contribution systems; chiefly because it will depend on the average profitability of the system and such is always an unknown feature.

However, taking a conservative return figure, say a 3.5% real net average, we get the replacement rate of the defined contribution systems as 44% of the last take home pay. This comparison is interesting since practically all the difference between the replacement rates of the defined contribution system and the defined benefit system is a state subsidy. Such estimates are based on the average numbers for the individuals who contribute to the pension system during all their working life and that is the problem; chiefly because those are very few.

We do not have very good figures yet for the region regarding the density of contributions, that is, what is the percentage of their active life in which people do contribute, but we know that it is a low figure.

In Chile, where we have some of the highest contribution densities in the region, with 50% of the people contributing during less than 30% of their active lives, which is worrisome because the replacement rate in such case is only 11%.

So, what we have nowadays are some pension systems, which, partly due to a widespread informality, will pay very low pensions, although the returns they are achieving are very high. The point I wish to emphasize is that the Pension Fund Administrators (AFP) will be judged for that, even if they reckon that fact it is not their problem.

So, the exhortation I would make is that we are all partners in this endeavour aimed at getting reasonable and adequate pensions for a vast majority of people, and with such pensions also being sustainable. For securing such objectives we, as IDB, we can assist with the supply of analytical studies, relevant evidences and exchange of experiences.

Please note that if these issues are not addressed properly, and if the relevant reforms are not implemented - however good the pension fund returns may become - it is a fact the systems will not be able to offer good pensions. Hence, the need arises for reforms aimed at increasing the contribution density.

Part of the problem we have is that practically no reform is being implemented, even though the numbers indicate that they are very essential; they remain unchanged despite the inexorable passing of time. Many years have gone by and there have been no changes in the key parameters of the pension systems (contribution rate and retirement age). Therefore, the systems are being damaged due to their sustainability or replacement rate they can offer and/or are likely to be affected by such factors.

As a last noteworthy point, I would like to mention we are having institutional difficulties to see the issue of pensions in a broad way. Everyone sees the problem of pensions from their own perspective: the AFPs and regulators see it from the private sector; sometimes the Ministries of Social Development see the part of non-contributory pensions and the Treasury sees what is relevant to it from the fiscal and likely revenue collection angles.

However, in many countries there is no one currently watching over the integrity of the system as a whole and such fact entails that at the end of the day, in my opinion, there are no reforms in sight and everyone wants the issue to be kicked forward and someone else to address it.

In conclusion, the sustainability of the systems will become increasingly complex. In countries applying mostly defined benefit systems, many difficulties are bound to surface when it comes to sustaining these huge subsidies.

On the one hand, just to give you an idea, in the distribution systems the current average subsidy granted per person amounts to approximately US\$ 81,000, that is, one individual contributes much less than what he receives from the system and such deficit, so to speak, is US\$ 81,000.

As a mere illustration example, the country where its system is most subsidized is the one still being applied is Mexico; where the current per person subsidy is US\$ 230,000. Such giant figure is obviously very difficult to sustain over time.

On the other hand, if no changes are introduced, the replacement rates will suffer heavily due to the defined contribution systems. In our estimates, due to demographic changes, the replacement rate can decrease, on average, from 44% to 10%.

There are very strong underlying tensions which, in turn, imply the need for adjusting the pension systems; both in their parameters and coverage alike. Such are tantamount to the collective need we must satisfy as governments, administrators, regulators and multilateral organizations.

VIEWPOINT OF THE ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

MATHILDE MESNARD¹

- 1 *Mathilde Mesnard is a French national and holds a degree in Philosophy, a Master's Degree in Finance and an MBA from the Ecole Supérieure de Commerce de Paris. She received her PhD in Economics from the École des Hautes Études en Sciences Sociales. Mesnard has extensive experience in the OECD, having been the coordinator of the New Approaches to Economic Challenges (NAEC) Initiative since 2013. In this position she supported the development of thirty innovative projects across the Organisation, promoting new approaches and outlining research directions. Prior to this, she has worked as Senior Advisor to the OECD Secretary-General and Counsellor. From 2001 to 2009, she worked in the Corporate Affairs Division of the Directorate for Financial and Enterprise Affairs of the OECD, where she led and contributed to a number of projects on corporate governance in different jurisdictions.*

I am going to refer to the challenges that are facing defined contribution pension systems. Pension systems, whether they are Pay-as-you-go or Defined Benefit (DB) or Defined Contributions (DC), whether they are voluntary or mandatory, they face these challenges: ageing, low fertility rate and low interest rate environment. The increasing life expectancy implies that you have an old-age dependency ratio that is higher and it is increasing very quickly in some countries. As for the low interest rate environments, this means low growths of pension assets and low returns.

What are the implications for these main challenges? For the Pay-as-you-go systems, obviously there are sustainability problems, because the higher dependency ratios and the increasing life expectancy implies solvency problems. For DC systems these challenges imply definitely inadequacy problems and low replacement rates: the level of pensions that people receive compared with salaries in some Latin American countries are very low.

With this environment of population ageing and low returns in general, the main challenge for DC systems is to provide adequate pensions. That might be not as high as people expect, that was also mentioned, putting at risk the capacity of the pension system to really provide an adequate standard of living in retirement. The solution is to contribute more and for longer, that's not nice to hear but there is no magic bullet. Unfortunately, the political discussions around the reforms of the pension systems, have been focusing almost entirely on increasing the retirement age which is good but not enough and sometimes on going back to Pay-as-you-go systems.

Increasing the retirement age is part of the solution but is not enough. Of course, retirement ages should be increased but this will address the impact of increasing life expectancy and not the impact of low rate of returns. For example, if in DC pension arrangements contribution rates are higher than 10%, it gives a replacement rate of 65% only if we can get an average return on investments of 8% over 40 years of contributions, which is far from being the case today. So today, even we increase the retirement age to have a dependency ratio constant, with the current rate of the tools on markets, with a contribution rate of 10% we only can get a replacement rate

of 45%. In Mexico the contribution rate is even lower than 10% these days, and that means that even if we increase the retirement age, we won't get adequate pensions.

Whether moving back to Pay-as-you-go is the solution to our problems, that is kind of an illusion because in some countries, including my own country, in France, where we have a Pay-as-you-go system, we have higher pensions for the time being, but also, we have higher contributions. The average contribution in France is around 20%-25%. So, it is not the fact that we have Pay-as-you-go systems, it is the fact that we have higher contribution. Therefore, the solution for DC contribution systems, is not to go back to Pay-as-you-go systems, it's to increase the mandatory contribution rate.

The general OECD recommendations on pension systems are to diversify the source of finance for retirement and to combine public and private pension provisions. Specially regarding the DC pension systems, what the OECD recommends is: (i) to establish a basic social pension to bring everyone in old age to a certain level of income, which is decided in a national level and is funded from the general taxes; and (ii) to improve the design of the systems. Regarding the second recommendation, the OECD has developed a roadmap for a good design of DC arrangements.

The roadmap for a good design of DC arrangements

First, we need to have a coherent system, globally and internally. That means the we need to look at the relationship between accumulation and retirement phases and also monitor all the risks faced by members. Regarding the accumulation phase, of course, we need to increase the contribution rate, and one way to do that is to link increases in contributions to increases in wages. We also need to contribute for longer, for example, by postponing the retirement age. We could also use default options and to provide good incentives to contribute (for example, the focus on incentives to contribute for informal workers is a very important topic in Latin America). We have also to address the issue of the cost of administration charged to members in the systems (we have good examples in Chile, with the auction system).

Also, we need to improve the design of the accumulation phase. That means for example, introducing default investment strategy based on the lifecycle, so that we can reduce the risk of suffering a big drop in income just before retirement. Also, this means we need to improve the structure of the retirement phase and one example is to introduce by default deferred annuities, that we can buy at the time of retirement but payment begins around 80-84, so that we have a longevity risk coverage. The idea is to reach a balance between flexibility, liquidity and protection from longevity risk.

So, all these good advices should help to have more adequate pensions in the case of DC systems, but the base is contributing more for longer and work longer.

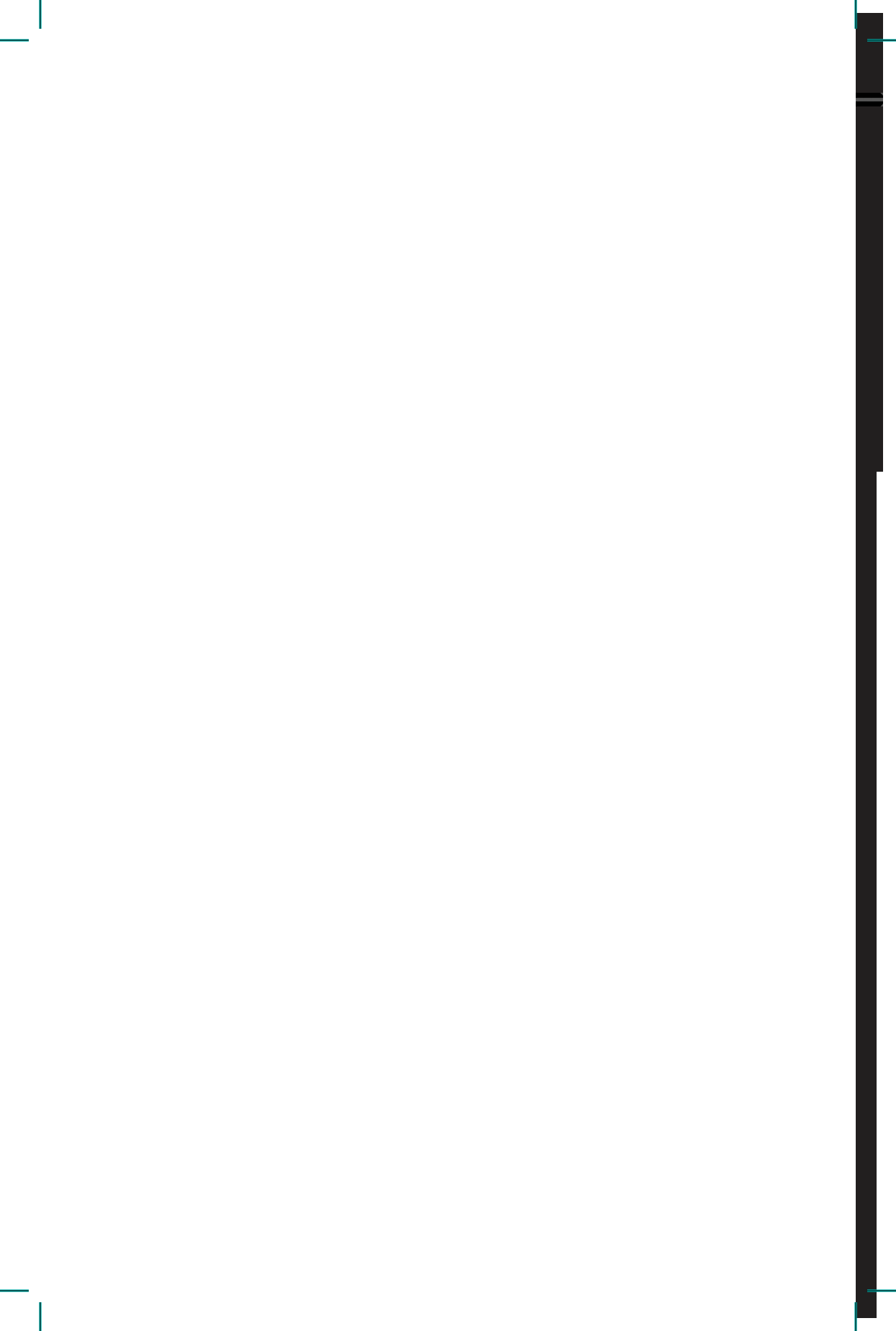
I will finish my comments with just a few words about the challenge that we have not discussed a lot, and this is referred to the challenge of the digital economy.

The digital economy is becoming a reality and it poses a lot of challenge to all policy areas including finance but pensions in particular. What we see is the development of digital applications related to pensions. We have a lot of opportunities but also, we have some risk that we should be careful about, in terms of opportunity. Of course, these applications can encourage an increase of the coverage in the pension system which is very welcome specially in Latin America, so more people will save for pensions which is a good thing. It could also facilitate more exposure to equity markets in terms of investment of our retirement savings, which is also good because this more returns and better pensions. It can also help in increasing the portability of the pension plans, which is very welcome too; we could improve the personalization and we could improve the communication with the members of our pension plans. These applications might also facilitate an easier comparison of pension products, generating a healthy competition in the pension landscape which is good thing. And last but not least, if we use the big data and the new algorithms we can reduce errors and to improve market search and project designs, to provide better instruments of investment and to improve the risk management. Also, and that's an important point, we can improve the supervision on the pension system.

So, there are a lot of opportunities that could become reality with the digital economy, but there are some risks that we should really pay attention too. Of course, with these applications it becomes very easy to invest and make decisions, maybe to invest in unsuitable products which are appropriate a device from a pension advisor. We could have a lack of attention and engagement in our pension investment decisions and we have a very inconsistent consumer protection across borders so they might be dangerous and difficult to supervising. And then we might have also a risk of financial exclusion, especially for the elderly, and because speaking of pensions that's an issue for the low educated people. And last but not least, we have the cyber security risk, which is growing as we all know and there is a specific trick to the pension debate, because if people feel that there is an increasing cyber security risk, they might lose their trust in the pension system and this could lead eventually to less pension savings, which is a very bad consequence.

So, to summarize, some of the brought lessons that the OECD investment and private pension committee as brought on, for the pension system, especially for the DC system, is that we have big challenges ahead, even more in Latin America than in other countries. These challenges are into population ageing, low returns and

the digital economy. Some reforms are obvious to everybody but are very difficult to implement in terms of political economy (like contributing more for longer). We have a lot we can do in terms of a better design of the DC pension systems and there are some new risks that we should really be careful about the digital economy, in terms of financial exclusions, consumer protection and cyber security.



OVERALL VISION OF THE CHILEAN PENSION SUPERINTENDENCE

OSVALDO MACÍAS¹

- ¹ Osvaldo Macías is a business administrator graduated at the Catholic University of Chile and holds a Master's Degree in business management awarded by the Adolfo Ibáñez University. He is currently performing as the Chilean Pensions Superintendent. In period 2003 - 2016 he served the position of insurance supervisor at the Superintendence of Securities and Insurance (SVS) and prior to that, was Head of the Surveys Division (1994-2003) and Financial Analysis and Control (1990-1994) of the former AFP Superintendence.

Nowadays in Chile we are witnessing moments of great turmoil concerning the issue of social security pensions, which appears to be the second most important worry in the minds of many Chileans. In fact, according to a recent and reputable survey, such concern even surpasses other pressing issues such as health and education.

It is important to start with our overall diagnosis about the status of the Chilean pension system. On the one hand, we have witnessing a steady decline in the returns on the investments undertaken by the pension funds. The historical measurement records for the past 35 years show a return of investment in the region of 8% over inflation, which is a good figure. However, these returns have been falling drastically in recent years with the obvious adverse impact on the pensions' levels.

A second very important issue has to do with the rise in life expectancy, which is a worldwide phenomenon. In Chile we are living longer, far more years than before. Following its setting up in year 1981, the current system is now having to cope with a life expectancy which, on average entails eight (8) more years. Therefore, its financial cover requirement must stretch over such extra 8 years.

As regards the contribution densities, they are really a very important factor. In Chile, the would-be pensioners are contributing to a 52% of the time they are affiliated to the pension system and, therefore, 48% their non-contribution period is 48%. That said, the savings achieved are not enough to finance pensions. In addition, in Chile the pension contribution rate is 10%, which is well below the equivalent average rate prevailing amid the OECD countries (18%).

All the foregoing delivers a predictable result: the resulting pensions and replacement rates are much lower than what most people are expecting. But this is not all, there are also other hindrances and difficulties. To start with, independent or self-employed workers are not required to contribute to the system and therefore do not do so; less than 10% of such workers are regular contributors.

The second tricky issue is that women have to contend with a more complex

situation than men: they live longer than men, their contribution period is more reduced - and therefore have smaller contribution densities - and their wages are also lower. As a result, pensions and replacement rates for women are underneath those for men.

A third burden factor we have noticed is that the contributors have very little knowledge of the pension system; to the point of being regarded as almost illiterate. They know nothing on how the system works, and only in the past 2 or 3 years have they grown increasingly concerned with the issue. And that is a problem that must be overcome soon, simply because people cannot adopt good decisions for building better pensions; simply because they have no idea how the system works.

Nowadays, the replacement rates in Chile are in the region of 40% of the last wage (on average), and the average updated amount of all pensions is USD 366. Undoubtedly, this is a very unsatisfactory result as opposed to what people expected from a system like this. Mr. Augusto Iglesias accurately stated that people expected to obtain a replacement rate of 70% of the last wage, so the gap between the expected replacement rate and the effective rate does not work out as a mere pittance.

What can we do with this overall picture? I think no one can argue that there is great dissatisfaction, and we know the reasons for it. The discrepancies have already showed up on how to implement the reforms which must be carried out. There is no doubt that reforms on this score must be made, but the solutions put forward by different public figures are very far apart from each other. That is, there is no consensus on which the right approach is. It was only recently - during August 2017 and by the government of Michelle Bachelet - that a pension reform project was enacted and sent to Parliament. It is a wide-ranging draft paper aiming at an increment in the pensions straightaway, and much more enhancements to follow in future.

What does it mean to increase pensions now? It means raising the pensions of those who have already gone on retirement, because their magnitude is unsatisfactory.

Where would the money come from to finance such pension increments? The foregoing draft reform paper was presented with a fundamental restriction: it did not commit any more fiscal spending, since the Chilean Central Government is not in a position to afford such a commitment.

The reform entails a large number of components. First, it improves the system of solidarity pensions, the system of individual capitalization and voluntary savings alike. Second, it creates a new collective pension savings system, which complements

the current individual capitalization scheme. Nowadays, the individual capitalization system is administered by the Pension Fund Administrators (AFP), and the worker's contribution is 10% of his take-home pay.

The draft bill encompasses also – and to be set up next to this system of individual capitalization - a new "Collective Pension Savings System", which would no longer be managed by the AFPs, but by a State-owned entity to be known as "Collective Savings Council" to be set up with this specific purpose. Like the capitalization system, the aim of the Collective Savings System is to maintain the standard of living of the would-be pensioners when they retire; that is as close as possible to what was their last wage level and payable to them during their active time.

The third suggestion of the reform introduces intergenerational solidarity components (from active people to pensioners), intragenerational solidarity (from those who earn more to those who earn less), and gender (from men to women). The reform is to be financed with 5% of the salaries, but this time payable by the employer, not the worker. The benefits obtained in the new system will depend on what the person saves, but also on the solidarity rules of the system.

There is a new contribution of 5% of the wage, paid by the employer and the worker which is entered onto a collective savings system administered by a State entity. This 5% is split in two fractions: 3% goes to the individual savings accounts, which are identical to the accounts managed by the AFPs, but this time managed by such State entity; and the remaining 2% is divided into 3 segments: one of intergenerational solidarity, where active contributors subsidize or benefit the pensioners; one for the financing of the "woman bonus" (the woman's pension is calculated with the life expectancy table of a man. But with the average women living longer than men, there is a delta in money or "woman bonus" which is necessary to compensate them); and finally, what remains to be allocated is for intragenerational solidarity (is divided among all contributors and goes to the personal saving accounts).

Thus, the foregoing 2% has approximately the following distribution: intergenerational solidarity occupies about 1% and increases pensions by 20%; and intragenerational solidarity and the woman bonus take up about 0.5% each. With the woman bonus, then the pension money coming from the flow of new pensioners could increase by 14%. The intragenerational component goes to the individual savings account and benefiting the low-income contributor who will receive higher amounts.

What is expected to achieve with a reform of this kind?

First, to increase current pensions by 20% for all beneficiaries. In the case of women

soon to go on retirement, it would increase their pensions by 20% plus another 14% - on average - with the woman bonus. So, would-be pensioners could see a rise of their pensions by 34%.

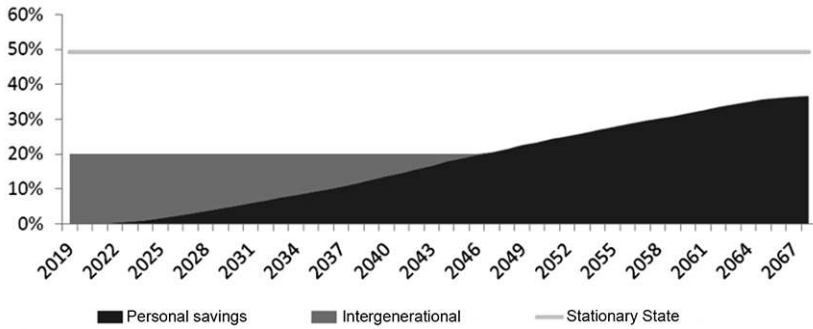
The intragenerational component will distribute the money coming from high incomes onto relatively low-income levels, and women's pensions will increase more than those of men. In the short term, the intergenerational contribution, which increases pensions today, represents the greatest benefit.

While the pensioners receive an intergenerational contribution, the increase in their pension will be a maximum of 20%. As they begin to accumulate it together with their personal savings account, they will exceed the 20% ceiling. In the long term, in an unchanged status, pensions should rise by almost 50% (Please see Chart 1).

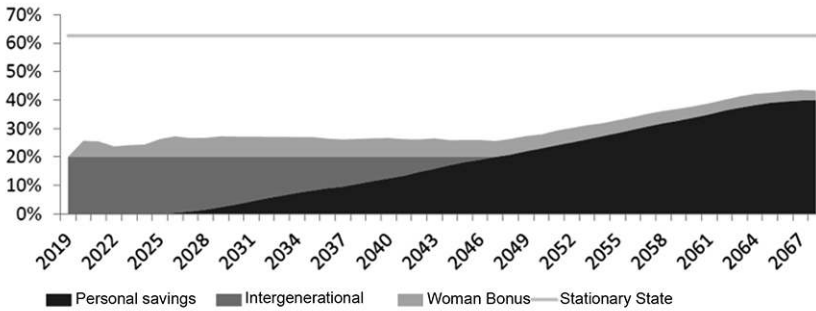
CHART 1

ESTIMATED PERCENTAGE INCREMENT STEMMING FROM REFORM SUGGESTION VIS-A-VIS THE SELF-FINANCED 10% PENSION

Average income (man)



Average income (Woman)



SOURCE: THE AFP SUPERINTENDENCE. AVERAGE INDIVIDUAL ESTIMATES.

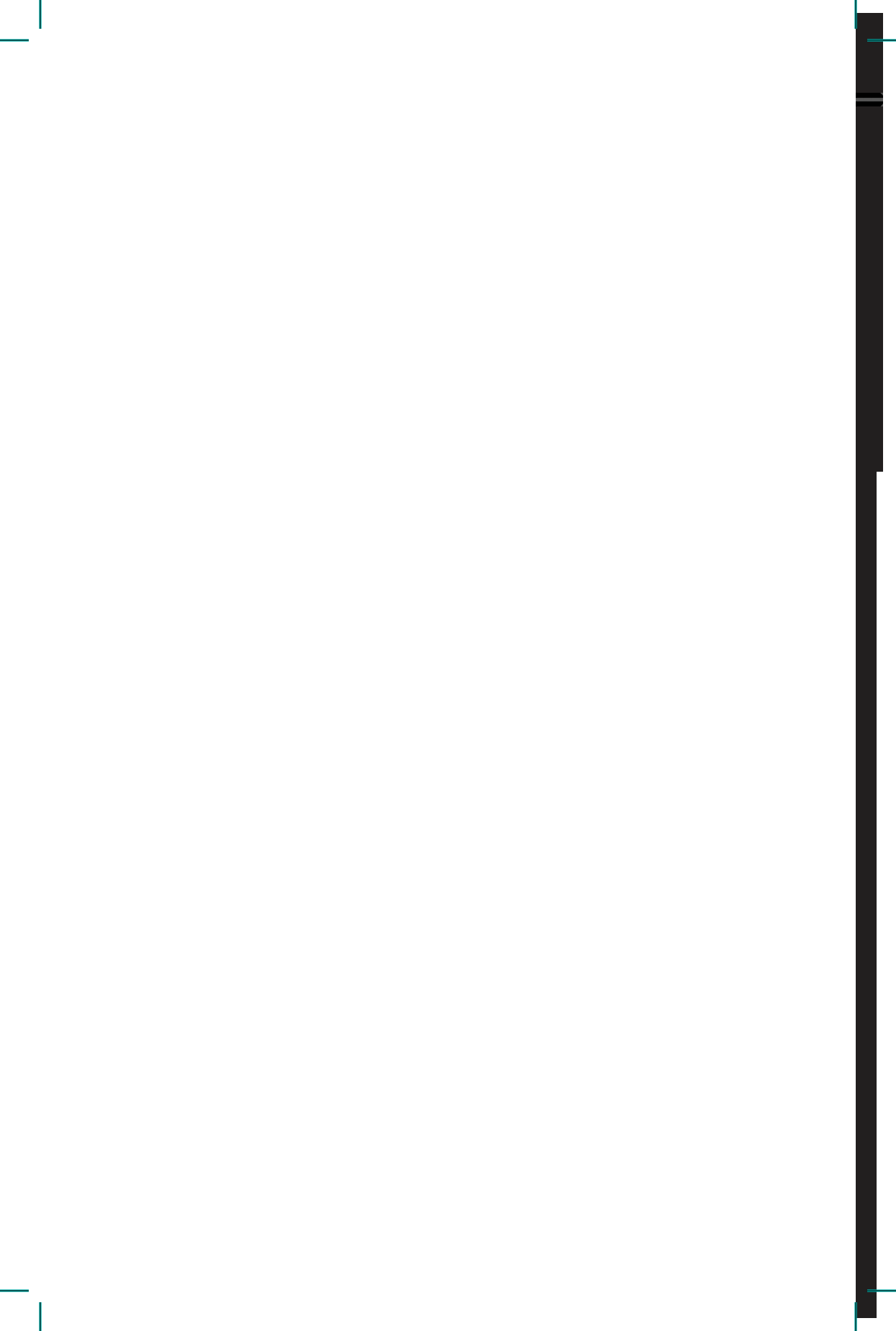
The draft bill is very lengthy and tries to tackle all the problems which have been detected. In this bill the independent or self-employed workers are compelled to pay their social contributions and issue fee tickets. Also, it introduces an insurance to cover all the so-called “absence of contributions” (locally known as “lagunas

previsionales”). When a worker is laid off in Chile, he receives a severance benefit; with this draft reform it is intended that this insurance also operates to cover the pension contributions of the unemployed.

The tax cap for pensions is increased; as well as a comprehensive assurance cover is introduced to benefit the people. All those pensioners who choose the scheduled withdrawal option nowadays must put up with steadily declining pensions; with this reform a longevity insurance is set in place and, therefore, those who have a programmed retirement - and are rated within the 60% most vulnerable bracket of the population - will now have a fixed pension. Thus, their degree of uncertainty regarding their pension must drop.

The market for annuities is also compelled to face more competition; and the regulation of the individual capitalization system is to be amended in the following areas: (i) greater competition and efficiency in the funds’ management and transparency; (ii) strengthening of the bidding of affiliates and introducing a single system for collecting the pension contributions and abate tax evasion; (iii) allowing a greater participation of the affiliates at the pension system; (iv) improvement of the Multi-Funds System; (v) set in place a compulsory mandate for the AFPs to implement pension education initiatives; (vi) strengthening of collective voluntary pension savings through new incentives; and (vii) enhancements to the regulations applicable during the retirement phase.

In short, it is a project advocating a legal change of enormous importance and a sizable magnitude, aimed at sorting out the imperative need to increase pensions. We are convinced that Chile has its systems enjoying sound and healthy foundations and, therefore it is possible and feasible to introduce amendments and reforms. I think we have taken too long to do it and it would be wrong for other countries – in which systems of this type are likely to be introduced – to commit this same mistake. Such other countries should make their own reforms soon; with a sense of urgency.



VIEWPOINT OF THE MEXICAN NATIONAL COMMISSION FOR THE RETIREMENT SAVINGS SYSTEM (CONSAR)

CARLOS RAMÍREZ¹

- ¹ Mr. Carlos Ramírez Fuentes has a degree in Economics granted by the Autonomous Technological Institute of Mexico (ITAM) and in Political Science from the UNAM. He also holds a Master's Degree in Economic Policy from Columbia University, and another Master's Degree in Public Policy from the London School of Economics. He has a long career in public service, where he has served as Manager for Social Communications and Speaker in Pemex; Deputy Director General of Dissemination and Institutional Liaison at CONSAR; Director of Strategy and Institutional Communications at the Ministry of Finance and Public Credit (SHCP); Chief economist of Mexico at Casa de Bolsa, Banorte. On the Academic area he has also been a professor for Economics and Political Science at ITAM. Since 2010, he was the leading consultant in Mexico for the Eurasia Group, whose headquarters are in Washington DC. In 2013, Mr. Ramirez was appointed President of CONSAR.

In their diagnosis, Ms. Carmen Pagés and Mr. Osvaldo Macías made abundantly clear two lessons for Mexico. The first one is that delaying reforms has significant costs. In the Chilean case the system was set up in 1981, and the first major reform which was introduced in that country took 26 years, even though the limitations of the system were known.

The reforms are complex and do require the support of many groups and sectors and postponing them entails costs that may not be felt in the short term, but they will certainly grow over time.

The second reflection has to do with the political economy of the reforms. As a general comment we can say there is little appetite for reforms throughout Latin America. The fact that a government must decide on implementing a pension reform entails a significant political challenge, because the benefits of these reforms will not be observed until a decade or two into the future. But not to do so may well bring an unwelcome consequence of eroding the legitimacy of the system itself. Therefore, it is vital to bring all stakeholders, the labour sector, the business community, the government and, particularly, the workers to be fully aware of the risk of postponing decisions.

The regulator has a role to play, and in Mexico - facing the presidential elections this year - it is very important to make clear to all political personalities the relevance of this issue; so that a diagnosis can be adopted soon and get moving towards a reform, which we all know, is urgent.

VIEWPOINT OF AFORE PRINCIPAL, MEXICO

MARIANO UGARTE¹

- 1 *Mariano Ugarte holds a degree in Business Administration awarded by the Chilean Universidad Adolfo Ibañez and a Master in Business Administration from the Harvard Business School. Since May 2016 he has performed as the General Director of Principal Afore in Mexico. His career in Principal began in 2005 while in Chile and where he reached the position of Director of Marketing and Sales for all their lines of business. While in the latter position he also was a regular lecturer at the Business School of the Chilean Universidad de Los Andes.*

A tremendously important issue is to further advocate the involvement of the affiliates in the process of improving pensions. In this issue, the Pension Fund Administrators have a great responsibility, via improving the level of communication they have with their affiliates; this in order to giving them a clear idea of what their pension situation is nowadays.

We are all fully aware that, if you do not save more than 6.5% in the individual account, the true fact is will be very difficult to secure a good pension, but that is not the expectation most people have. People do not know how these processes of long-term savings and accumulation do work, and it is the duty of the Administrators to brief them in no uncertain terms.

The foregoing is a primary responsibility. If we want the affiliate to be further involved in the process of his/her pension, we must clearly communicate to them what his/her situation is.

The second responsibility has to do with how to properly design the regulation. There are more general regulatory changes, which obviously can improve the accumulation process, such as increasing the contribution rate or allowing for certain incentives aimed at improving voluntary savings. But this general regulation can also have certain more micro-impacts, if they are focused on changing the behaviour of people, or on breaking certain inertial trends which people suffer from whenever they have to start saving.

For instance, in the United States, a fraction of the benefits and achievements of the 401k plans have not only been associated with generating tax incentives for companies (this was the initial step which was implemented); but there were also regulatory changes which allowed the so-called "*self-enrolment*".

VIEWPOINT OF AFORE XXI-BANORTE, MEXICO

JUAN MANUEL VALLE¹

- ¹ *Juan Manuel Valle is an economist graduated from the Instituto Tecnológico Autónomo de México (ITAM), who also holds a master's degree in public policy and economics from Princeton University. He is currently the General Director of Afore XXI-Banorte. He has held sundry key positions in the Mexican financial system, with a track record close to 20 years' service in the public sector. He has served as executive director of the Mexican Agency for International Development Cooperation (AMEXCID); responsible for the financial regulation agenda of the Ministry of Finance and Public Credit (SHCP). Other of his noteworthy positions are: member of several international organizations, ranging from the Global Partnership for Financial Inclusion of the G20 and the Working Group on Protection of Users of the Financial Services within the Organization for Economic Co-operation and Development (OECD).*

I have no doubt that the people should have the pension issue as their priority and we all have to do something to generate such awareness. This discipline must be instigated when people are undergoing their schooling phase, that is from their early childhood. We must undertake a first effort, as Carlos Noriega stated beforehand, with the publication that will become part of the pilot plans in some schools; all this within the context of the educational reform in Mexico.

For many years we have been advocating for a steady financial education to be included in the evaluation of the PISA test of the OECD. The response from the education authorities is that it will go very badly, but such factor should give us a further impetus aimed at rectifying this matter's course; chiefly by creating good habits amid the people and ranging from planning to saving habits.

Some things have to be amended and, no doubt, other aspects are our responsibility. The authority has given us the tools and vehicles, such as voluntary savings or the AFORE Móvil, to send messages onto the people. By focusing on the design of the information we must provide, so as to ensure they know their current status and where they are likely to be in the future with the suggested changes in our savings' habits.

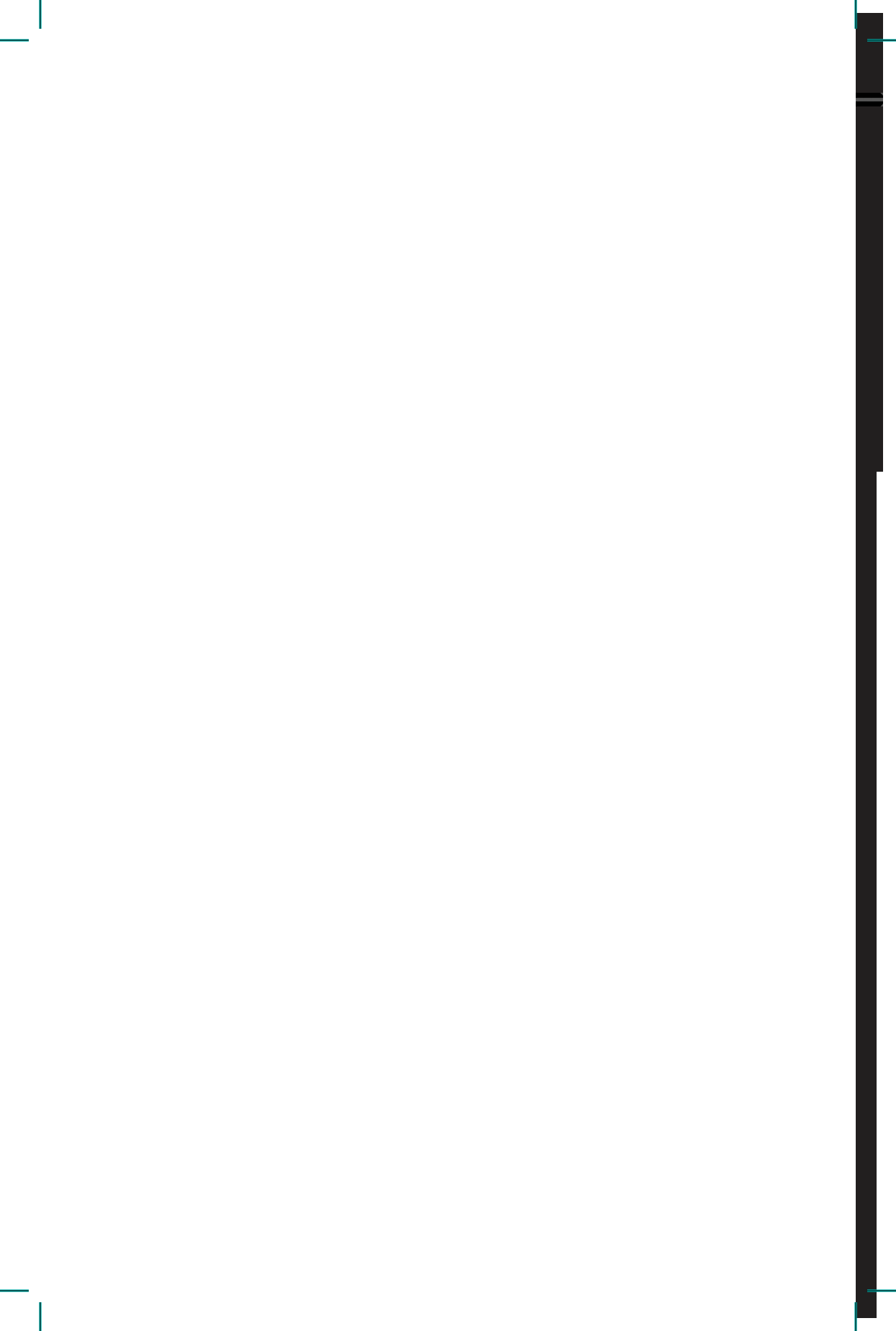
I agree that the subject of the contributions must be discussed, although I am not so insistent. I think there are several things that are already inserted in the equation, and I believe that accommodating them better we will get much better replacement rates. The informality aspect is much more worrisome, which is not only a problem confined to the pension system only, but to the whole economy.

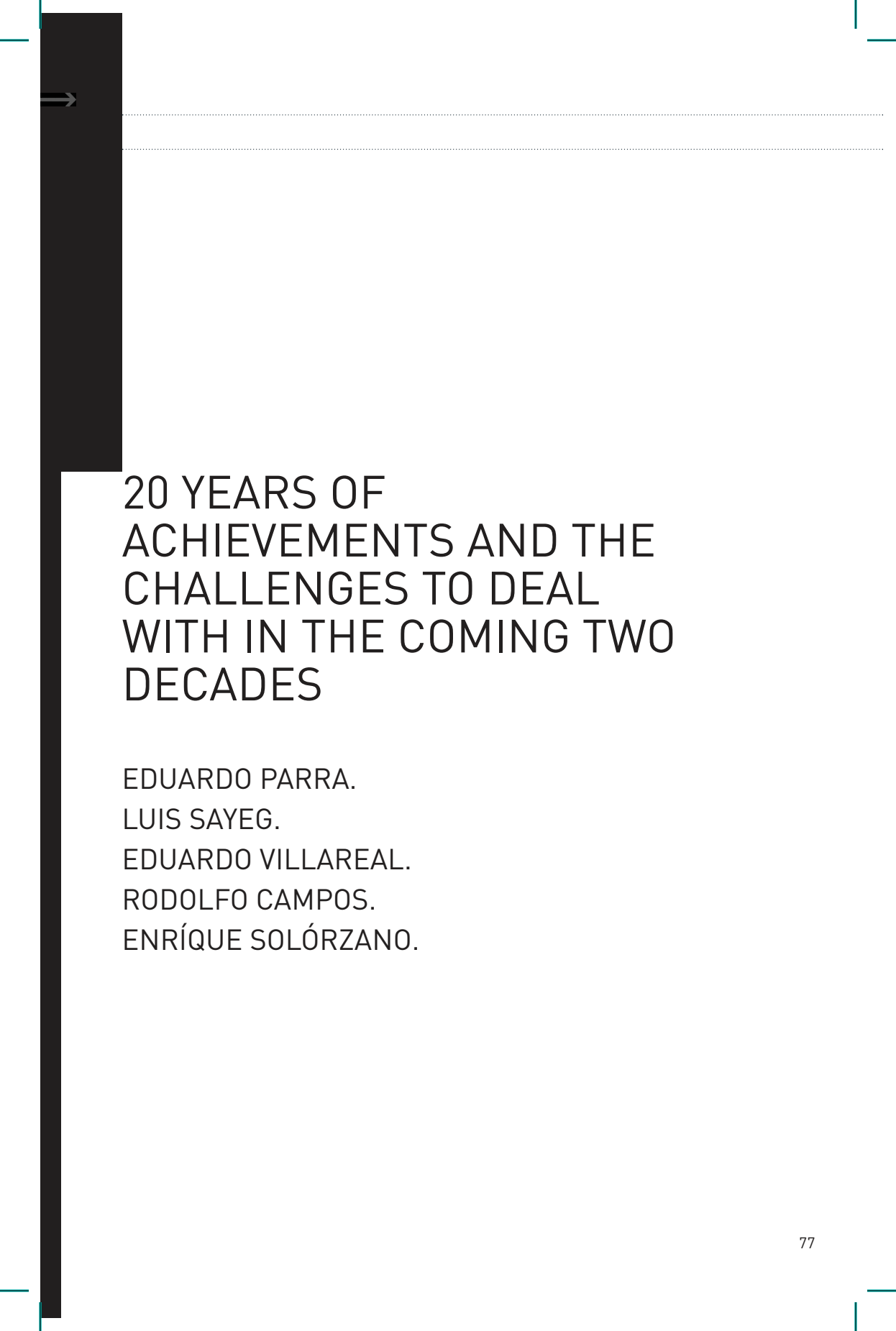
The Secretary of the Treasury mentioned this issue in past few days, when he stated what must be done is curbing down informality and removing much of the importance we currently allocate to cash.

What would happen if here in Mexico we only printed 20 and 50 Pesos notes, and we forget about the 100, 200 and 500 Pesos equivalent notes? What would happen with informality and with many other bad practices related to the use of cash?

I believe the role that all administrators have to play is crucial in supplementing many efforts undertaken by the authority, but also being self-critical about how we do things, how we build this link with our affiliates; who are been supplied every day with information aimed at helping them in such key decision-making stage.

The affiliates must have the elements enabling them to make their decisions, and we are the first ones to tell them that if they do not make an additional saving effort, they will not be able to reach a pension in line with their expectations.





20 YEARS OF ACHIEVEMENTS AND THE CHALLENGES TO DEAL WITH IN THE COMING TWO DECADES

EDUARDO PARRA.

LUIS SAYEG.

EDUARDO VILLAREAL.

RODOLFO CAMPOS.

ENRÍQUE SOLÓRZANO.

Moderator: Ms. Regina Reyes

Ms. Regina Reyes is an independent Mexican journalist and an expert in personal finance. She holds a degree in journalism from the Mexico City-based Universidad Iberoamericana, followed with a master's degree in journalism from the University of Boston, USA. She did her internship with the Expansion magazine, which thereafter became her home for several years. She made a blog on CNNExpansión with the title "Live as a queen and spend as a commoner", which is now also a book. She has collaborated with the Mexican Association of Afores (Amafore) in its site "Prepare your Future", and with the Mexican Stock Exchange among other companies, creating content about personal finance or conducting training courses.

Panellists:

Mr. Eduardo Parra

Mr. Eduardo Parra holds a degree in Public Accounting and a Master in Finance from the Technological Institute of Monterrey, Mexico. He has lectured and participated as an exhibitor in sundry forums in Mexico and abroad on the subjects of Fixed Income, Risk Management, Derivatives and Investment Portfolios. He joined Afore Azteca in August 2013 as Investment Director and since March 2015 is the General Director of the same company.

Mr. Luis Sayeg

Mr. Luis Sayeg has a degree in Business Administration from the Mexico-based Universidad de las Americas. From June 2013 to date he is Chairman of the Board of Directors of Afore Banamex - Citigroup. Likewise, he is the General Director of this same entity. Between 2002 and 2012 he was in charge of selling fixed income products, currencies and merchandise at Banamex, and was also responsible for directing the foreign exchange business in Banamex aimed at the commercial banking area.

Mr. Eduardo Villarreal

Mr. Eduardo Villarreal is currently the Managing Director of Afore Invercap. He was Director of Financial Planning and Marketing at Galvok and Director of Financing at Cemex. He has an extensive track record in the financial sector, collaborating as Director of Investment Banking at Banco de Oriente and Director of the Capital Market at Banorte. He has been an independent member of the Metrofinanciera Board.

Mr. Rodolfo Campos

Mr. Rodolfo Campos holds a degree in Accounting and Finance and a Master Degree in Finance from the Universidad de las Américas at Puebla. Within the Ministry of Finance and Public Credit he held the position of Director of Internal Credit from 2005 to 2010 and implementing sundry strategies. In 2013 he joined Petróleos Mexicanos where he served as Deputy Director of Treasury. Subsequently, he went back to the Ministry of Finance and Public Credit as Deputy Director General of Recruitment. In May 2017 he joined PENSIONISSSTE as Executive Member.

Mr. Enrique Solórzano

Mr. Enrique Solórzano holds a degree in Economics granted to him by the Technological Institute of Mexico (ITAM). He has a track record within the Mexican financial sector which extends over 25 years to date. He began his professional career at BBV-Probursa in 1985 where he became Treasurer of the institution in 1990. Subsequently, Solórzano joined the Bankers Trust in 1996 as Treasurer, until 1998, when this Institution decided to leave the emerging markets. Prior to his arrival at Afore SURA, Solórzano was the Investment Director of the Santander's retirement fund until it was sold to ING Group in 2007. Since then he has served as Investment Director of Afore Sura. In 2013 he was appointed as General Director of this same entity.

Regina Reyes:

The AFORES completed 20 years of operation in 2017. I would like to start with this basic but very important question: What changed and how has benefitted the overall pension system with the AFORES being in place?

Eduardo Parra:

The private pension system in Mexico has grown and is already very large; its numbers are impressive. It currently manages mandatory savings equivalent to over USD 164 billion, equivalent to 14.3% of total GDP. The total number of accounts encompassed in the system is close to 60 million accounts, a figure which speaks of a large participation.

But the most important thing which has not been mentioned, at least in the different discussions I have attended, is that the AFORES system allowed the creation of the individual account. That is, the individualization of the account is the most important thing that this system has contributed with, because in the past each person retired with what other workers were contributing hitherto.

It has been argued that previously – and because of the structure of the population pyramid - this was sustainable. However, with the current demographic structure, this way of financing pensions is no longer affordable.

Nowadays, with the individual account, the worker is fully aware how much he/she has and almost on a daily basis, even though the account statements are issued and delivered every four months. Today, with all the applications that we have developed, both the AFORES association and each of its member entities can see online how much they have.

I think the valuable thing about this event is that we can empower the worker, that is, we let him/her know what his/her current situation is. So, he/she can be kept informed and do his/her own calculations to check if he/she really holds what has been cumulative accredited in the individual account and allocated to the financing of a reasonable pension.

Regina Reyes:

I believe that in addition to the above, there has been a great impact on the companies which are receiving financial backing thanks to the AFORES. Where are the success stories in the economic development thanks to the money the workers are saving in the AFORES?

Luis Sayeg:

The structural reforms have set the guidelines to become an important factor of the investments currently contributed by the pension funds. Everything which has been developing about the investment in alternative assets is crucial, because what is sought is to increase profitability; and with that the relevant replacement rate.

In the communications reform outstands a very important project. It entailed an auction where a consortium was created and where different participants joined in. The intention of this investment was to provide a 4 G highway to 92% of the Mexican population, and which can be used by sundry providers of content services. This can become a decisive and very important moment in the country's economic development; and which can be used for tackling other types of current problems such as education.

Another very important case has to do with the energy reform drive, whereby new auctions will eventually come into being. There is already a company in which the AFORES are also investing – known as Sierra Oil Energy - which with the investment of the AFORES will enable a daily production surge of 100,000 additional oil barrels.

There are other examples. For example, in matters pertaining education, there is the so-called Bono 100, which also the AFORES have been funding in a significant way, chiefly for providing infrastructure to schools. Another example is the first Fibra E, the so-called "Fibra Vía", which was structured on the basis of the Pinfra owned Mexico-Toluca highway, and which was listed on the Mexican Stock Exchange (BMV) in September 2016.

Finally, another example is the investment in Certificates of Investment Projects (CERPI), whose regulation was issued in January 2016. The real estate developer MIRA Companies became the first company to place a CERPI, in September 2016. This product came out more focused on developing mix-use real estate projects.

The AFORES have been participating more and more in a greater number of productive projects, and there are already thousands of companies that have been benefited with capital contributions from the AFORES.

Regina Reyes:

Another thing which happened in the operational history of the AFORES, is that 10 years after the system kicked off, the Decentralized Public Body of the Institute of Security and Social Services of State Workers (PENSIONISSTE) joined in. What were the reasons for including state workers in the AFORES system? How does the panorama look 10 years after this decision was adopted?

Rodolfo Campos:

My reply comes in two dimensions. First, the effects this decision has had on the public finances. To put the issue in context, 2017 represented savings in the region of MXN 40 billion (approximately USD 2,034 million) and at its highest point, close to year 2050, the public savings originated by this decision will represent (in today's Pesos) about MXN 250 billion (some USD 12,714 million). This translates into less pressure for the public finances and at the end of the day, this also represents a tangible benefit for all Mexicans.

Having freed the State from this burden, has allowed the latter to better focus and plan the public finances, and in turn has allowed the financial markets to develop in a very significant way. We are leaders in the region, and none of this could have been possible or explained if this liberation had not been granted by the State. Let us remember that for this type of workers, the State serves two roles: as an employer and that of a state-owned entity which contributes to finance part of the worker's contributions.

The second dimension, is more directly connected to the account holders, and is related to their portability. Let us remember that in the previous regime, of defined benefits, in a real-life context the worker had an expectation of pension entitlement; which did not materialize until all the required parameters were met.

So, for instance, if in the previous social security system, a worker was working for the State during an accumulated period of 10 or 15 years, and then migrated to the private sector, the true fact is that he/she ended up accumulating insufficient resources for his/her retirement, due to the impossibility of taking with him/her the accumulated funds from one sector to the other.

With the reform and its associated portability, this changed completely. Part of the success is reflected with the AFORE that I lead, PENSIONISSSTE, because it not only handles accounts for workers working for the State, but also for workers serving in the private sector. And, at the same time, all the other AFORES also manage accounts of workers serving the State.

Regina Reyes:

Another benefit the AFORES have generated is the ability of the workers to invest. The AFORES, besides being the recipients of the workers funds, in a certain way are allowing many Mexicans to invest from very low amounts. Where is the benefit of access to investment?

Eduardo Villarreal:

What you are commenting is correct. In fact, the workers can start saving in an AFORE from MXN 50 (approximately USD 3). The AFORES are a vehicle which allows savers to gain access to a wide range of investment instruments, such as Development Capital Certificates (CKDs), Certificates of Investment Projects (CERPIs), 30-year bonds, equity instruments and fixed income, all which allow them to have a diversified long-term investment portfolio.

With this prospect, the account holders can minimize the pension risk at their retirement time and they will be exposed to less volatility in their replacement rate. It should also be stated that these funds are governed by an investment regime, which has evolved over the years, and which has allowed the integration of additional instruments and securing a better performance.

Furthermore, each of the funds in each of the AFORES is regulated by an Investment Committee and a Risk Committee, which sets the funds' long-term strategy, in line with the years remaining for each group of people to meet their retirement age.

Regina Reyes:

In addition, the AFORES have allowed workers to gain access to investment instruments which, otherwise, they could never have accessed.

Eduardo Villarreal:

Definitely, that is right. Now the workers have access to many products which, by themselves, could never have done so.

Regina Reyes:

Of the total of 60 million accounts in the AFORES system, only about 19 million are active. Why is this? How do we have to face the technical challenge represented by this coverage gap?

Enrique Solórzano:

Perhaps what you have just mentioned is the biggest problem of all pension systems in developing countries. The fact that there are 60 million accounts, of which only 19 million are active, means that it is not always the same 19 million who are quoting for their pension; but that there is a very high level of informality. In Mexico there

are contributing to their own pension some 37% of the accounts, which indeed is a very low level. Sorting out this issue is very complex and is very much associated to the development level of each country.

There is a huge correlation between development and formality. As countries develop they become more formal on how to hire their workforce; the workers appreciate being formal and employers find value in hiring a worker under formal terms; instead of having an informal one. In Mexico, the wage gap between a formal and an informal worker ranges from 23% to 25%.

Obviously, such is a cost to the employer and which eventually also becomes a cost for the worker, because the contribution to social security is usually divided between employers and workers alike; and is distributed in cash at the time of implementing the work. In plain English, a worker will probably have a take home wage which is 20% higher if it is informal, and the rest will probably remain as a benefit for the employer.

This is a tremendously complex problem to solve, and it is not only about the pension or social security sector, but it is a serious issue for the whole country. What the AFORES can do to help sorting out this problem is to disseminate the news, making the worker aware that it is very important for his/her future to be formal, since such factor allows him/her to access a housing, health and pension benefits alike.

Fortunately, an application known as AFORE Móvil was launched recently, which will gradually make it possible to be closer to the workers and highlighting to them this type of benefits they are entitled to as formal workers. The foregoing, while recognizing is still a very complex problem, we are compelled to tackle together with many other key operators such as the Ministry of Finance and the Ministry of Labour.

Regina Reyes:

What other technical challenges must the AFORES system be facing, in addition to informality and coverage? How have the AFORES worked together to face some of these other challenges? What else is still to be done?

Luis Sayeg:

Perhaps one of the most important challenges now is to raise the size of the contributions. In terms of contributions, there is much more to be done, and the different parties concerned must agree on the need to generate sufficient awareness,

raise their voices and implement whatever reforms necessary for increasing the size of the contributions.

Regarding voluntary contributions, where the AFORES have been working hard, the new AFORE Móvil application will help a lot to reach people. Other ideas have referred to wage increases for the next 4 years, so that a percentage of such increment goes directly to the individual account on a voluntary basis. For instance, in the next 4 years, to think about increasing the contribution made by the workers directly - by 4 percentage points - and on a voluntary basis.

There has also been talks focused on generating incentives for the companies to put a money match forward or set an additional amount to the resources that the worker can save; allowing an increase in his/her pension as a result.

There has also been a lot of discussions about the resources that nowadays go to the housing account, which could eventually be managed during the life of the worker - and not therefore subtract his/her ability to buy a house, but eventually be seen from the start as part of his/her savings component and thereafter built into his/her pension.

The addition of all these ideas are issues that could be eventually resolved with a sense of urgency and speed, via some consensus that could be generated. It is up to everyone to apply the relevant pressure to ensure such aim becomes a real-life fact.

Regina Reyes:

Voluntary savings is a key factor which has been mentioned frequently in the discussion to increase savings for the retirement of workers. In the case of workers serving at government departments, how has it been arranged to ensure there are greater savings performed by the worker?

Rodolfo Campos:

There is an exclusive benefit for workers serving with State dependencies; it is known as "Ahorro Solidario" (Solidarity Savings Scheme). The latter is a way to accumulate resources in the individual account, exclusive for State workers, with which he/she can save - in addition to mandatory contributions or specified in the law - up to 2% of the base salary. All this in addition to the contribution of the entity or dependence of the worker (up to 6.5%); and which will increase the balance of the worker's account to the equivalent of 8.5% of his base salary, to be allocated in full to his/her retirement sum. Therefore, with this benefit under the umbrella system of individual accounts, the entity for which the worker is serving is compelled to supplement his/her saving efforts.

Every fortnight, the dependency where the worker works retains from his base salary the amount that he/she chosen as contribution to his/her individual account, and the entity will also contribute to his account the equivalent of MXN 3.25 for each “Peso” the worker gets deducted from the pay slip. The worker has two alternatives for the application of the discount: 2% or 1% of his base salary. For instance, a worker with a base salary of MXN 5,300 has two options, under the voluntary savings scheme to increase his/her retirement savings, as shown below:

- Option 1. The worker decides to save – on a solidarity basis - 1% of his base salary, equivalent to MXN 53, so that the total result of contributions to the individual account with solidarity savings being tantamount to 15% of his/her salary.
- Option 2. The worker decides to save 2% of his base salary, equivalent to MXN 106, so that the total contributions to the individual account with solidarity savings is almost 20% of his/her salary.

Definitely, this is a scheme that could be one of the elements which may contribute to the solution of maximizing the replacement rate and the resources available for the pension. Clearly it is not a magic solution, and the problem is so complex that it must be tackled from different angles, but at least it is a creative way which would be worth exploring for the rest of the workers in the private sector, where the employer receives the sufficient incentives to encourage voluntary savings; and make a more than proportional contribution in favour of the account holder.

Regina Reyes:

I think we have talked about several challenges, but there is one stating that Mexicans, on average, are unaware of AFORES. There are about 18 million Mexicans who are allocated to an AFORE, but they do not even know this is their case. What are the reasons explaining this reality? How are we addressing this disconnection between the AFORE and the worker?

Eduardo Parra:

There is a universe of workers who do not even know to which AFORES he/she is affiliated, or how much balance he/she holds in the individual account. There is a high percentage of people who do not know this basic information, and then there is an outstanding effort that both the administrators and the regulator must do to correct this shortcoming. The AFORES have already started communication campaigns, and commercial points have been opened where money can be deposited (voluntary savings) in different convenience stores (for instance in TELECOMM). In general, there has been an effort to bring the AFORES system closer to the worker.

The AFORES have branches scattered all over Mexico, and there are even branches in municipalities where there are probably no financial services, trying to expand their networks so to be closer to the workers. That is the only way they will be able to make themselves known, empowering the worker to take control of his/her individual account for the construction of the relevant pension. The AFORES are also doing advertising campaigns in mass media to try to make people aware of their rights and benefits, and stressing the system is being built for them. No doubt this effort must continue.

Regina Reyes:

I recently downloaded the application "AFORE Móvil" (Mobile AFORE) on my cell phone, and with this, in less than 5 minutes I could arrange a voluntary savings' instalment. Such facility, in comparison with other pension systems, puts Mexico at the forefront. In what other novelty aspects is the country at the forefront in bringing all Mexicans closer to the AFORES system?

Eduardo Villarreal:

The "AFORE Móvil" application is part of a service strategy which the AFORES have been looking for many years. Before the surge of this new technology, we started with the so-called "electronic file", where we identified each of the workers with all their contact data; which allowed us to overcome an important barrier we had, which is how to contact the worker efficiently.

Then we moved onto the use of biometric data, which allowed us to be sure about and crosscheck who was making the movements and the identity of the worker.

Finally, the most important part was missing, that is the closeness to the customer, and this is what we have tried to sort out with the "AFORE Mobile", a tool with which the worker can register, undertake a balance inquiry, search the places where he/she can make his/her contribution, domicile the contributions, etc. In short, many activities that really bring the client closer to his/her AFORE.

For the next step, which we are already working on, the workers will even be able to draw out their funds and move them from one AFORE to another, to name a few relevant procedures.

Regina Reyes:

What other reforms or initiatives can be implemented to help face the current challenges of the AFORES system?

Enrique Solórzano:

If the AFORES had to opt for a high impact reform, it seems to me that, for simplicity sake, one of them would be linked to recognizing that the National Fund for Housing for Workers (INFONAVIT) is an extraordinary institution; which has achieved tremendous benefits for most Mexicans. On average, 63% of Mexicans have their own home and this is thanks to this institution.

However, the country is overfunded in housing and under-funded in pensions; and a relatively simple reform would be that the resources which are currently contributed to INFONAVIT go to the AFORES instead.

This would not lead to the disappearance of INFONAVIT, since it could continue providing support to the financing of a home, because it has access to markets and the same money from the AFORES can grant fund support to INFONAVIT. So, it can continue granting loans for house purchases and thus there is no need to change that scheme.

What it should be doing is to recognize that the INFONAVIT money today, after so many years, is probably better used for generating a residual pension than to fund a house, more so when considering that this institution can continue operating during the next 30 years; by taking money from the market and lending it to the workers. INFOVAVIT does not necessarily need to fund such function.

The second reform initiative, probably also a simple one, would have to be the automatic enrolment for voluntary savings. The automatic enrolment, with the possibility of an opt-out for all workers, presents the possibility of each worker to approach his/her AFORE to know what his/her pension situation is and obtain a tool to improve the account voluntarily via the already set complementary contribution (3%, 4% or 5% of salary).

The worker who does not have the opportunity to increase his/her savings, could leave it in abeyance for a while.

This idea does not imply too many legislative changes, it is simply a reform and a proposal in which the National Institute of Public Health (INSP) implements the collection; with the workers having time to approach their AFORE and understand what is happening with their pension.

Likewise, they can be briefed about the enormous benefits of making voluntary savings and been granted the option of leaving if they lack the capacity to save.

Regina Reyes:

There are two things we have not talked about, unemployment and marriage withdrawals. While these benefits are evidence that the money is owned by the worker, it is complex to allow fund withdrawals, since this is in detriment of the amount of the future pension which could be financed. Any comments on this topic?

Rodolfo Campos:

It is indeed a complex issue since, if it facilitates the exit of resources whose vocation is long-term, and which were attracted after considerable work; then the problem of financing pensions can clearly be made more difficult and uphill.

Now, there is also the thesis of the account holder being made aware that such account is useful for many more reasons and he/she is granted access to the money, he/she is likely to use the account on a recurring basis.

Nowadays, many of the people interviewed rate their contributions as a tax burden, etymologically speaking, and at the end of the day they do not consider their pension savings to be part of their own resources.

However, if the workers are convinced that the product of their financial discipline is deposited in their account as voluntary savings, they could access other resources which are not available today, and part of this likely arrangement is to facilitate their access to a fraction of the funds.

That said, the foregoing is always controversial because there is a risk of the money being disbanded. Indeed, there have been cases even in highly developed regions, about how this kind of measures have been implemented in the wrong way and have had very negative effects.

I believe measures of this type, with due regulations and safeguards, could become an element which contributes to the linking of the account holders with their accounts, to such an extent they can become committed and better understand how the system works. All this while getting a clear idea of the relevance of making contributions over and above the compulsory ones.

Enrique Solórzano:

I would not say that unemployment insurance is a problem in itself, but when the contribution of the workers is so small, a retirement by unemployment would merely worsen the situation. If the contribution in Mexico would be greater, this



unemployment retirement prospect would be a very good incentive for the worker to realize that his/her money is there; and he/she can withdraw it in the event of a contingency.

Regina Reyes:

Which is that key or challenge that for you still exists in the system, and to which you are going to commit yourselves towards a sorting out such issue in the next 20 years?

Eduardo Parra:

In two words, financial education.

Luis Sayeg:

Inclusion of more people.

Eduardo Villarreal:

Service.

Rodolfo Campos:

Link with the account holder.

Enrique Solórzano:

No doubt, in addition to promoting reforms, we will also continue encouraging voluntary savings.

Regina Reyes:

Many thanks to you all.



CHAPTER II

THE CHALLENGES OF WORLD'S AGING POPULATION

RAFAEL PUYOL. Current and future demographic trends.

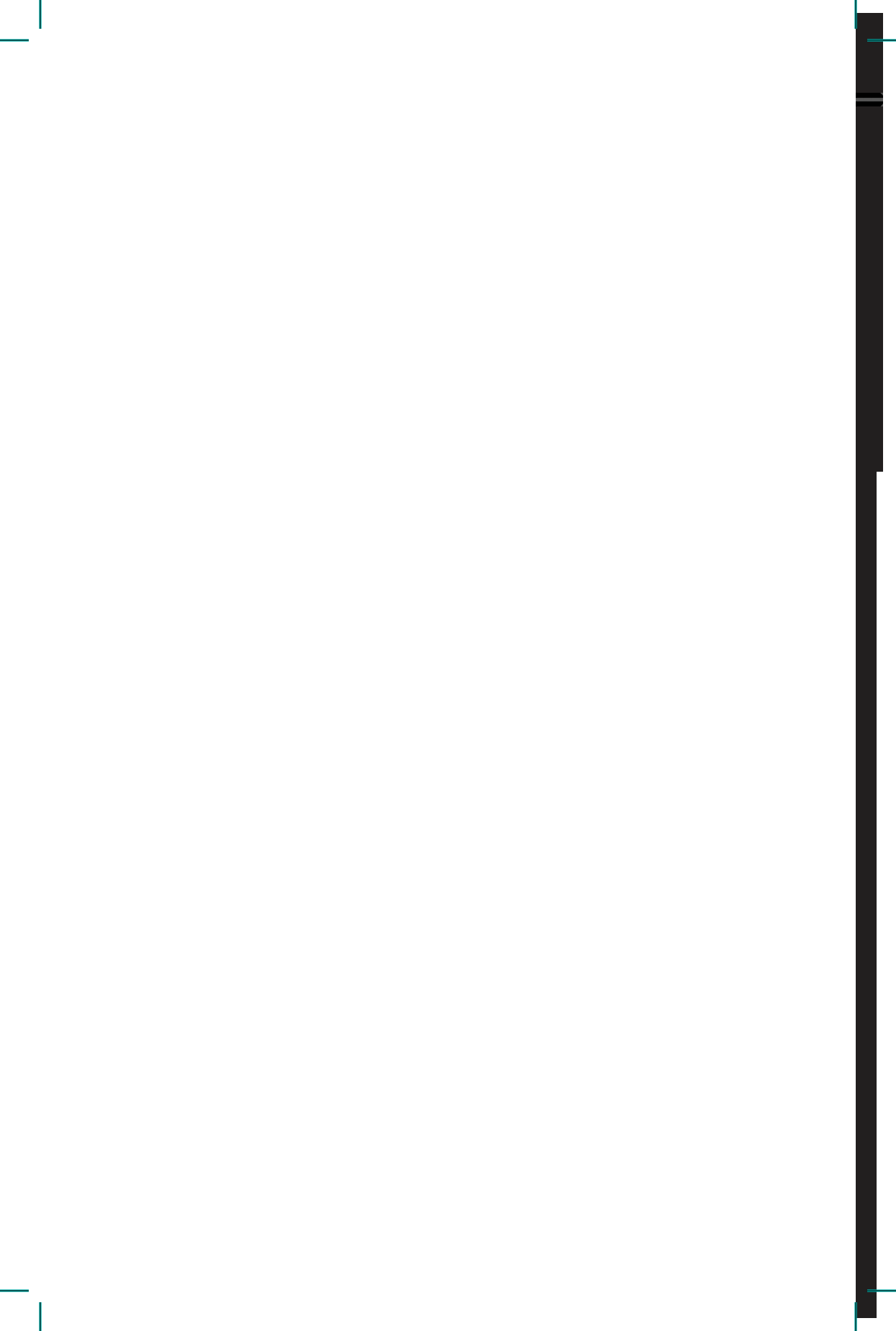
ROBERT BOYDA. Retirement decumulation strategies: next generation.

AYE M. SOE. Indexing solutions for retirement.

FRANCESCO SANDRINI. How to integrate a strategy with long term view today and be able to achieve proper retirement goals.

JOHN CROKE. Target-date funds: Laying a critical foundation for retirement success.

RODRIGO ACUÑA. Perfecting the decumulation phase in individually-funded pension systems.



CURRENT AND FUTURE DEMOGRAPHIC TRENDS

RAFAEL PUYOL¹

- ¹ *Rafael Puyol holds a doctor's degree in Geography and History from the Universidad Complutense de Madrid (1971). He is professor of Human Geography and honorary Rector at this university. Moreover, he is Vice President of Institutional Relations of the I.E. Business School and Chairman of the Board of Directors of the I.E. College. He created and was the First President of the Population Group of the Association of Spanish Geographers. Among other positions, he is a member of the Board of Directors of the Spanish Chapter of the Club of Rome; and 1st Vice-President of the Royal Geographical Society. He is currently the patron of four Institutions (Institution Banco Santander, Institution Independiente, Caser Institution, Instituto de Empresa Institution) and member of the European Institution Center and the Club of The Haya.*



Executive Summary

European societies are an example of aging processes, in which an ever more numerous population over the age of 65 can be observed (almost 20% of the total population). Life expectancy at birth (an average of 78 for men and 83 for women) and life expectancy at 65 (86 and 83 for women and men, respectively), will increase steadily and people will live ever longer lives without disability (with the ability to work). Furthermore, many of the people who will live to an average of 100 have already been born.

Population aging is due to an increase in longevity, the drop in birth rates caused by fertility rates below the replacement level (less than 2.1 children per woman), the ever-decreasing number of women of childbearing age, and late motherhood (over the age of 30).

The combination of low birth and fertility rates with high aging rates, translates into an ever-diminishing number of young people, and an ever-growing volume of senior citizens, entailing a significant imbalance between the active and dependent population.

In PAYGO pension systems, where contributors pay the pensions of those who are retiring, the imbalance will continue to increase and inhibit the sustainability of the system. To alleviate this effect, European countries have adopted some socio-demographic measures such as family support (aimed at increasing the birth rate), an increase in the official retirement age (more contributing workers and less pensioners), more women in the labor market (more contributing workers), or the arrival of immigrants (more contributing workers and a higher birth rate). These measures have also been accompanied by others that affect pension systems, such as parametric changes that curtail generosity in the calculation of pensions, and structural changes that introduce a more meaningful role of the individually funded systems in the pension systems.

8 Latin American countries are already below the generational replacement level of 2.1 children per woman; fertility has never been so low, and projections indicate that it will continue dropping to 1.77 children per woman by 2050. Furthermore, average life expectancy at birth for men and women will be 81 by 2050, intensifying population aging (the population aged 65 and over will be 19%, similar to the situation in the European Union today). Latin American demographic evolution will be similar to that of European, but faster. The consequences of this situation could be minimized if the population percentages of young people could be kept at reasonable levels (fertility rates of approximately 1.7 to 1.8 children per woman, and immigration with a positive balance).

As far as pensions are concerned, this reality makes it impossible to consider returning to the PAYGO system, and also makes the introduction of an individually-funded component necessary.

Introduction

In developed societies, and in countries that are in the final phases of their demographic transition (like most of Latin America), the future of pensions is a source for concern. This challenge has a demographic context defined by the sharp decline in the birth rate (the number of live births) and the intense aging process (percentage of the total population of the country of people aged 65 and more). This brief article seeks to review the population issues that have, and will have, greater influence on the future payment of pensions, especially in the PAYGO systems, with the case of the European Union (EU) serving as a reference and warning for many other countries.

I. The situation in Europe

The 3 major demographic variables

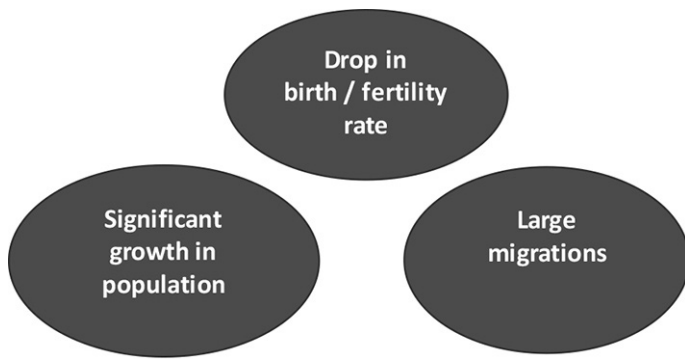
The world is no longer the same in demographic terms. The population continues to grow, but not as before, and that must be seen in relation to the first great demographic variable, namely birth/fertility rates, which have declined all over the planet.

This drop in the birth/fertility rate, along with lengthening of human life spans (longevity), has resulted in a significant growth in population aging, the second major demographic variable that must be taken into account.



Thirdly, current large migrations, which constitute the third major demographic variable, are based on population differences.

FIGURE NO. 1



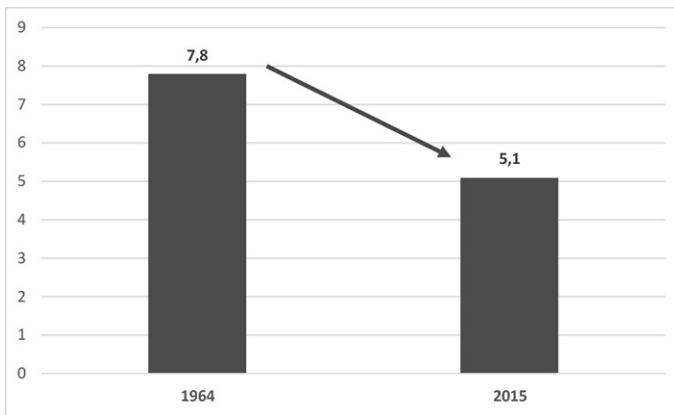
SOURCE: THE AUTHOR.

Drop in the birth and fertility rates

Since the early 1960s to the present day, the birth rate, measured as the number of live births, has fallen sharply in the EU. From the record figure of 7.8 million in 1964, it dropped to 5.1 million in 2015, a reduction of nearly 35% (Graph 1).

GRAPH 1

NUMBER OF LIVE BIRTHS. EU-28
1961-2015 (MILLIONS)



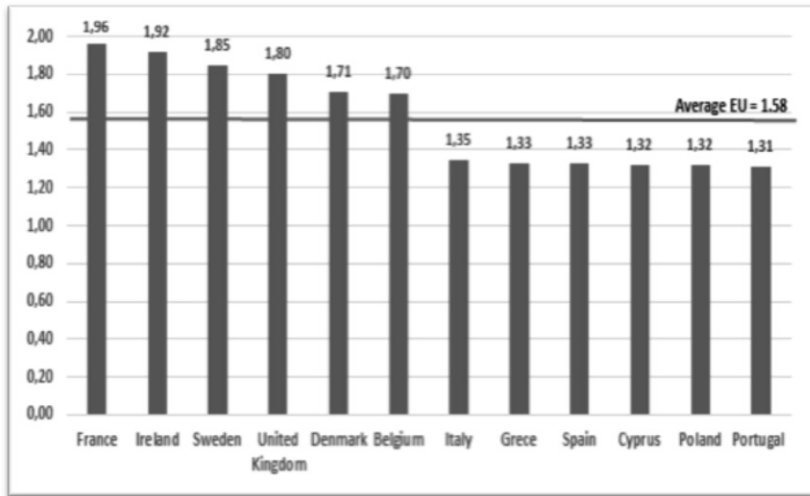
SOURCE: EUROSTAT.

This drop in the birth rate can be explained by three factors:

1. **Low fertility rates**, below the replacement level of 2.1 children per woman². For generations to be able to renew themselves, each woman of childbearing age (between 15 and 49) must have 2.1 children on average. No European country was capable of achieving this in 2015. The countries closest to this threshold were France (1.96 children per woman) and Ireland (1.92 children per woman). The EU average was 1.58, but there were 17 countries below this level. The worst ranked (approximately 1.3 children per woman) were Italy, Greece, Spain, Cyprus, Poland and Portugal (Graph 2).
 2. **A reduction in the number of women of childbearing age, due to previous periods of low birth rates**. Spain is a case in point: it has a fertility rate of 1.33, and lost 1 million women of childbearing age between 2009 and 2016.
- 2 "Birth rate" is used when referring to children, and "fertility" when referring to the mothers who give birth to those children.

GRAPH 2

FERTILITY RATES IN SOME EU COUNTRIES (LIVE BIRTHS PER WOMAN, 2015)



SOURCE: EUROSTAT.

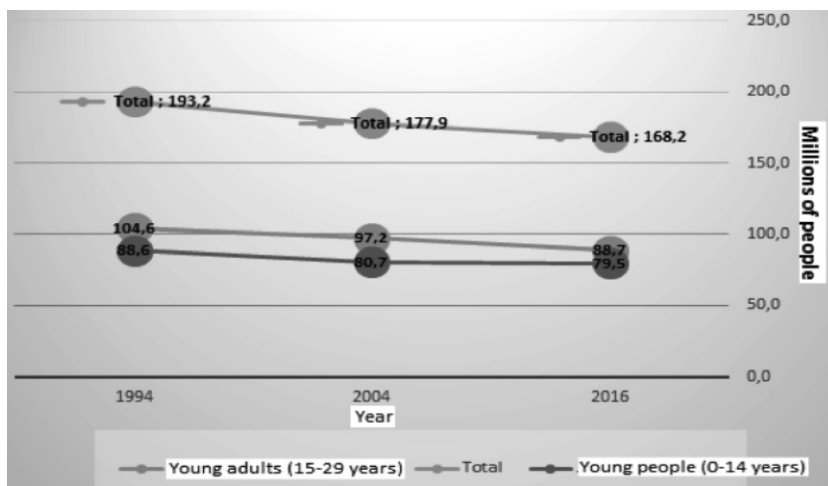
3. **The advanced average childbearing age.** The childbearing age has increased in all countries over the last 3 decades. The European average is above 30.5 years of age, and in some countries, it is around 32 (Italy and Spain). This fact correlates with the increasingly high proportion of women attending universities and entering the labor market, and the fact that European societies have entered what is known as the "Second Demographic Transition," characterized by a drop in traditional marriage, an increase in the number of single people, the growth of common-law relationships (without any civil or religious links), the increase in the number of divorces, the greater number of children born out of wedlock, and the emergence of new family models (single-parent, same-sex couples).

A direct result of the low birth rate: reduction of the young population

The main consequence of such low birth rates will be a reduction in the young population. In the EU, young people (0-14) dropped from 88.6 million in 1994 to

79.5 million in 2016, and adolescents-adults from 104 to 88.6 million (see Graph 3). The combined loss of both groups is 25 million young people, and this trend will continue.

GRAPH 3
YOUNG AND ADOLESCENT-ADULT POPULATION, EU-28, 1994, 2004 AND 2016



SOURCE: EUROSTAT.

The 5 major phenomena related to the growth of the elderly population

The drop in the birth rate and the reduction of the young population, is accompanied by a significant growth of the elderly population, and this translates into at least 5 phenomena:

1. **Population aging.** The percentage of the total population of a country aged 65 or more. explained by the drop in the birth rate and the increase in longevity (aging at the base and at the tip of the age pyramid, respectively). Aging occurs starting at 10%, although most developed countries are now at around 20% or more. 90% of the population in our societies reach the age of 65, only achieved by 32% of the population one century ago. The current aging average in the EU is 19%, and it is expected to grow to 29% by 2080.

2. **Increased longevity.** Adolescents and the working age population will diminish in Europe, and the population over 80 years of age, especially, will increase (octogenarians and nonagenarians, centenarians and super centenarians, a new category for referring to people aged 110 and more). According to Eurostat, the percentage of the total population aged 80 or more in the EU between 2016 and 2018, will increase from 5.4% to 12.7%, while the adolescent and working-age population will drop from 81% to 71%.
3. **Growth of life expectancy at birth and the emergence of generations that will live to 100.** Life expectancy at birth is the number of years a person can expect to live if the mortality conditions at the time of his birth remain unchanged for the rest of his life. Its growth has been remarkable, and is currently 83.3 for women and 78 for men in the EU. The other phenomenon worth mentioning is that, according to experts, the majority of children born after the year 2000 in countries with high levels of life expectancy will live to celebrate their 100th birthday.
4. **Growth of life expectancy at age 65 (theoretical start of old age) and disability-free life expectancy.** Life expectancy at age 65 has also grown considerably: 100 years ago, life expectancy at 65 was only 10 years, whereas the current average in the EU is more than 21 years for women, and 18 years for men.

Another phenomenon related to the above is the growth of disability-free, or healthy, life expectancy, which was estimated to be 63.3 for women, and 62.6 for men in the UE in 2015. The figures are good, but there is still scope for improvement, which will undoubtedly occur in the immediate future.

The combination of low birthrates and fast aging makes the public PAYGO systems unviable

The low birth rate phenomenon, coupled with strong aging and greater longevity of the population, means that there will be fewer people entering the labor market, on the one hand, and more people collecting a pension for a longer period of time. This partly explains why the percentage of the population of 65 or more, compared to the population between 15 and 64 (old age dependency rate) will increase from nearly 30% in 2016 to about 50% in 2080, on average, in the EU.

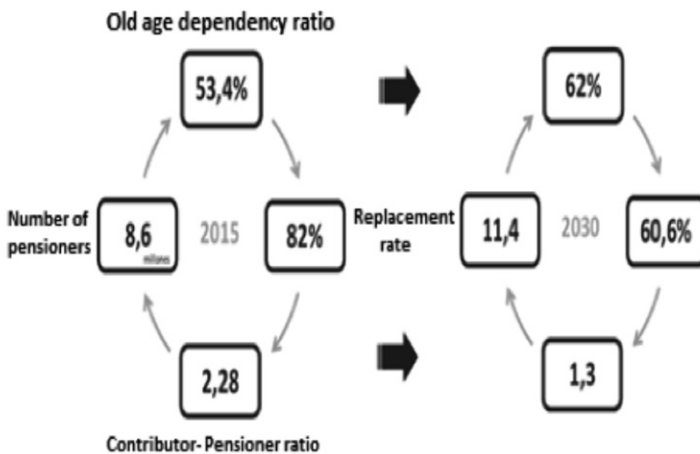
When the former PAYGO system was established in Germany by Bismarck in 1889, the retirement age was set at 70, while life expectancy at birth was about 35 for men and 38 for women. These ages did indeed enable financing pensions, mainly benefiting the higher classes of German society. As time went by, life expectancy at birth kept growing to more than 80 in advanced societies today, whereas the

retirement age did not increase, but rather receded (the official retirement age is about 65, and the real retirement age is much lower). If a person previously worked throughout his life and did not collect a pension, or did so for very little time, today the average duration of working life, in the best of cases, is 30-35 years, with 45 or more years of retirement.

The analysis of these indicators leads to a clear conclusion: the current exclusively PAYGO public pension system will not suffice for paying future pensions and maintaining an adequate standard of living. Spain is an exemplary case.

Spain currently has a public, mandatory, contributory PAYGO system. According to the Circle of Entrepreneurs (see Figure 2), if there are no reforms in Spain, in just 15 years the old age dependency ratio will rise from 53% to 62%, the replacement rate (the monthly pension amount divided by the average income over a specific period of time) will drop from 82% to slightly more than 60%, and there will be slightly more than 2.2 to 1.3 contributors per pensioner. Hence, it is recommended to adopt short and medium-term measures for modifying the PAYGO system and introducing a mandatory individually funded system.

FIGURE 2



SOURCE: CIRCLE OF ENTREPRENEURS, BASED ON INE AND EUROPEAN COMMISSION, 2016.

Measures taken by European countries to address the imbalance between the active and dependent population

These measures can be classified mainly into two types: sociodemographic, and those affecting the pension systems.

1. Socio-demographic measures

- 1.1 Immigration It acts primarily in the short term and is an important phenomenon, since the current population growth in Europe due to immigration is 85%, and natural growth accounts for the remaining 15%. The most outstanding feature of this immigrant population is its youth (20 - 47), since it is an eminently active population. This condition, in turn, contributes significantly to the birth rate, and somewhat relieves aging.

Nonetheless, immigration cannot be the only solution for resolving the demographic and economic problems of the EU: its contribution to the native birth rate drops after the second and third generations, and immigrants also age. Furthermore, the sources of supply will also run out, except for Africa.

- 1.2 Increase the birth and fertility rates through effective family support policies, such as financial benefits for families with children, measures for reconciling work and family life, assistance in the payment of child care, and fiscal measures based on family size and future pension payments (in Spain there is a 5% supplement if the mother has two children, 10% if she has 3, and 15% if she has 4 or more).
- 1.3 Incentive for the incorporation of more women into the labor market. Although it is not a particularly influential factor, except in some societies, since at the ages at which it would be more effective (young adults) the activity rates of men and women are not very different.
- 1.4 Increasing the retirement age. This leads to more workers and less pensioners. Many European countries have adopted policies in this regard (23 of the current 28 countries, including the United Kingdom) due to the recommendations of the European Commission. The current average retirement age is about 65, which will rise to 67 in many countries in the coming decades (Spain in 2027). But some experts are already considering higher rises in future, to about 70 years of age.

2. Measures affecting the pension systems

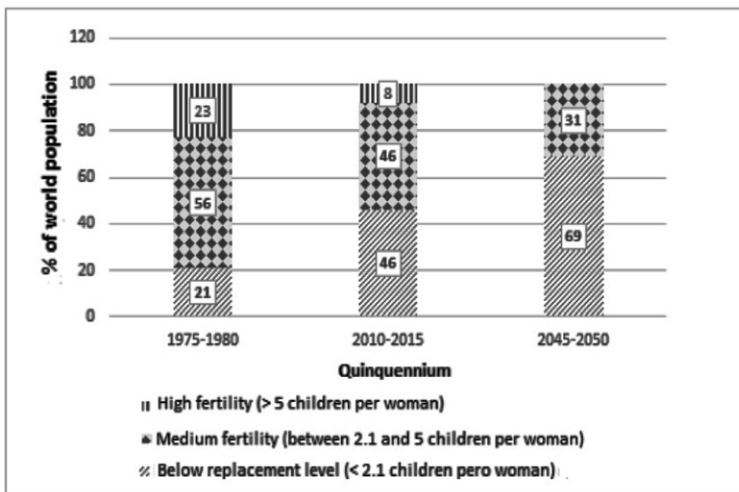
- 2.1 Parametrics. Consists in changing some of the criteria for calculating pensions, such as the aforementioned increase in the retirement age, contribution periods to be eligible for a full pension, the basis for the calculation of pensions, or their reevaluation index. All countries have carried out reforms of this type and many have introduced automatic adjustment mechanisms for certain pension parameters (such as sustainability factor in Spain).
- 2.2 Structural. Many EU countries have increased the role of individual funding in their pension systems.

II. The context in other continents

Fertility

In the 2010-2015 five-year period, 46% of the world's population lived in countries with fertility below the critical threshold of 2.1 children per woman, whereas this percentage is expected to increase to 69% of the world's population in the 2045-2050 five-year period (see Graph 4). This figure is truly significant and entails a reduction in the number of countries with intermediate and high fertility levels.

GRAPH 4



SOURCE: UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, POPULATION DIVISION (2017).

Latin America

In the case of Latin America, fertility has experienced a significant downward trend, and eight countries are already below the generational replacement rate, at below 2.1 children per woman (see Table 1). Eleven countries have an intermediate fertility rate of between 2.1 and 2.5 children per woman. These two groups account for 93% of the Latin American population. Only three countries have more than 2.5 children per woman, and represent only 6% of the total population. Latin American fertility has never been so low, and projections indicate that it will continue to decline.

TABLE 1
FERTILITY STATUS IN LATIN AMERICAN COUNTRIES (2017)

A) Below 2.1 children per woman		B) Between 2.1 and 2.5 children per woman	
Countries	Population		
Brazil	207.9	Mexico	129.2
Colombia	49.3	Argentina	44.3
Chile	18.4	Peru	31.8
Cuba	11.3	Venezuela	31.4
Costa Rica	4.9	Ecuador	16.8
Uruguay	3.5	Dom. Republic	10.7
Puerto Rico	3.4	Honduras	8.9
Jamaica	2.9	Paraguay	6.8
	301.6 (46.9%)	El Salvador	6.4
		Nicaragua	6.2
		Panama	4.1
			296.6 (46.12%)
C) Between 2.6 and 3.0 children per woman			
Guatemala	16.9		
Bolivia	11.1		
Haiti	10.6		
	38.6 (6%)		

SOURCE: POPULATION DATA SHEET 2017.
 DATA REFER TO COUNTRIES WITH MORE THAN 1 MILLION INHABITANTS.

Aging

Life expectancy at birth will increase on all continents in the near future. The average growth over the next 35 years will be 6-7 years, reaching 11 years in Africa.

Lower fertility, coupled with the growth of life expectancy, will in turn give rise to the growth of the elderly population. There were more than 600 million people aged 65 or more worldwide in 2015, and on a planetary scale, one could not say that the population as a whole is old (8.2%). But within 35 years, in around 2050, there will be 1,560 million people over the age of 65, and the percentage (16%) already clearly defines the planetary population as aged. The general situation is repeated on every continent, with the exception of Africa, where young people still make up a considerable proportion of the population.

This trend gives rise to a significant reduction in the ratio of people between 20 to 64 for each individual of 65 or more. Active to retired population ratios are currently 7.4 for Asia, 3.3 for Europe, and 7.3 for Latin America. In 2050, on the other hand, 7 countries in Asia, 24 in Europe and 5 in Latin America will have values below 2, i.e., only two potentially active individuals for every retired individual.

The situation in Latin America is better than in the rest of the continents, due to high past birth rates, which ensure a higher percentage of young population. Only 5 countries have a population over 65 exceeding 10%, and inversion of the demographic trend has not occurred in any of them, i.e. a greater percentage of the elderly (over 65) compared to young people (under 15).

Nonetheless, the combination of an intense drop in the birth rate and a general increase in life expectancy in Latin America, portend a strong aging process in the immediate future. In demographic terms, and with the exception of some countries (basically Guatemala, Bolivia, and Haiti), Latin America is undergoing the final phase of the demographic transition, characterized by low birth and mortality rates, and moderate population growth. In the 2025-2030 five-year period, the fertility rate of all Latin America and Caribbean countries will be 1.89, and 1.77 in the 2045-2050 five-year period. Only the three countries mentioned previously will have rates above 2.1 children per woman on both dates. On the other hand, average life expectancy for both sexes will reach 78 between 2025 and 2030, and 81.3 between 2045 and 2050 (only 1.5 years below the European average). The intensification of aging is clear from these figures: by 2030 the population of 65 and over will be 12%, and 19.4% by 2050, which is the situation in the European Union today.

Thereafter, the demographic evolution of Latin America will be similar to what has occurred in Europe, but with a big difference: the shorter period of time in which low levels of fertility, high life expectancy and considerable levels of aging will occur.

III. Final considerations

The increase in life expectancy and longevity is an unstoppable phenomenon and we should consider it a positive development, whose economic and social consequences will have a lower impact if countries manage to maintain reasonable percentages of young people, for which they must have fertility rates that are not too different from the generational replacement rate. Values around 1.7 to 1.8, with a slightly positive or balanced level of immigration could keep the population in a certain state of balance. Fertility rates below 1.5 children per woman must be avoided at all costs (Puerto Rico is already in this situation, with a rate of 1.3, and Brazil, Costa Rica and Cuba are approaching it).

The introduction of certain family support measures must be addressed if the fertility rate drops below 2.1 children per woman. Swift introduction of such measures will prevent significant drops, and the steep rise of subsequent costs.

As far as pensions are concerned, there is one clear idea. The strong imbalance between the active and dependent population currently existing in European societies, makes the public PAYGO system unviable. Keeping it, or returning to it, as some intend, makes no sense whatsoever. The evolution experienced by the vast majority of European countries is a good example for the rest of the world, which must find formulas compatible with any of the individually funded systems. Failure to do so will contribute to an increasingly difficult situation, defined by a downward trend of the replacement rate and a high level of frustration of workers.

The European example illustrates what should be avoided, and its lessons will be especially useful for other continents.



RETIREMENT DECUMULATION STRATEGIES: NEXT GENERATION

ROBERT BOYDA¹

- ¹ Robert Boyda holds a Honours Bachelor of Arts from the University of Western Ontario. He is currently head of Capital Markets and Strategy, co-head of the Portfolio Solutions Group's (PSG) asset allocation team for North America and a senior portfolio manager at Manulife Asset Management. He is responsible for both economic and capital markets strategy as well as portfolio management of John Hancock's Lifestyle and Lifecycle portfolios. Previously, Bob was senior vice president, investment management services, for John Hancock Financial, the US division of Manulife Financial Corp. In 1994 he originated what are now John Hancock's Lifestyle funds and developed the framework for the IMS function responsible for sourcing, performing due diligence and replacing third party managers for John Hancock.



We spend a lot of our time discussing how people can save more money for retirement but we spend very little time trying to answer the question. We have been challenged with this problem in every country we do business in, all across Asia, Canada and the United States.

In this brief article I would like to present some of the findings that we have had working on retirement decumulation, as we've come across this problems in every single country. No matter where you are in the world, people don't save enough money. Corporations are getting out of the defined benefit (DB) business and increasingly a large number and percent of the population don't know how much to save, how much to spend and how much money they will have when they get into retirement and the solutions have tend to be fairly complicated or far too simply. We, as an industry, have an opportunity to help, not just millions but hundreds of millions of people across the world as they approach the longest vacation they will ever take in their life.

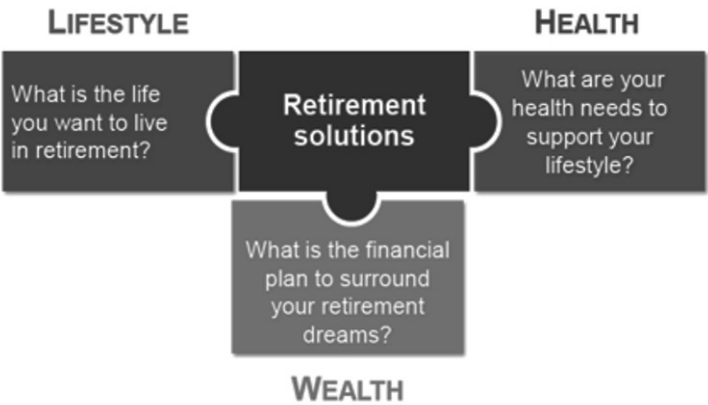
Ideal State

I will give some of the examples of what we have been working on in Canada. This is a problem of approach and communication. When we look across all the domiciles, everyone wants the same thing. We are proposing an ideal state (see Figure 1) that says: "give me a retirement solution and take this problem away from me". Increasingly, countries all over the world are leaving participants and employees and to come out with retirement solutions on their own and we ask questions like: "what is the life that you want to live in retirement?"; "do I want to live with your family?"; "do I want live near the beach?". And those questions are necessary because they don't understand how much money they're going to need in retirement or how they're going to be able to spend it. In more than 50 percent of the cases, even saving enough money to get to a point where you can replace 50% or 60% percent of your pre-retirement income is a challenge. In the United States as an example, the average retirement balance of a 64 years old person, is less than USD 150,000, and the stats get much worse if we look at the broad population (in this

case, the average balances are less than USD 35,000, because it includes a lot of free retirees in 25 years old). There’s a long savings road ahead, but we know, in order to save money for anything, we need a goal. We try to know what we’re shooting for and what we want to do in retirement is only one piece of it. We also asked the question: “what are your health needs to support your lifestyle?”; “What is the financial plan to surround your retirement dreams?”

My suggestion is at the most basic level of trying to understand accumulation and decumulation needs. We collectively as an industry, have not yet solve the problem, because what we have been saying for 30 years is just pile up as much money as you can possible have and hope for the best. So, we’re challenged now not only by saving enough but by looking ahead, and part of our responsibility is to look forward at the expected future returns from capital markets.

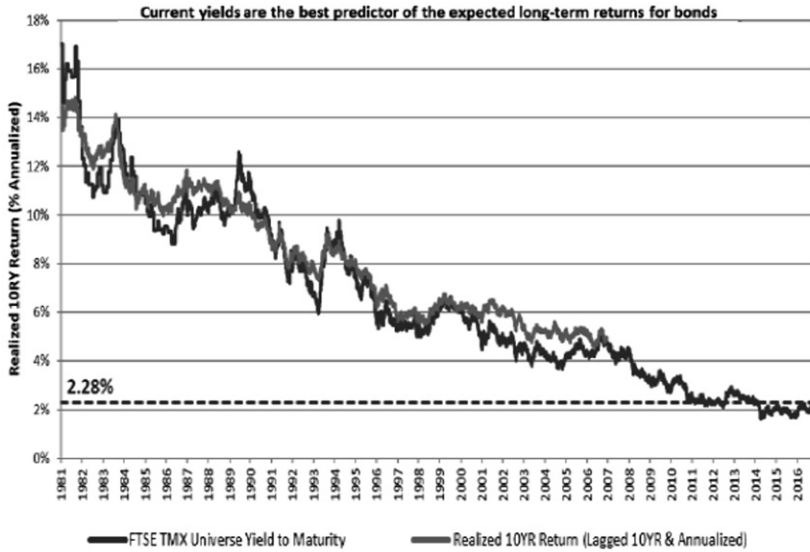
FIGURE 1
IDEAL STATE



SOURCE: THE AUTHOR.

Regarding the returns from capital markets, Graph 1 illustrate a point about projecting returns from fixed income. In Canada, 2,3% is what US investors can expect to return from Canadian bonds for the next 10 years. As we look globally, we are converging down on interest rates, so we are going to be faced by very low returns for a very long and extended period of time.

GRAPH 1
CANADIAN BOND VALUATION (FTSE TMX UNIVERSE)



SOURCE: PSG AS OF JUNE 30, 2017.

We don't expect much more at the equity markets. The flood of capital is coming to equity markets and that is pushing valuations up. Investors going to Canadian large caps maybe return in the 3% range. For the more adventurous, we're willing to go into the developing markets and the return maybe is as much as 7% range. They're not going to get the returns that were built into the early model. Those days are gone and much lower returns are expected, and we don't have the solution for that. We may have a partial solution for getting the saving rates up, through automatic enrolment or automatic escalation.

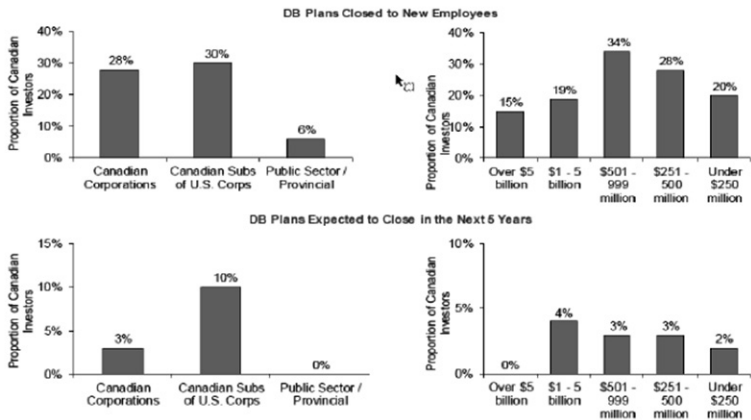
**Defined Contribution (DC) pension plans continue to grow in Canada though
Defined Benefit (DB) pension plans still dominate the market**

In Canada, which is one of the most liberal country in terms of keeping the DB plans open, less than a third of these plans are currently closed today (see Figure 1). They

want out the business of DB pensions, because the long term expected returns make the cost of funding those employee plans far too expensive. And the DC pension plans world are being bored; participants are putting money in, they're on their own to save, and we give them a menu of 20 or 30 options, waiting for them to be lucky or they hire some financial planning advice.

FIGURE 1
DEFINED BENEFIT PLAN CLOSURES

Less than a third of corporate DB plans are now closed and Canadian subs of U.S. corporations lead the way in terms of migrating to DC.



SOURCE: GREENWICH ASSOCIATES, CANADIAN INSTITUTIONAL INVESTORS 2016.

However, I think there is a better way to do it, because we have some fairly sophisticated processes of asset allocation and global diversification. The world is increasingly more and more interested in investments. Up to about 15 years ago, in the Canadian environment, you had to invest the vast majority of all of your money in Canadian assets. So, in retirement plans, approximately 90% was invested in Canadian assets and eventually 10% in the rest of the world. After time, 10 years later, with the Canadian economy booming, we realized that the Canadian equity market was under-diversified. The Canadian equity market was overwhelmed by financials and resources and policy-makers needed to massively diversify it. So, they opened up the doors and allowed participants to access a more global diversified portfolio, but it took a tremendous political organizational will on behalf of the industry, the politicians and the saving people to make those changes.

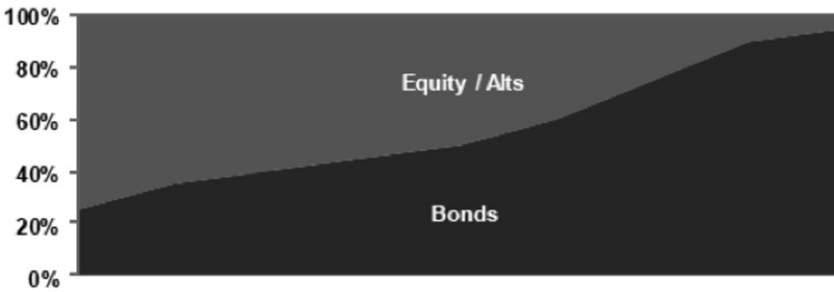


Current DC Investment Approaches

One of the most popular approaches to investment strategies in DC pension plans is one in which a menu of options (“a la carte”) is offered. Here participants can choose among Equities, Bonds or Alternative instruments, and they can choose the percentage assigned to each one (participants decide the mix). Here we face a series of challenges, such as: low investment literacy, multiplications of funds offered, complexity of alternatives, irrational behavior of the participant, and focus on short-term performance.

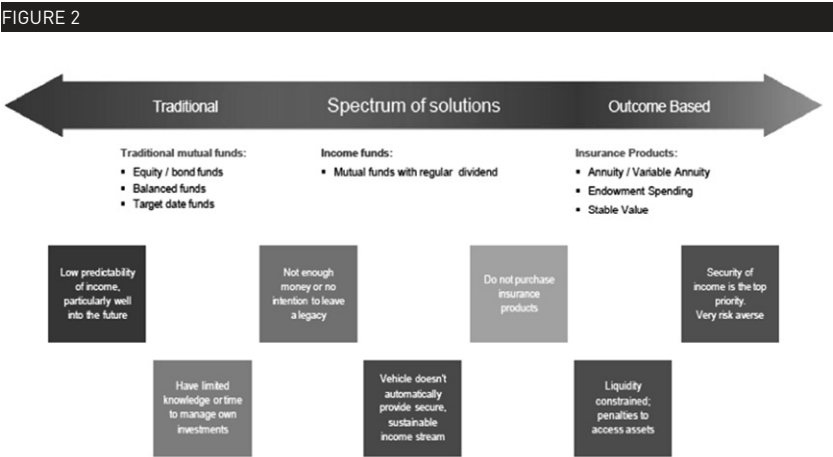
One of the things that we could do instead of the mentioned approach is what we call “do it for me”. This means diversified funds, and the can take the form of “Target Date Funds” (“to” or “through” retirement) or Target Risk Funds. This approach is intended to create a path, so that at the beginning of the professional career of participants (young people) the investment of pension funds in equities or alternatives is very high, and as workers get older and the risk tolerance goes down the investment in equities is reduced and the investment in bonds increases, putting them on a more stable long-term path to retirement (see Graph 2). This approach is not without challenges, among which we can mention: the fiduciary responsibility that falls on the sponsor of the pension plan, the herd behavior (with industry standards), binary de-risking strategies (Equities vs Bonds), and lower flexibility for participants. So, in the current market conditions, could this be a “lose-lose” proposition for participants in terms of meeting retirement goals?

GRAPH 2
TARGET DATE FUNDS



SOURCE: THE AUTHOR.

There is an incredible spectrum of retirement solutions available in today’s marketplace (see Figure 2). We have a lot of solutions in terms of insurance products, income funds and traditional mutual funds. One of the things that is normal to see in the pension world, is that due to the high cost, many of the solutions to guarantee some portion of income are dismissed. This is the case of countries under AFORES like Mexico), in which the cost of capital to back and guarantee a portion of the income is absolutely insane.

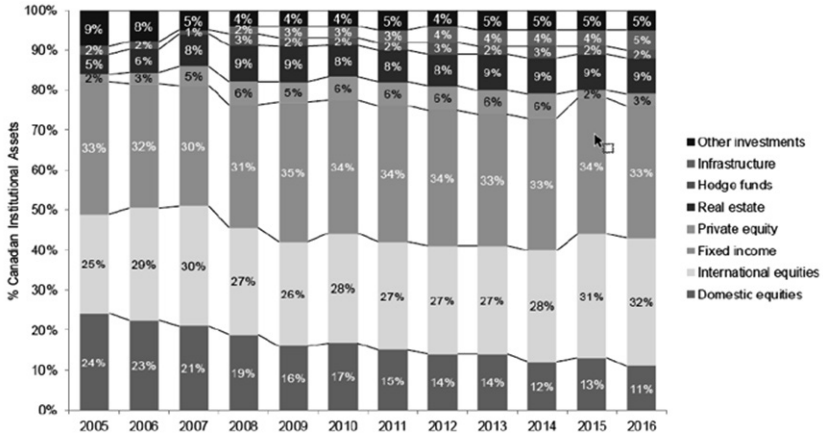


SOURCE: THE AUTHOR.

What can plan sponsors do?

What can we do as industry, in order to help? Over time Canadian plan sponsors decided that the one thing they can do for their participants is help them to have a more diversified portfolio. So, Canadian plan sponsors have been decreasing domestic exposure to the Canadian equity in favor of non-domestic equities and alternatives (see Graph 3).

GRAPH 3



SOURCE: GREENWICH ASSOCIATES, CANADIAN INSTITUTIONAL INVESTORS 2016.

A shift to a more objective based solution

By traditionally focusing on the accumulation phase, DC plans, risk-based, may not be meeting the participants desired post-retirement outcomes. In current volatile and low-rates market conditions, Target Date Funds (TDFs) or Target Risk Funds (TRFs) may not be fulfilling participants expectations of savings for retirement. So, we have a challenge, and a possible revised approach is to move to an outcomes-oriented savings framework, a more objective based solution, where savings serve a clear purpose of building a post-retirement predictable decumulation experience.

Creating the same kind of outcome oriented to approach in retirement is one of our biggest challenges when we shift to a more objective based solution. We have been working on and outcome-oriented strategy, so that is accessible to everyone and it provides a 4% or 5% return; it has a very stable return characteristic. The key here is trying to do it in a space where you are not providing a guarantee and still maintain the confidence of your investors. This is going to be the communication and behavior challenge.

There are a series of challenges or retirement goals faced by retirees:

1. How can I convert my savings into a personalized retirement income? Can I improve my retirement income taking some risks? If we just go to the bond market, we are not going to be successful at 2%. If we want our retirement income to come from our investments, we look at equities, a 2% investment world does not provide enough. If we go to risk our part to the capital structure, we might find more, but we avoid then the idea of being diversified, either globally or by sector or industry.
2. Can my portfolio be managed to secure retirement income payout?
3. How will I effectively de-risk as my target outcome is reached?
4. How do I address longevity risk? Somewhere between age 55 and 65, the little bell goes off in the back of the minds of workers that says "I have a longevity problem". People start to look at their family members who are living to 90, 95, 100, 105 years old and they begin to realize that the same is going to happen to them. In the simplest form of this, if we start working at age 25 and we finish at age 65, we have accumulated money for 40 years and we need to payout for myself for the next 40 years, without running the risk of losing it and not having anything when I reach that age.

Next generation: Goals-Based Investing (GBI)

This is a solution rooted in Asset-Liability Management (ALM). Using the principles that we learn from pension asset management for retail clients in the distribution face is exactly appropriate for the distribution.

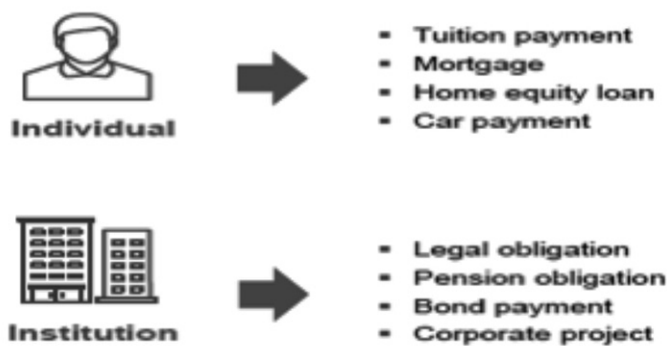
This approach focus on specifically addressing the goals of the investor, rather than risk tolerance.

We have multiple "definitions" of risk:

- Annualized portfolio volatility.
- Providing sufficient capital appreciation.
- Mitigating longevity risk.
- Maximizing withdrawals in retirement.
- Aligns investment approach with goals, time horizon and stage in life.

Liability-Driven investing (LDI), is an investment framework that is structured around modeling and meeting the payment of income to match an individual's or an institution's liability, while protecting against interest rate risk (see Figure 3).

FIGURE 3
LIABILITY-DRIVEN INVESTING

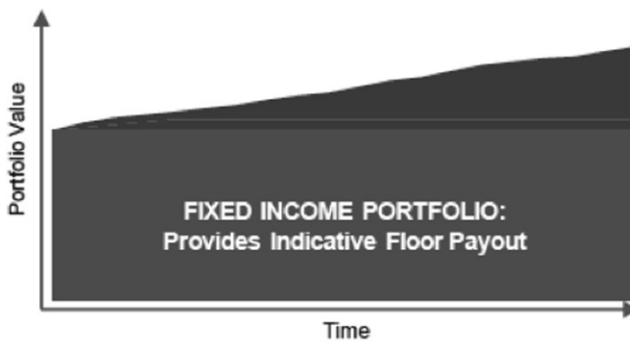


SOURCE: THE AUTHOR.

Dynamic Liability-Driven Investing is not a systematic, long duration fixed income strategy. This strategy seeks to secure a minimum income stream and ensures continued growth over time an investor moves from the accumulation phase to the decumulation phase (see Graph 4).

GRAPH 4

PAYOUT EXPECTED TO INCREASE AS GROWTH ASSETS GET
CONVERTED INTO FIXED INCOME ASSETS



SOURCE: THE AUTHOR.

Technology is playing a more prominent role for participant engagement

Across the world, one of the most important trends that we see is that people want advice. They want to be closer to our industry and they want us to be closer to them. My benchmark for this is now one of the most valuable companies in the world, Amazon. What is Amazon doing? Amazon is taking technology and bringing distribution to our front door. They are closing the last mile between the retail store and the client and what we are seeing now in digital financial planning tools is that the financial technology world is beginning to close the last mile between the asset managers, the asset gathers and the clients, the customers who live with us every single day.

Figure 4 shows three examples of financial engines or “Robo-advisors”², in the market place today. They have built very sophisticated models for asset allocation, asset mix and advice, and the next frontier is going to be how we collectively as

2 Robo-advisors or Robo-advisers are a class of financial adviser that provide financial advice or Investment management online with moderate to minimal human intervention. They provide digital financial advice based on mathematical rules or algorithms. These algorithms are executed by software and thus financial advice do not require a human advisor. The software utilizes its algorithms to automatically allocate, manage and optimize clients' assets.



an industry, look to these sorts of financial engines to help us solve not the mass problem of retirement and retirement planning, but get down to the individual participant (what we call “mass customization” for every single participant in our universe). That is the challenge in front of us, it is not just an accumulation challenge but it’s also a distribution challenge. Simplicity is the key factor is required in order to get people on board, to take these LDI concepts and turn them from the complex language into things that can be used day to day and then to use technology to get closer and closer to our younger participants every single day.

FIGURE 4

EXAMPLE OF 3 ROBO-ADVISORS IN THE MARKET PLACE TODAY



**Financial
Engines®**



wealthfront



Betterment

SOURCE: THE AUTHOR.

INDEXING SOLUTIONS FOR RETIREMENT

AYE M. SOE¹

- ¹ *Aye M. Soe is a CFA Charter holder, a member of the New York Society of Security Analysts (NYSSA), and the CFA Institute. Aye has a bachelor's degree in economics from Tufts University and a master's degree in economics from Fordham University. She is Managing Director, Global Research & Design, Americas, at S&P Dow Jones Indices. In this capacity, Aye heads up the Americas research team. The group is responsible for conceptualization, research, and design of the S&P global core and quantitative equity, fixed income, commodities, volatility (VIX futures based), multi asset, sustainability (ESG), and alternative asset strategy indices. Aye also regularly publishes on a number of headline S&P publications as well as research papers related to capital markets and investment concepts. Prior to joining S&P Dow Jones Indices in 2007, Aye was a research analyst within the Consulting Services Group at Morgan Stanley Private Wealth Management and an associate product manager at FactSet Research Systems.*



Trends in indexing

Over the last 10 years there have been three powerful trends, which have reshaped the investment management industry and asset allocation processes. The first one is the migration of assets from active to passive management, using index-linked investment vehicles (e.g. ETFs), which has been an efficient way to access exposure to asset classes and market segments beyond core equities and fixed income. The second one is the increasing adoption of a factor-based asset allocation, in which investors are increasingly aware of the risk factors or risk premia as the building blocks of asset allocation, rather than asset classes. This is very important because that also means that type of innovative retirement income solutions are more likely to be incorporating those types strategies (I will explain this in greater depth later). The third one is what we call outcome-oriented solutions, which means shifting focus from individual investment products to investment solutions. This third trend is born because institutional investors increasingly demand solutions that address their specific needs, such as matching liabilities, reducing funding ratio volatility and achieving absolute return targets.

Evolution of index solutions in retirement

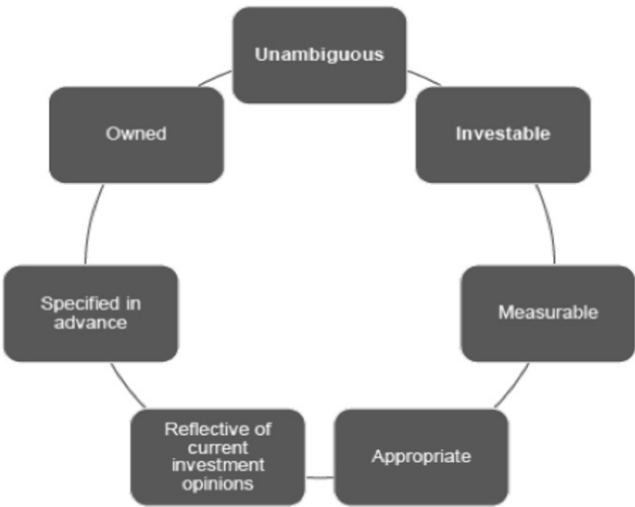
As an index provider, we have seen a tremendous need in the market, for a rule based transparent target on retirement solution indexes. The shift from defined benefit pension systems (DB) to defined contributions systems (DC) has placed enormous amount of challenges on the plan participants and on individual investors (how much to save, how often should they save, how do they pick judiciously from all the investment vehicles that are available on the platform and also how do they move from wealth creation or accumulation in to income generation in the retirement face).

What constitutes an adequate investment? Wealth maximization or income stability? Regulators, plan sponsors, and public and private managers have put different alternatives on the table.

At the same time, having an appropriate measurement of performance and evaluation framework is a major part of the investment management process. In this regard, indices serve as yardsticks against which managers’ performance can be compared and their effectiveness can be assessed. However, we do not think these indexes have been benchmarked to properly reflecting the type of risk exposures that these targeting funds are taking on. We need to have benchmarks in the industry, to measure the effectiveness of the managers, and also to do proper performance attribution and to understand what kind of risk these managers take to get to that return.

Figure 1 shows the desirable characteristics for a good benchmark.

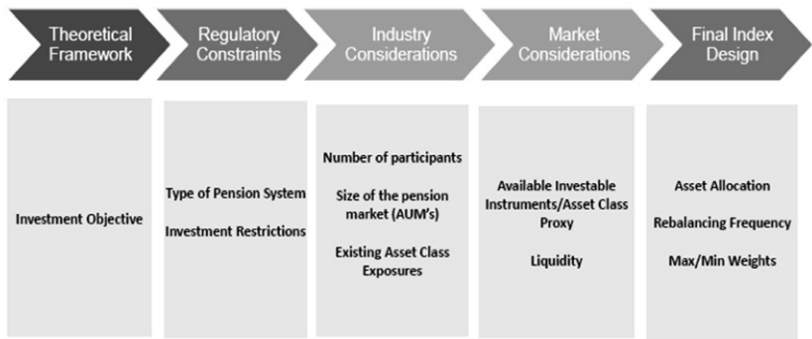
FIGURE 1
PROPERTIES OF A GOOD BENCHMARK



SOURCE: BAILEY, J., AND D. TIERNEY. "CONTROLLING MISFIT RISK IN MULTIPLE-MANAGER INVESTMENT PROGRAMS." RESEARCH FOUNDATION OF AIMR & BALCKWELL PUBLISHERS, 1998.

In creating these retirement solutions indexes, what we have been doing is to take into consideration the regulatory constraints, and the industry and market considerations (the local investments, the regulatory environment and the type of asset class that are available) to get the final index design (see Figure 2).

FIGURE 2
FROM THEORETICAL FRAMEWORK TO INDEX DESIGN

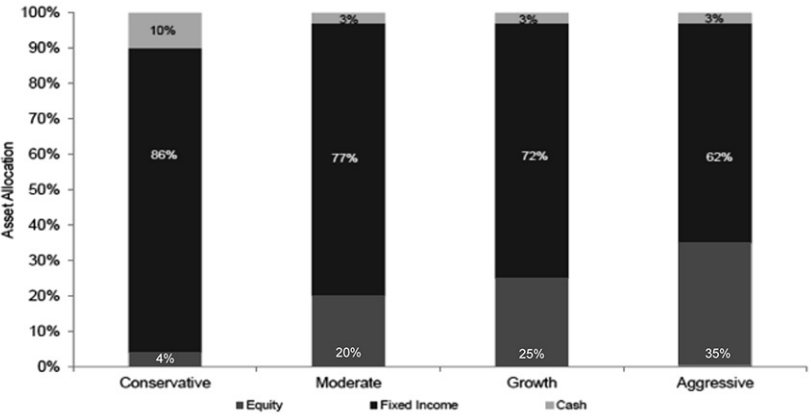


SOURCE: S&P DOW JONES INDICES LLC.

Target risk

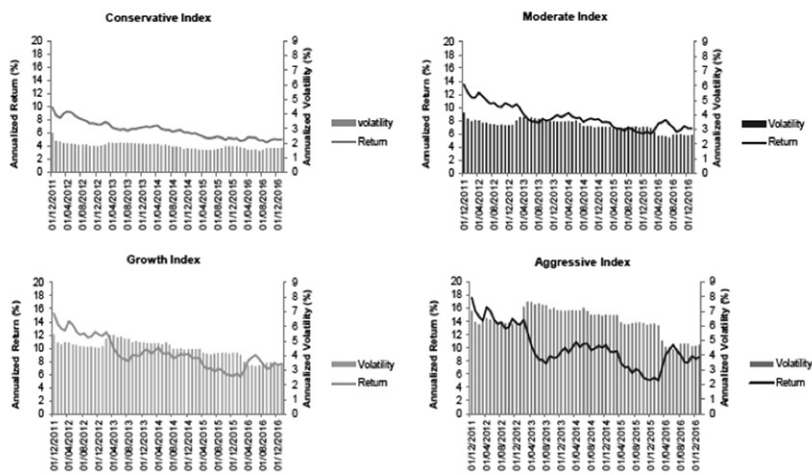
Earlier past year we launched in Mexico the S&P/BMV Target Risk Index Series, which comprises four multi-asset-class indices, each corresponding to a particular risk level (see Graph 1). These indices are intended to represent stock-bond allocations across a risk spectrum from conservative to aggressive, while considering the regulatory and investability constraints of local pension funds. Figure 3 shows the 36-month rolling annualized returns and volatility of each Mexico S&P/BMV Target Risk Index.

GRAPH 1
MEXICO TARGET RISK SERIES



SOURCE: S&P DOW JONES INDICES LLC. DATA AS NOV.1, 2016.

FIGURE 3
MEXICO S&P/BMV TARGET RISK INDEX SERIES
36-MONTH ROLLING ANNUALIZED RETURNS AND VOLATILITY



SOURCE: S&P DOW JONES INDICES LLC. DATA AS NOV.1, 2016.

Target date

The other solution that we have provided over the last 10 years is target age and it followed the same concept of the path moving from equities into bonds gradually as people near the retirement age. The only thing that we have done that is different, is rather than being model-based, the target age indexes use a consensus survey-based approach to set the moving path.

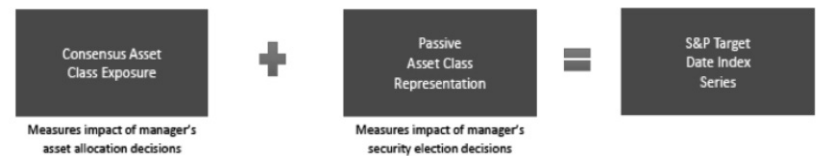
The S&P Dow Jones Target Date Index Series is a family of multi-asset class indices, each corresponding to a particular target retirement date. Each index provides varying levels of exposure to equities and fixed income, and each target date allocation is created and retired according to a pre-determined schedule related to the respective target date.

The underlying premise of target date strategy is a varying de-risking glide path, shifting from a high equity risk level to a low equity risk level over time. Let’s

explore two options for benchmarking Target Date Funds: (i) The survey approach (the U.S. approach), which is based on a consensus asset class exposure; and (ii) The model driven approach.

Regarding the survey approach, significant differences in glide paths and asset class exposure across the target date fund universe can create difficulties in benchmarking and defining passive exposure to the available universe. In the U.S., S&P Dow Jones Indices’ target date benchmark series extends traditional representative indexing into the growing target date fund universe by establishing a new method for defining market consensus. Benchmark asset allocation is derived from a robust survey of target date fund peer groups with the allocations fully investable (see Figure 4).

FIGURE 4
THE SURVEY APPROACH



SOURCE: S&P DOW JONES INDICES LLC.

The S&P Target Date “To” and “Through” Indices offer stakeholders style-specific measures of the two prominent approaches to glide path management within the target date fund universe. “To” funds have relatively conservative glide paths and aim to emphasize market risk sensitivity around the retirement date. “Through” funds are relatively more aggressive and aim to be more sensitive to longevity risk at, and beyond, the retirement date (see Figure 5).

FIGURE 5
TO TDF_s AND THROUGH TDF_s



SOURCE: S&P DOW JONES INDICES.

In Latin America at the moment, we partnered with exchangers and we are also thinking about how to best design targeted indexes for the industry. We feel that the survey-based approach has been not adequate given the limited number or the small sample size of the Pension Fund Administrators (AFPs) and perhaps the model driven approach is probably more reflective and representative. The model driven approach is based on a pre-set Target Risk strategy (life-cycle and rules-based strategy), transitioning focus from index components representing growth assets to index components). To avoid the subjectivity of the model, it's necessary the review of the theoretical framework, regulatory environment and industry and market considerations.

S&P Shift to Retirement Income and Decumulation (STRIDE)

Transition from wealth accumulation to income generation

The majority of plan participants in DC pension systems lack access to in-plan income solutions or investment that integrate with out-of-plan income solutions. The DC plan participants face at least the following 3 challenges (among others; see Figure 6): (i) how to earn enough and budget spending for retirement; (ii) how to select investments, rebalance and adjust for changing circumstances; and (iii) how to transition from wealth accumulation to income generation. Innovations in DC plan design, such as auto-enrollment & auto-escalation have helped with the first challenge. At the same time, the introduction of target risk, target date funds and other diversified investment alternatives has helped with the third challenge.

FIGURE 6
THE DC LANDSCAPE

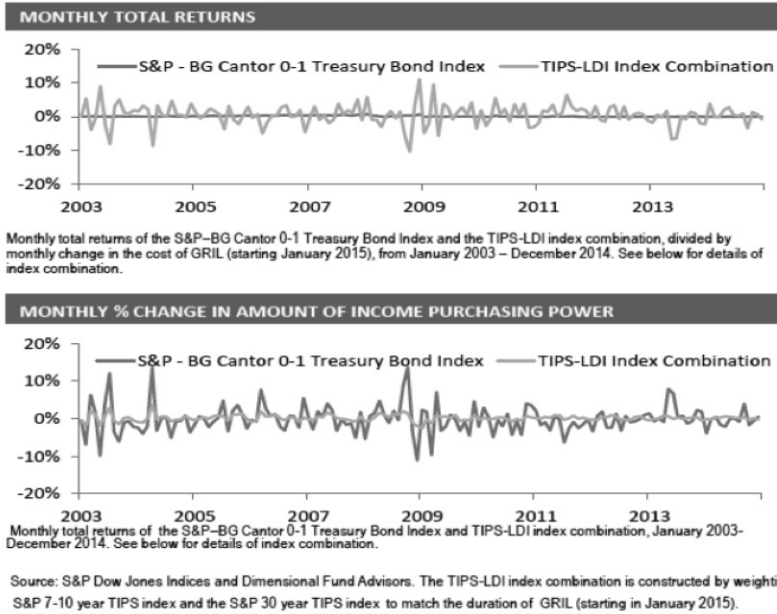


SOURCE: S&P DOW JONES INDICES LLC.

The retirement services industry is still struggling with the income generation problem. We tend to focus tremendously on wealth maximization. For example, if I say that I am going to retire in 25 years, therefore I am going to need USD 1 million. Is that USD 1 million going to fund my lifestyle? Is the purchasing power of the USD 1 million going to be adequate enough, given the costs of health care and the life expectation risk? Therefore, there is a need to count with a solution that considers a risk management approach.

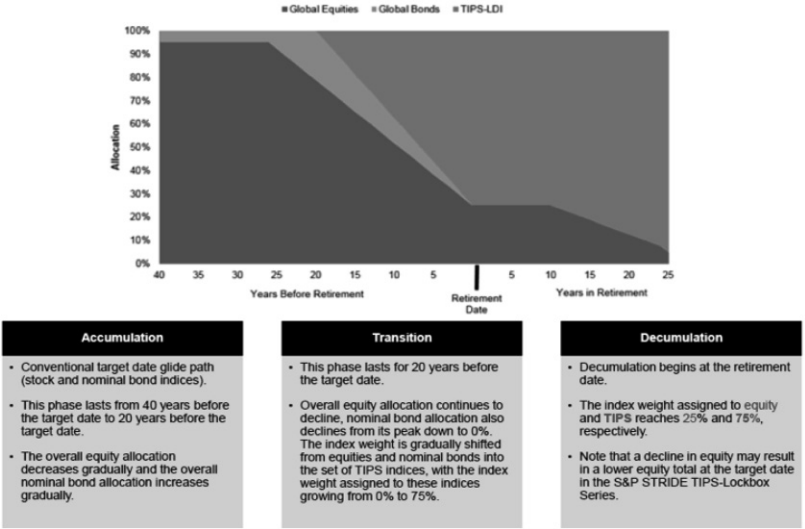
This is the S&P Stride framework, a risk management model, where the risk being mitigated is the uncertainty of how much real income can be afforded. That is a very important concept, drawdown risk is not the only risk faced by employers nearing retirement; uncertainty of income affordability is also a risk. To give an example, Figure 7 shows two charts and in each one there are two lines; one line is referred to the short-term bonds (Treasury Bond) and the other one is referred to the U.S. Treasury Inflation-Protected Securities (TIPS). When you look at just the return volatility (the chart on the top), you can see that the short-term bonds do not have much volatility and instead, the duration matched TIPS display greater volatility (high-risk asset). However, when you look at the changes of the volatility of income (the chart below), what you see is that short-term bonds appear more volatile and the duration matched TIPS become the low-risk asset. Therefore, it is imperative that we think about the income stability.

FIGURE 7



Earlier in 2016, we launched this index family cost (S&P STRIDE; which stands for S&P Shift to Retirement Income and Decumulation), and we partnered with an asset manager dimension of funds, who contributed greatly to index design. This index marries the traditional glide path with Liability Driven Investment (LDI) TIPS portfolio. Therefore, when you are in retirement stage, you have that income stability. So, for example, if the accumulation face begins 40 years before retirement, 20 years before retirement the portfolio begins to move away from the growth assets (global equities) and starts allocation into the duration matched TIPS portfolio (TIPS-LDI). The landing point at target date is an allocation with 25% in global equities and 75% in TIPS-LDI. portfolio allocation is 75 percent (see Figure 8). TIPS provide inflation hedge (inflation-linked bonds) and duration of TIPS-LDI allocation matches that of a retirement income. Of course, in this exercise we also take into consideration the mortality tables and the fact the people are living longer.

FIGURE 8
S&P SHIFT TO RETIREMENT INCOME AND DECUMULATION (S&P STRIDE)
GLIDE PATH



SOURCE: S&P DOW JONES INDICES LLC.

What we have really created is what we call a Generalized Retirement Income Liability (GRIL), defined as the hypothetical inflation-adjusted stream of cash flows equal to USD 1 per year that starts at the target date and ends 25 years later. The cost of retirement income is the Present Value of this stream of cash flows. The interest rates used to discount these future hypothetical cash flows to the present are derived from the current U.S. TIPS curve. GRIL is expressed monthly, so the cost of income at time t is given by:

$$P_{GRIL,t} = \sum_{i=1}^{300} \left(\frac{1}{12} \right) x e^{R_{i,t}(T_i-t)}$$

Where:

t = the calculation date

T_i = the month and year the i^{th} payment is made

$R_{i,t}$ = the discount rate corresponding to maturity (T_i-t)

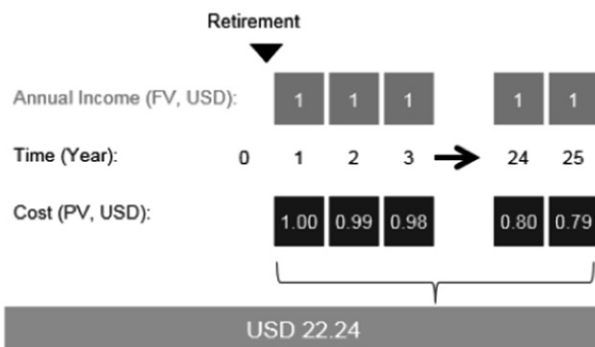
So, what we are really doing is matching assets with future liabilities; we are essentially immunizing the portfolio (this is classic LDI).

Let's think about simply. Suppose you have 25 years to retirement. You are calculating how much do you need back to your present-day value. When you are calculating how much you need, in present value, you are also incorporating the changes in interest rates and inflation. So, at the minimum if you look at it, I'm sitting here today, I have 25 more years to live, and I need a dollar every year. When you discount back to the present value, that means I need to have USD 22.24 dollars in order for me to fund a real USD 1 of income in retirement. We can take that figure and multiply with any savings number we have and that gives us a sense of how much we need to save (see Figure 9).

FIGURE 9

THE COST OF GRIL

Today's Cost of a 25-Year USD 1 Inflation-Adjusted Stream of Income



SOURCE: S&P DOW JONES INDICES LLC.

Quantifying the cost (present value) of GRIL has a few important benefits:

1. We can measure duration of GRIL, which is used as the target duration of the TIPS allocation in the index. This process is important because:
 - a. It hedges the TIPS allocation to interest rate risk on a monthly basis.
 - b. It enables us to roughly match the duration of retirement income (the liability represented by GRIL) with the duration of assets meant to collateralize the provision of retirement income, or to provide it directly, in the future.
2. One can calculate how much income would have historically afforded by any STRIDE index. Of course, hypothetical illustrations using indices do not account for investment expenses, and it is not possible to invest directly in an index. But such illustrations may nevertheless be valuable for what they demonstrate.

The next generation of life cycle benchmarks

As I mentioned, one of the key powerful trends shifting through the asset management industry, is the adoption of factor-based asset allocation or Smart Beta investing strategies. With this understanding, we now have the ability to innovate even further in the retirement solution space. We know that in our earlier years we have greater ability to take risks, and that means we can take on more equity risks than our core equity benchmark portfolio, by using return enhancing factors such as momentum or growth, which allow us optimize the portfolio in the accumulation phase, with a risk in line with the market. Later in our years, as we are more risk averse or as we get closer to our retirement age, typically happens that our financial planner or our asset manager moves most of our capital into fixed income. Instead of fixed income, now we can select the least volatile stocks by using the risk reducing factors (such as low volatility or a minimum volatility), to maintain market exposure with less risk (see Figure 10). This is because what we have seen is that low volatility or minimum volatility strategies tend to have lower beta to the market (they tend to have beta of 0.65 to 0.80 over the long-term investment horizon), and that means two things: (i) we do not have to move into bonds and take on interest risks; (ii) we can maintain or even level up more, because our beta to the market is only 0.65 or 0.80 and that freeze up our budget and we can still have lower risk to the market (see Figure 11).

We are combining these new trends that are shaping through the market and thinking about what kind of better and more innovative solutions we can bring to the market. Again, benchmarks need to be properly design, in order to do a proper

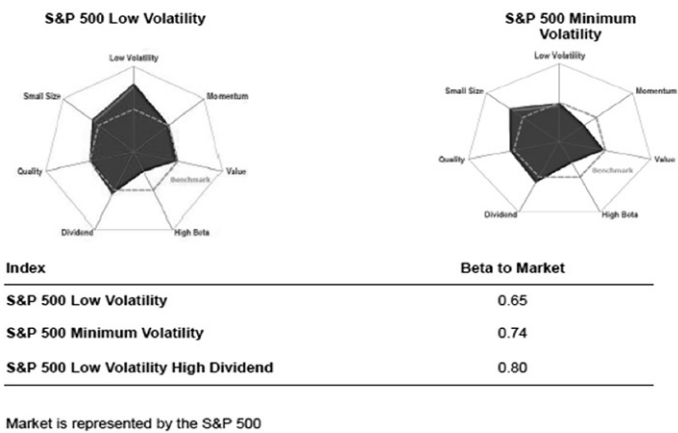
performance attribution as all the measures of the effectiveness of the manager, often times are not reflective of the risk exposures that these strategies are taken.

FIGURE 10
 INCORPORATION OF SMART BETA STRATEGIES

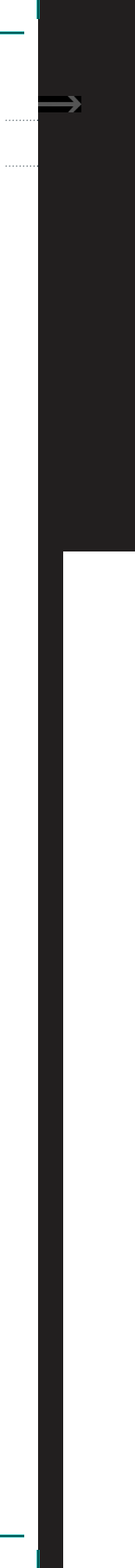


SOURCE: S&P DOW JONES INDICES LLC.

FIGURE 11
 MANAGED EQUITY VOLATILITY INDICES



SOURCE: S&P DOW JONES INDICES LLC. DATA AS OF SEPT. 29, 2017.



HOW TO INTEGRATE A STRATEGY WITH LONG TERM VIEW TODAY AND BE ABLE TO ACHIEVE PROPER RETIREMENT GOALS

FRANCESCO SANDRINI¹

- ¹ *Francesco Sandrini graduated in Economics from Bologna University and holds a Masters Degree in Economics from Bocconi University of Milan (1998). In addition, he received a PhD in Banking and Finance from University College Dublin in 2009. He is currently Head of Multi Asset Securities Solutions at Amundi Asset Management. Francesco has as extensive experience in cross asset investing. At Amundi, Francesco oversees Multi Asset solutions of the company, investing primarily in stocks and bonds. He is responsible for Balanced Institutional Portfolios, Balanced Flexible and Income Multi Asset Portfolios. Francesco is also responsible for Insurance separated accounts, Capital Guaranteed products and the Institutional Solutions team. Francesco joined Amundi Asset Management (previously Pioneer Investments) in 1998.*

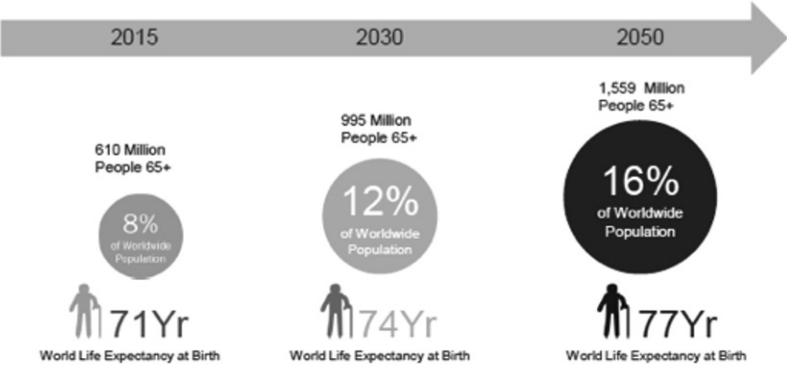


In this brief article I will try to merge some of the challenges imposed by demographic trends, with the challenges that I see particularly relevant in terms of market dynamics in this very contentious situation. The trend we are seeing in the market today is that things are moving faster from default solutions to individual solutions, in which the individual advisories become extremely relevant. That's the way the most innovative corporations in Europe at the moment are thinking ahead. I will show how the most innovative sponsors are at the moment moving ahead this concept and how eventually to start conceiving more innovative solutions to achieve proper retirement goals.

Demographic trends shaping

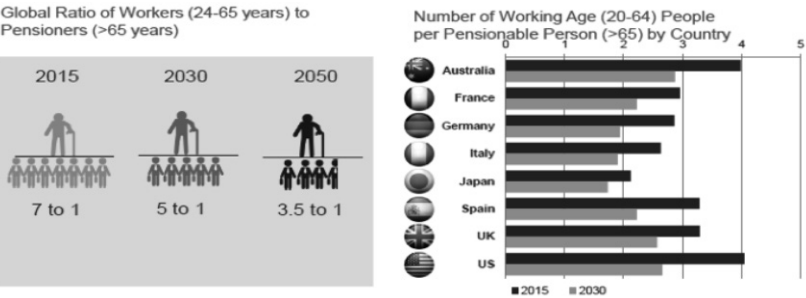
First of all, there are big demographic trends that are developing. This has been explained in a very sophisticated way by other authors in this seminar. The average age at global level is increasing rapidly, from around 71 years at the moment, to 74 and 77 at global level in 2050. Around 2030, when India will overtake China as the most populated country in the world. But more warning than that, what I would like to focus the attention, is that there will be almost 1.5 billion people in the world, aging 65 plus at year 2050 (see Figure 1). This will put a massive pressure on pension plans in order to adapt themselves over this time window.

FIGURE 1
THE WORLD IS GETTING OLDER AND LIVING LONGER
GLOBAL PROPORTION OF PEOPLE AGED 65 AND ABOVE



SOURCE: THE AUTHOR, BASED ON UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS; AND WORLD POPULATION PROSPECTS, THE 2015 REVISION COMPARED TO THE 2013 EDITION.

FIGURE 2
MORE PENSIONERS LIVING LONGER AND LESS WORKERS TO SUPPORT THEIR RETIREMENT

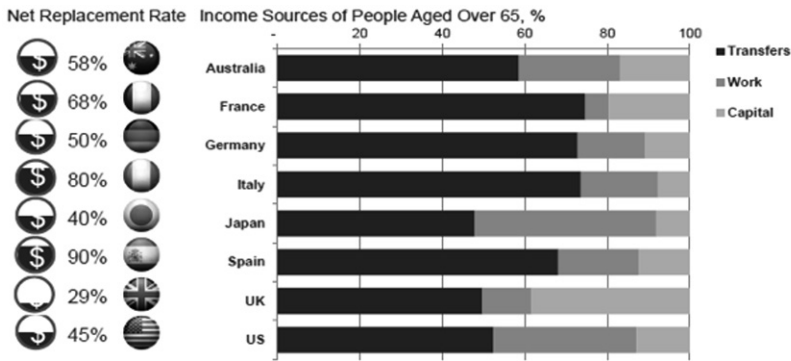


SOURCE: THE AUTHOR, BASED ON UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS; AND WORLD POPULATION PROSPECTS, THE 2015 REVISION COMPARED TO THE 2013 EDITION.

Figure 2 shows how many people in different countries, in a working age between 24 and 65, are maintaining the people retired. You see that in the year 2015, at global level, there were 7 working people per pensioner, and this number will shrink to reach 3.5 working people per pensioner in the year 2050. This will make all the public scheme and the word under pressure, as well as all the health care systems. You can also see many differences in terms of countries on the right part of this Figure, and you will notice that these trends are particularly relevant those for countries like Germany, where I coming from, that apparently are in extremely good shape, but when we look at those challenges, those countries are particularly under pressure.

Figure 3 shows a different way of looking to those challenge, from the point of view of how pensions are struggling. The dark line in the histogram represents how much in terms of replacement rate will come from the pension system (transfers) and how much instead will come from the work, otherwise from financial income (capital). The reality around the world is quite heterogeneous. Pensioners are already sourcing income from work and capital to supplement their pension. With expected reforms in pension systems, we believe this trend is set to continue.

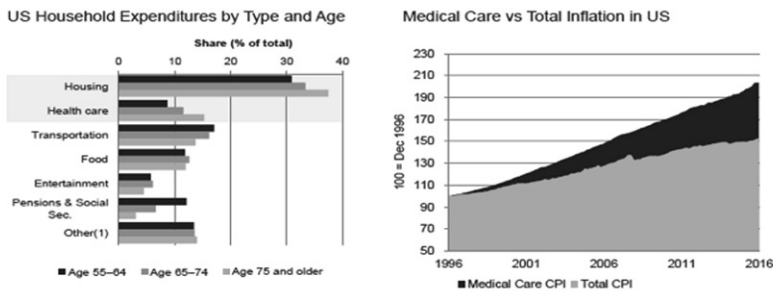
FIGURE 3
PENSIONERS COULD NEED ADDITIONAL RESOURCES



SOURCE: PENSIONS AT A GLANCE 2015 AND 2013.

This Figure 4 shows the situation of United States regarding the rising costs of health care and housing in United States (quite representative of the situation worldwide). A big part of the pension expenditures will be absorbed by housing and health care. If we look on the right side of the Figure 4, from 1996 to 2006, the proportion of health care and housing absorbed in terms of these retirement needs, is impressive. In the retirement phase, the share of expenditure for Housing and Health care increases and represents around 50% of average household costs. 70% of people turning 65 can expect to use some form of long-term care at some point.

FIGURE 4
RISK OF RISING COSTS: PARTICULARLY FOR HEALTH CARE AND HOUSING



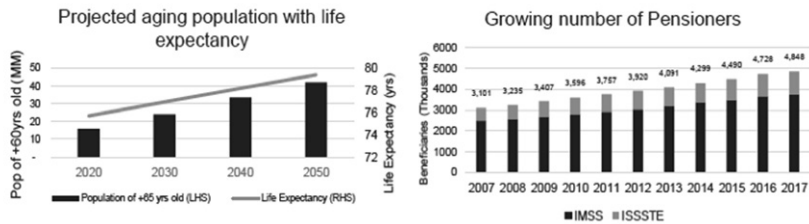
SOURCE: CONSUMER EXPENDITURE SURVEY 2015, U.S. BUREAU OF LABOR STATISTICS.

The problem here in Mexico is not different. The aging population in Mexico is a fact as well as the growing number of pensioners (see Figure 5; chart on the right). This is a challenge that Mexico will experience like every different country in the world.



FIGURE 5

MEXICAN DEMOGRAPHICS IN LINE WITH WORLDWIDE TREND

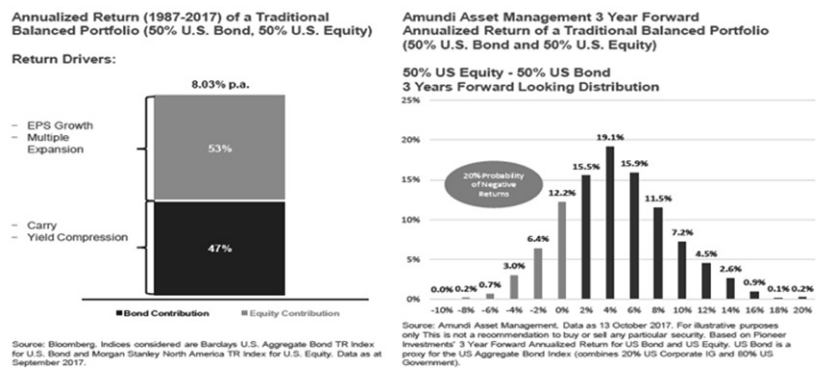


SOURCE: CONEJO NACIONAL DE POBLACIÓN, ENVEJECIMIENTO DE LA POBLACIÓN DE MÉXICO (RETO DEL SIGLO XXI) 2004, 5TO INFORME DE GOBIERNO.

In a strenuous financial market environment

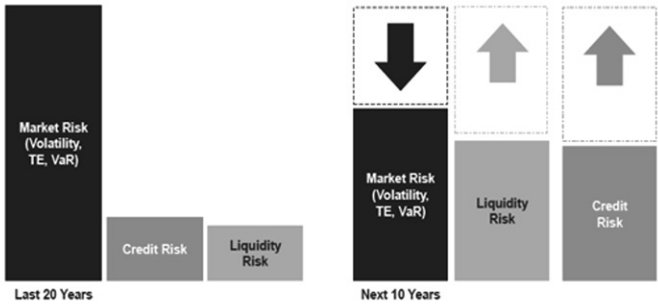
The left chart of the Figure 6 shows that, for an average investor, a traditional balance portfolio investing 50% in US equities and 50% in US bonds, in the last 30 years, would have delivered a return in excess of 8% per year, but those contingency situations are over. What you see on the right chart of the Figure is clearly a simulation of what could be the return over the next 3 years. There are two components that I find quite worrying. The first one is the fact that the average return is lightly an excess of 4%, because we have assisted to a super historical compression of interest rates and credits spreads. The second one is that we can expect a 20% probability of negative returns over a 3-year horizon. What does it mean exactly? That for people retiring in 3 years, there is a substantial probability that they will experience negative returns, harming their replacement rates.

FIGURE 6
CHALLENGING MARKET BACKDROP REDUCES RETURN POTENTIAL



We have been experiencing 7 years of continue financial brush. For the last 20 years we had very little episodes where we had to be concerned about market, liquidity and credit risks (we can count them with the fingers of one hand: Lehman Brothers, EMRON, 1998 Russian crisis). However, the future will be different; the future of the next 10 years will be talking about the unfolding of the current abandons of liquidity with Central Banks withdrawing money from the market. Policy actions of Central Banks has distorted asset prices, thus impacting the nature of market, liquidity and credit risks (see Figure 7).

FIGURE 7



Source: Amundi Asset Management. For illustrative Purposes Only.

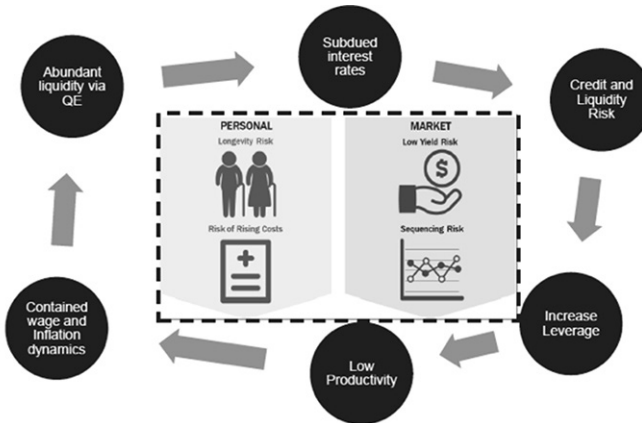
Let me show you the collateral effects of a prolonged Quantitative Easing (QE) from the Central Banks. Figure 8 (chart on the right) shows a turnover decrease over 12 months of government and treasury bonds, of -70%. A pattern similar applies to the investment in corporate bonds (chart on the left). What does it mean exactly? That in this an unprecedented environment; the liquidity of the market has been decreasing. The reality is that with do not have a clue today, on how the credit and liquidity risks will perform in the market.

FIGURE 8
LOWER TRADING VOLUMES IN SOVEREIGN BONDS AND CREDIT SECTORS
IMPACT OF QUANTITATIVE EASING (QE)



I want to complete this contingency analysis of financial markets with the perception. We face an income dilemma from short to long run. We have the need to say more, we have the need to address longevity risk, and we have to face with financial markets that are heavily distorted. Today there is a spiral against the possibility, for asset managers, to plan long-term returns. We have abundant liquidity via QE, and this leads to a subdued interest rates. In these environment, credit and liquidity risks looks extremely low, and this leads to increase leverage. That's what you see in the corporate bond market in the US. This leads to low productivity, because when debt is very high, productivity is very low, and this leads to a contained wage and inflation dynamics. This leads again to the need to continue this plan and the spiral will restart. How to escape the spyral? (see Figure 9).

FIGURE 9
FACING THE INCOME DILEMMA FROM SHORT TO LONG TERM



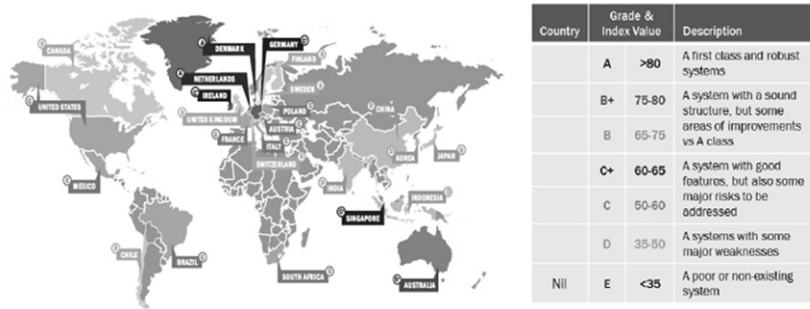
SOURCE: AMUNDI ASSET MANAGEMENT.

Dealing with the challenge today

Any model addressing individual liabilities has to deal with this dilemma. A lot of pension plans have been addressing to those challenges already. Figure 10 shows a map taken from Mercer. It can be seen how around the world, many economies and many countries have started to address these challenges, in particular the one coming from demographic trends. It is Chile for example, which is ranked extremely high in this ranking, in terms of how adequate the pension system is with reference to the challenges that we have been discussing. It is not a homogenous picture. There are different transitions in place, with countries that are lagging the reforms and countries that are ahead of the reforms. Mexico has addressed at least in part some of those needs, and despite of that, because of the living together of a defined contribution plan and the disintegration of transition in terms of defined benefits, the cost of the system is projected still to increase. In conclusion, many countries have already reformed their pension systems, but there continues to be a significant room for improvement, and investors should prepare in advance for potential changes in their pension entitlements.

FIGURE 10
GOVERNMENTS PUSHED TO REFORM THEIR PENSION SYSTEMS

Global Scorecard of Pension Systems. Index Value based on Adequacy, Sustainability and Integrity



SOURCE: MELBOURNE MERCER GLOBAL PENSION INDEX 2015.

Let me try to give an understanding on this and I will try to use some examples to see how we can start thinking in a different way. It is quite clear that around the world we saw a trend, transitioning from defined benefits (DB) to defined contributions (DC). If we ask people to transition from a DB pension plan to a DC pension plan, we need to be able to preserve the quality of living of people, so it makes a lot of sense to think about the individual liability of people.

The replacement rate (the ratio between the retirement pension and the last salary) is a metric in terms of portfolio construction that makes a lot of sense. What we need to be able to consider when we perform portfolio construction, for a modern DC schema, is the trade-off between targeting a sustainable replacement rate and its shortfall or volatility.

If we want to target the replacement rates, we need to acknowledge the fact that every individual has a different salary. What are the dynamics of the salaries of our members? We cannot pretend that all the salaries dynamics are the same. Salaries are heavily influenced by factors like inflation, wages and economic growth. But when we enter at micro level, it is quite easy to observe that age, sex, sector, career path and the human capital (education and skills), are factors that make a difference statistically.

The dynamics of the salaries affect the replacement rate: the numerator cumulate contributions and investment performances, and the denominator is the salary at retirement (see Equation (1)).

$$G = \frac{A}{s^T} = \text{Replacement Rate (1)}$$

$A = \text{Annuity}$

$s^T = \text{Salary at Retirement}$

When defining default investment solutions (as innovative European pension plans do), we need to consider four general points:

1. We need to create clusters, from individual to groups. It is required a cluster analysis of the adherents by age, sex, sector, carrier path, human capital. Our approach should not be focused only on age.
2. From groups to types: we need a definition of employee types for each representative cluster.
3. From types to default solutions: we need to design the investment solution for the employee types. Is to say, we need to design asset allocation decisions, based on salary dynamics, to maximize the replacement rate.
4. From default solutions to individual solutions, we need to integrate different building blocks to approximate the individual's requirements and targets.

How to proceed

I would like to approach the conclusion, by giving an example, taking probably the most common asset class that all of you are familiar with. The idea is to try to show how we can design policies that consider individual liabilities and assets in order to solve the problem of met a retirement replacement goal.

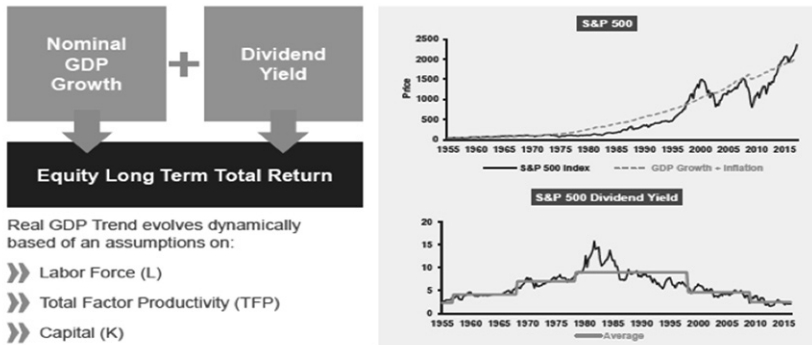
What are the desirable investment features? First, we need a broad asset diversification. We are facing interest rates historically low and the inflation is set to increase; we are not anymore in the environment where some of these policies were designed in the past; the inflation will rise and our investment in bonds will fall, so it's very wise to start conceiving a broader diversification into account, what drives our individual liabilities. Second, we need to consider a multiple time dimension for addressing short term issues with overlays, we cannot pretend to design today policies that are true for the next ten years, in terms of benchmarks; in terms of weight in the asset classes, we need to be able to review those policies dynamically. And third, we need to see address the risks of planning the future in the long-term, considering the problem as an Asset Liability Management (ALM) problem.

What are the required asset allocation tools? First, we need a simulation model for generating correlated paths of assets and salary determinants. Second, we need a multistage optimization to manage different horizons.

Let me try to take the example of the Standard and Poor's Index (S&P). We can decompose the S&P into 2 components, the trend and the cycle. Macroeconomic variables and asset prices follow a long-term direction, and economic and financial cycle have a medium-term evolution. All possible market deviations are short-term misalignments.

Different variables/cycles affect long/medium/short term dynamics. In particular, in the very long term, equity returns depend on nominal GDP growth and the dividend yield (see Figure 11). And the real GDP growth and trend evolves dynamically based on the assumptions on labor force, total factor productivity and capital. Productivity directly depends on the working age population. Labor force and productivity are negatively affected by the demographic trends already discussed, so we have to take into account the fact that the demographic challenge not only is affecting the liabilities, but also is affecting the returns of the asset classes.

FIGURE 11
CAPTURING THE RISK PREMIUM
EXPLOIT LONG-TERM EQUITY RETURNS



Source: Amundi Asset Management, Global Financial Data, Bloomberg. Data as of 28th of April 2015.

Identified the fundamentals in the long-term (over 30 years), it is necessary to do the same in the medium-term. What are the medium-term cyclical patterns? We need to focus on financial cycles. Modelling cyclical patterns has proved to be extremely important when forecasting returns with a 1-5 year horizon. One example is the equity, where from the revenue point of view, sales are affected by the business cycle; but from the cost perspective, variables like leverage, interest rate levels or

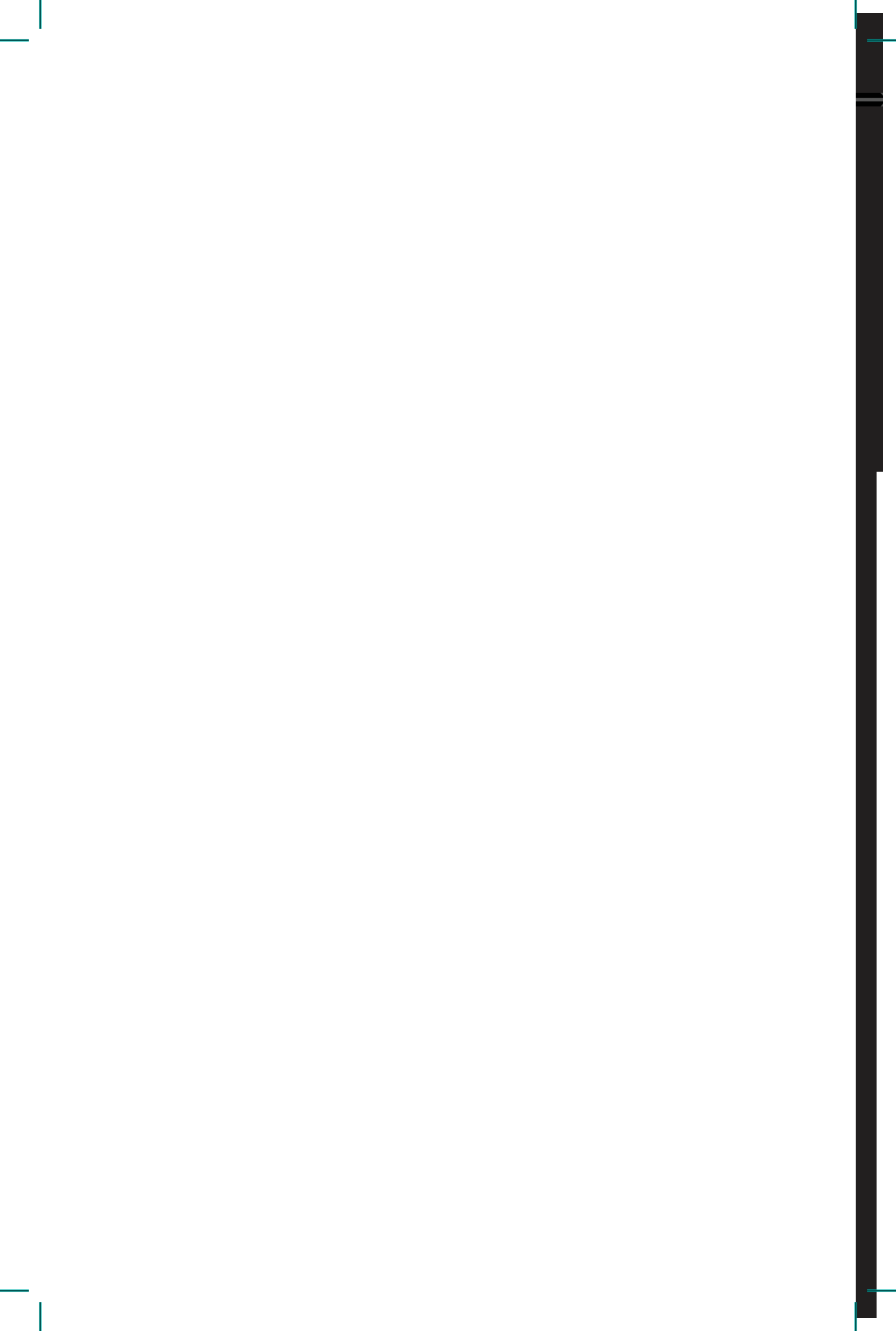
commodity prices (e.g. Oil) are more related to the cycle of credit and monetary policies. Another example is the credit; here normally meaningful variables such as the amount of leverage companies take during the phases of low interest rates can identify the cycle, and when monetary policies revert or signs of late cycles are visible rates might rise, revenues may shrink and default rates can be affected.

Finally, we need to build a short-term outlook too, merging macroeconomic and financial theory with empirical evidence. This analysis takes into account both financial variables and market misalignments and should look at: (i) fair value valuation; (ii) technical and momentum analysis; and (iii) sentiment and consensus analysis and risk perception.

Conclusions

The future of pension design should consider a bridging between the DB pension schema legacy and a modern DC pension plan. There are five key messages:

1. Think about the right retirement target.
2. Address structural correlation between assets and individual liabilities (salaries).
3. Consider long-term return opportunities with short-term challenges.
4. Design robust default solutions where to transition members.
5. Transitioning schema at individual level with an individual advisory planning.



TARGET-DATE FUNDS: LAYING A CRITICAL FOUNDATION FOR RETIREMENT SUCCESS

JOHN CROKE¹

- ¹ John Croke earned a B.S. in economics from Vanderbilt University and an MBA from New York University's Stern School of Business. He holds FINRA Series 6 and 63 licenses, is a CFA® charterholder, and is a member of the CFA Institute and the CFA Society of Philadelphia. He is responsible for overall product strategy of multi-asset class funds at Vanguard, including its target date retirement funds and trusts. He also partners with the Vanguard Investment Strategy Group on asset allocation for the firm's global multi-asset class products. Before joining Vanguard, he was director of investments at Pfizer Inc.



It is a privilege to participate in the broader Inter-American and international dialogue on the future of retirement, the future of saving for retirement and of course the future of investing for retirement. The spectrum of issues addressed at this seminar, during the panels as well as by the individual presenters, has been impressive: demographics, dependency ratios, coverage, access, reforms, regulatory obstacles, regulatory incentives, subsidies, education, financial literacy, setting realistic expectations, savings levels, retirement rates, replacement rates, retirement income, the accumulation, costs, and portability. These issues are concerns which are being confronted by fiduciaries charged with asset management across the globe to ensure the challenges and opportunities in their respective markets are effectively addressed.

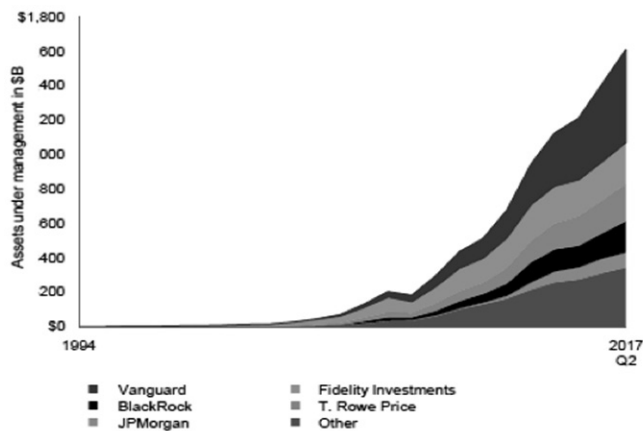
On this occasion, Vanguard seeks to contribute to the conversation through the lens of target-date funds (TDFs). For many years, TDFs have been a source of particularly good news within the broader defined-contribution scheme sector. The majority of the news has been concentrated in the US market, where tens millions of investors have embraced these portfolios – these single-fund solutions – to help them navigate their asset-allocation decisions as they prepare for and eventually transition to retirement. However, we are beginning to see traction in other markets as well. For instance, Canada and the United Kingdom come immediately to mind as examples of nations which have experienced sizable increases within their respective TDF sectors in recent years. As the industry leader, Vanguard is in contact with governments, employers and regulators throughout the world (Asia, Europe, Central and South America) regarding target-date funds. In fact, the issue is one of its primary focuses; and, in the case of the author, particularly the subject of asset management.

Vanguard is currently the second largest asset manager in the world. More importantly, it serves 20 million investors living in 170 nations. The fastest-growing group among our clients involves individuals seeking solutions for retirement. Approximately \$1.7 trillion are under management in TDFs, a figure which represents about 30% of assets in defined-contribution (DC) plans. In terms of actual

cash flow (i.e., money entering DC plans), it represents over 50%. Figure 1 provides a quick overview of sector growth, which will continue into the foreseeable future. For its part, Vanguard is responsible for one-third of assets under management and 60% of cash flow since 2016; and in terms of index-based funds, which are the most prevalent option available, the figure climbs to 90% of cash flow.

Fund administrators often focus on the issue of *how* TDFs operate: a trajectory which leads us further and further away from the central issue of *why* TDFs exist in the first place. Fortunately, there is a wealth of truly fascinating data which *will* serve to refresh our collective memory regarding why TDFs were created, as well as the factors which have contributed to their outstanding track record for investors.

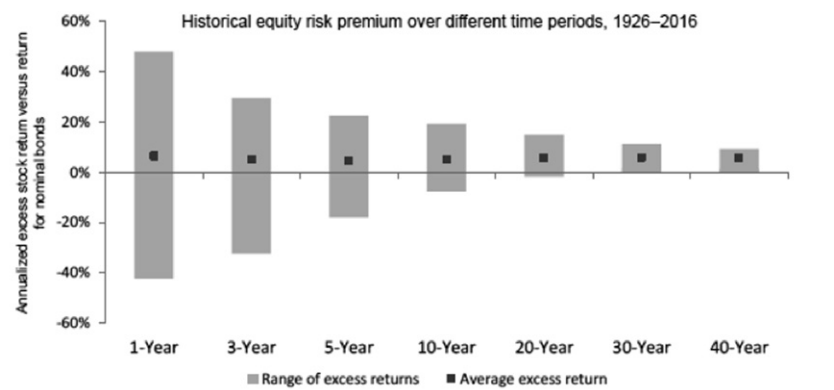
FIGURE 1
ANNUAL TARGET-DATE ASSETS UNDER MANAGEMENT SINCE 1994



SOURCES: VANGUARD, MORNINGSTAR, COMPANY PUBLIC FILINGS, AS OF JUNE 30, 2017. FIGURES BASED ON U.S. FUNDS.

Understanding TDF portfolios is a fairly simple, three-part exercise. First, one must understand the equity-risk premium. It has averaged 4-5% over the last ninety years (Figure 2). Equities consistently outperform fixed income over time in terms of wealth creation/growth for retirement investors.

FIGURE 2
LONG-TERM INVESTORS ARE REWARDED FOR TAKING MARKET RISK

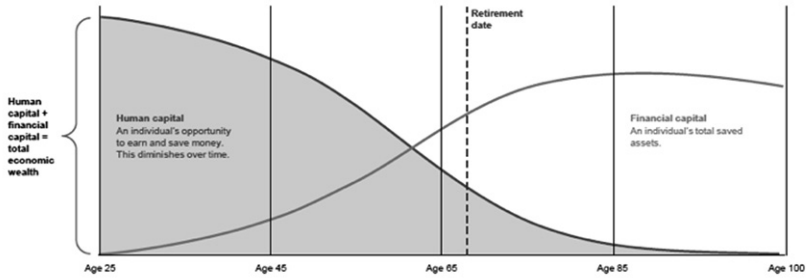


NOTES: PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS. THE PERFORMANCE OF AN INDEX IS NOT IN EXACT REPRESENTATION OF ANY PARTICULAR INDEX, AS YOU CANNOT INVEST DIRECTLY IN AN INDEX. US STOCK MARKET RETURNS ARE REPRESENTED BY THE STANDARD & POOR'S 500 INDEX FROM MARCH 4, 1957 THROUGH 1974; THE WILSHIRE 5000 INDEX FROM 1975 THROUGH APRIL 22, 2005; THE MSCI US BROAD MARKET INDEX FROM APRIL 23, 2005 THROUGH JUNE 2, 2013; AND THE CRSP US TOTAL MARKET INDEX THEREAFTER. US BOND MARKET RETURNS ARE REPRESENTED BY THE STANDARD AND POOR'S HIGH-GRADE CORPORATE INDEX FROM 1926 TO 1968; THE CITIGROUP HIGH-GRADE INDEX FROM 1969 TO 1972; THE LEHMAN BROTHERS US LONG CREDIT AA INDEX FROM 1973 TO 1975; THE BARCLAYS CAPITAL US AGGREGATE BOND INDEX FROM 1976 TWO 2009; AND THE SPLICE BARCLAYS US AGGREGATE FLOAT ADJUSTED BOND INDEX THEREAFTER.
SOURCE: VANGUARD CALCULATIONS, BASED ON DATA FROM STANDARD & POOR'S, WILSHIRE, MSCI, CRSP, CITIBANK AND BARCLAYS.

Secondly, human capital clearly declines over time. It is an academic way of looking at our future ability to earn income and involves factors which are fairly stable, and which behave similar to cash flows on a fixed income security. In many ways, they resemble risk traits on a bond. As Figure 3 demonstrates, investors must decrease their exposure to financial risk accordingly. After graduating from university, an individual's human capital is high, while their financial capital is fairly low. At this stage of life, we can comfortably manage a strong level of risk in terms of our limited financial capital. This is to say, we can begin allocating assets within the equity market and then slowly de-risk our portfolio over time.

FIGURE 3

AS HUMAN CAPITAL DECLINES WITH AGE, INVESTORS SHOULD DECREASE RISK

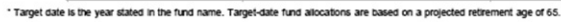


SOURCE: VANGUARD.

Lastly and most importantly, while academic theory can be fascinating, a well-designed target-date fund must be constructed on both sound financial theory and investor behavior.

For the purposes of this chapter, glide paths will not receive a great deal of emphasis. But it is important to point out that a difference does exist between the so-called “to” glide path and the “through” glide path. A “to” glide path continues to decrease risk and then achieves the terminal allocation to equity at the retirement age. Most TDFs employ this type of glide path. A “through” glide path continues to slow down to a point *after* retirement.

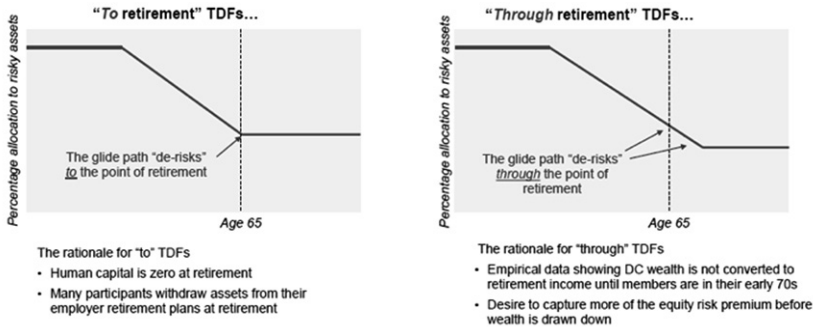
GLIDE PATH SETS EXPOSURE TO RISKY ASSETS (I.E. EQUITIES) THROUGHOUT INVESTOR'S LIFE CYCLE



A great deal has been said about the difference between these two options within the TDF sector. Figure 5 provides a clear breakdown of the pros and cons of the two types of glide paths.

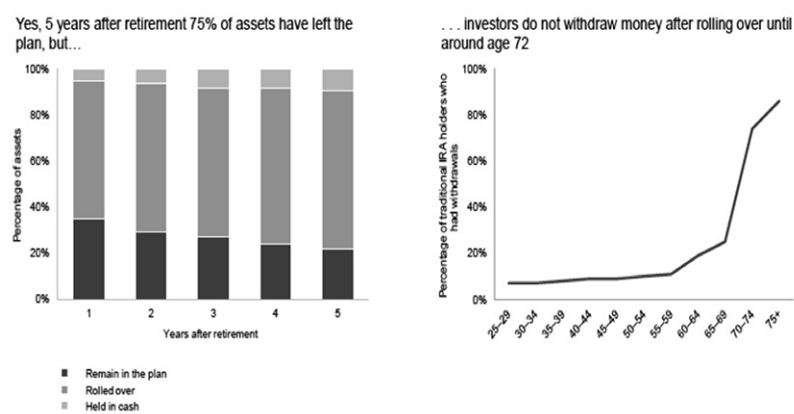
FIGURE 5

THE "TO" VS. "THROUGH" DEBATE: FINANCIAL THEORY MEETS OBSERVABLE INVESTOR BEHAVIOR



For its part, Vanguard strives to combine quantitative theoretical work with practical observations of real-world investment behavior. Many retirement fund administrators operate on the basis of the assumptions listed on the left-hand side of Figure 6. They assume that when people retire they take their money with them. It is easy to see why many plan administrators assume that because funds are leaving a plan they are necessarily used for consumption, even though said fiduciaries may lack a complete knowledge and of what actually occurs in a given individual's retirement. In fact, funds exiting the plan are only half of the story. Basically, the only thing that has occurred is that assets have left one retirement vehicle and entered another. One cannot ascertain whether wealth has been converted into income per se. This issue is addressed on the right hand side of Figure 6, where distributions from individual retirement accounts are analyzed by age cohort. And the fundamental take away from this chart is the fact that the spike in distributions does not occur during the mid-60s when many people retire. It occurs a few years later, in the early 70s. At least in the case of US investors, this is the point at which assets are used for consumption, though variances occur based on demographics, regulations and tax incentives.

FIGURE 6
INVESTOR BEHAVIOR DRIVES VANGUARD'S "THROUGH RETIREMENT" APPROACH TO TDFS IN US

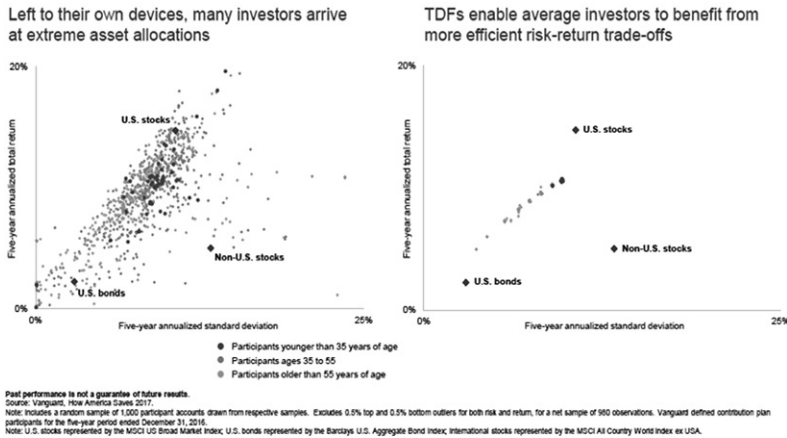


SOURCE: RETIREMENT DISTRIBUTION DECISIONS AMONG DC PARTICIPANTS, VANGUARD, OCTOBER 2016

To address the more central issue of why TDFs exist, Figure 7 has been included. It is especially well-suited to illustrate a very simple point. On the left hand side, we tracked 1,000 investors in do-it-yourself, defined-contribution plans. It is easy to see that the distribution of dots by age group is extremely variable. Therefore, we can say that there is no logical correlation between risk and return vis-à-vis an individual's age cohort. The dots are all over the place.

FIGURE 7

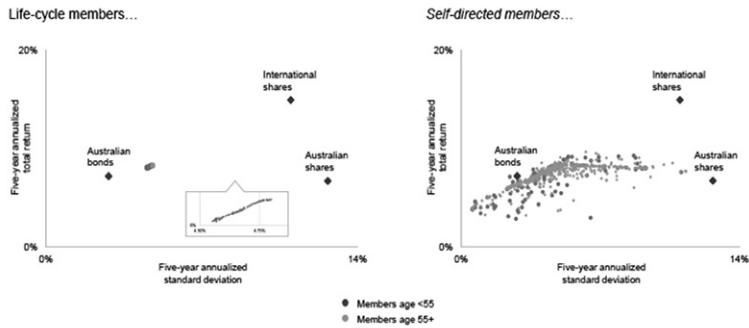
RISK VERSUS RETURN, BY AGE COHORT (US)



On the right-hand side, we have mapped the risk-return outcomes of TDF investors over the last five years. The difference between the two could not be clearer: the right hand side shows a very clear relationship between risk and return. Young investors are involved in higher risk portfolios while older individuals have sensibly reduced their level of risk. While some variances do occur, outliers are limited to eleven or twelve dots.

A similar analysis was made of the situation in Australia, a nation which possesses a system which is similar to many of those nations in attendance here today (mandatory contribution regime). In this case (see Figure 8), targeted funds are tracked on the left side, while self-directed investors appeared on the right. But the results are the same. The dispersion of results is greatly reduced within the TDF context. Therefore, while we may like to spend time contemplating how to fine tune investments and TDFs, the real headway within the industry has been made in terms of our ability to reduce the number of accidental outcomes (outliers) and deliver a professionally-managed solution that guides people on to a much more prudent, sustainable path to success.

FIGURE 8
RISK VERSUS RETURN, BY AGE COHORT (AUSTRALIA)

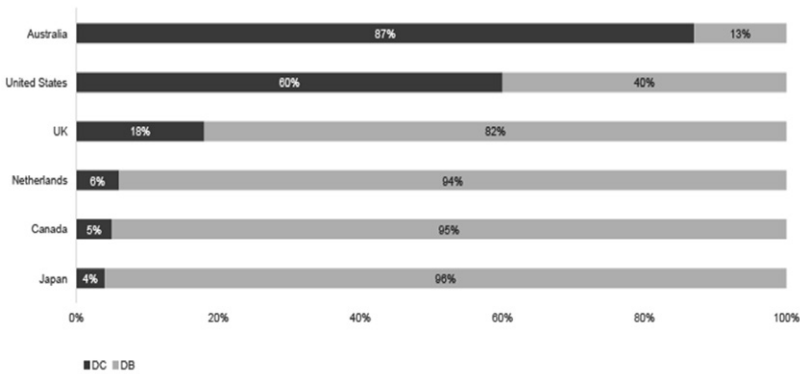


Past performance is not a guarantee of future results.
Source: How Australia Saves 2017, Vanguard.
Note: Australian shares represented by the S&P/ASX 300 Index; Australian bonds represented by the Bloomberg Ausbond Composite 5+ Yr Index; International shares represented by the MSCI World ex-Australia Index; a random sample of 1,000 participant accounts drawn from respective samples. Excludes 0.5% top and 0.5% bottom outliers for both risk and return, for a net sample of 990 observations. Vanguard members for the five-year period ended June 30, 2016.

Clearly, TDFs are great tool for accumulating assets and also help to ensure investor retirement-savings portfolios possess sensible asset allocations. Within the industry, there has been a fair amount of discussion regarding one size fits all retirement solutions. However, it is impossible to construct a financial product capable of responding to each individual's situation in life. For instance, while we can tailor plans vis-à-vis a person's age, there is no way to build in contingencies for every, single factor which impact our lives before and after retirement. A plan would need to take into account prior employment, whether or not a person is married, how many children they have, and other factors such as what role an individual plays in caring for their elderly parents who may or may not have a world-class retirement plan. The ostensibly unending list of variables includes issues such as total assets, life insurance or other financial products held by an investor, as well as home ownership. This would require an unprecedented degree of information sharing between the provider and investor, and the industry is just not there yet.

How should the industry approach what might be termed our global quest for a decumulation solution? Figure 9 illustrates a fact which has been more than adequately covered at this event: access to guaranteed retirement income is declining. In fact, in many markets it never existed.

FIGURE 9
SHARE OF DEFINED CONTRIBUTION VERSUS DEFINED-BENEFIT ASSETS ACROSS
MAJOR MARKETS

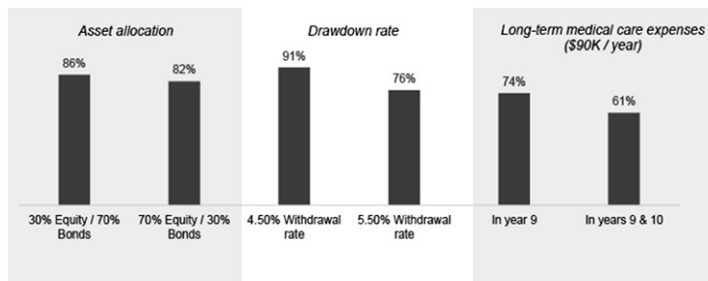


SOURCE: WILLIS TOWERS WATSON GLOBAL PENSION ASSET STUDY 2017.

What factors impact success during decumulation? Figure 10 provides an excellent illustration of issues which affect how we deploy our savings to fund our lifestyle in retirement.

FIGURE 10

IMPACT ON SUCCESS IN YEAR 35 OF RETIREMENT, DUE TO CHANGES IN...



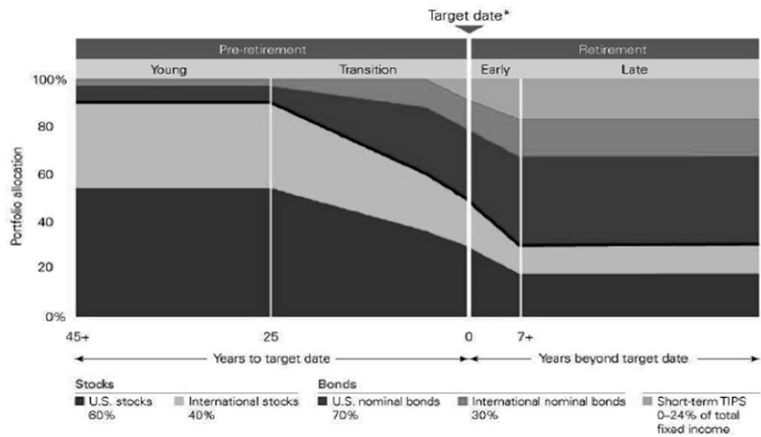
IMPORTANT: The projections or other information generated by Vanguard Capital Markets Model® (VCMM) regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. Results may vary with each use and over time. Please see the important information slide for additional information about VCMM. Notes: Salary projections are derived from the Social Security Administration's Wage Index, an index that accounts for factors like career advancement. The index is grown by 1.1% annually, on a real basis, which is representative of the U.S. economy's historical productivity growth. Age-specific contribution rates are derived from How America Saves 2014 (The Vanguard Group, 2014), a report surveying 3 million participants served by Vanguard's recordkeeping business. Contributions are assumed to start at an average rate of 4.00% at age 25, increasing to an average rate of 9.00% by age 64. Over the employee's career, the average contribution rate is 7.2%. We assume a company match of \$0.50 on the dollar up to 3%, which is consistent with industry averages. Replacement ratios are drawn from the work of Aon Consulting (with data taken from the U.S. Department of Labor's Bureau of Labor Statistics "Consumer Expenditure Survey") to assign appropriate replacement ratios based on retirees' age-65 income.

It is a particularly interesting analysis, especially when we step back and think about outcomes and what drives success in retirement. The industry has generally been on the correct trajectory since the 1980s when Brinson published his study on the overall importance of asset allocation. Over the long run, asset allocation determines 90% of portfolio-return variability. This is still a true statement if we limit our analysis to return and risk, as well as distribution of returns. However, this is a fairly narrow scope. Within a broader context, the industry's measure of success must include more than compound returns and standard deviation. Therefore, Figure 10 analyzes the probability of an individual still possessing positive assets thirty-five years into retirement (i.e., at age 100). The most fascinating part of this graphic is that fluctuations in asset allocation had little to no effect on success. Variations in the drawdown rate, however, had a more sizable impact. Clearly, large outlays on medical care also have a significant impact. They are also completely unpredictable.

While issues such as illness are often out of our control, other issues are completely controllable. Vanguard has been active in this industry for nearly 15 years and is highly focused on three basic, enduring and defensible principles. We seek to construct investment solutions founded on long-term, repeatable investment principles. In short, we try to avoid fads and experimenting with investor assets. Investors who lack the time, willingness or ability to construct a viable asset allocation strategy on their own rely upon the industry to provide responsible decision-making. As fiduciaries or providers, we must blend the theoretical with the empirical in order to develop solutions tailored to how people are actually saving for retirement, drawing down and building portfolios on their own.

A major part of Vanguard strategy is to ensure the defensibility of our strategies by ensuring they are low cost, globally diversified and transparent. A major component of transparency in a targeted portfolio involves the manner in which it is constructed; which is to say, the transparent, straightforward asset-class exposure demonstrated in Figure 11.

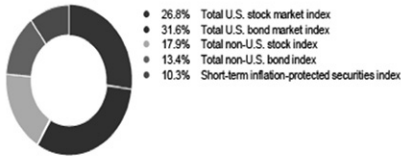
FIGURE 11
TRANSPARENT, STRAIGHTFORWARD ASSET-CLASS EXPOSURE



Vanguard TDFs offer the simplicity of an index-oriented, well-diversified portfolio that is strategic and straightforward in its approach. Figure 12 how its TDF funds follow an easy-to-understand asset allocation glide path, and include 90% of global capital markets.

FIGURE 12
TWO DIFFERENT LENSES TO PORTFOLIO CONSTRUCTION

Fewer moving parts—5 index funds



Many moving parts—25+ sub-asset classes

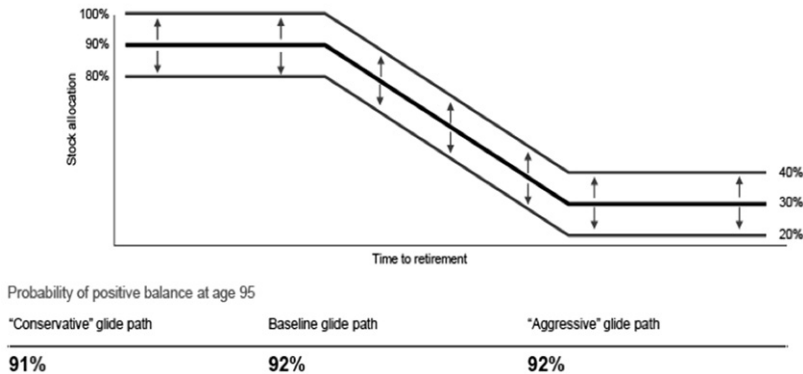


SOURCES: HYPOTHETICAL TARGET ASSET ALLOCATIONS PER THE GLIDE PATH OF A 2015 TARGET-DATE FUND. SUB-ASSET ALLOCATIONS DETERMINED USING DATA FROM VANGUARD AND MORNINGSTAR AS OF MARCH 31, 2017.

The upper half of Figure 12 provides a simpler breakdown of asset allocation; i.e., fewer ingredients, same nutritional value. We can always slice and dice this simple description into what we have in the lower half of the Figure 12. But one must consider which format is easier for investors to understand, and which of the two will inspire confidence in the fiduciaries charged with ensuring portfolios operate as intended for this very unique, very vulnerable demographic.

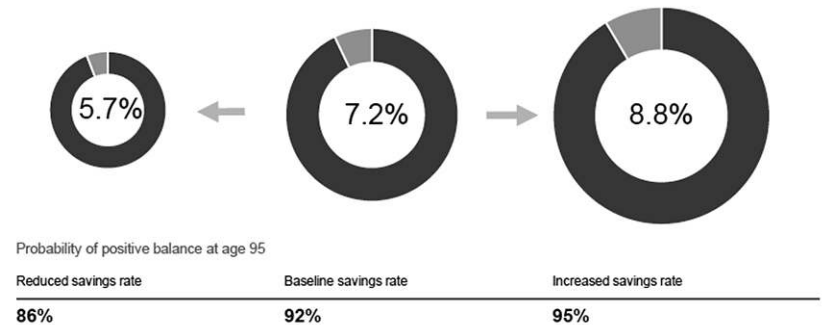
In closing, it is important to reiterate the fact that it is impossible for individuals to invest their way out of a savings deficit. While it is extremely beneficial to address issues such as fine-tuning portfolio design, incorporating new asset classes and rethinking asset allocations, we must never lose sight of the fact that small adjustments to savings rates have major impacts upon investor lives during decumulation (compare Figure 13 with Figure 14). Even if one effects major changes in portfolios in terms of risk and diversity, the overall effects are fairly limited when compared to minor adjustments to savings behavior.

FIGURE 13
CHANGES IN GLIDE PATH DESIGN HAVE MARGINAL IMPACT ON DECUMULATION SUCCESS



SOURCE: VANGUARD.

FIGURE 14
CHANGES IN SAVING RATE HAVE MAJOR IMPACT ON DECUMULATION SUCCESS



SOURCE: VANGUARD.

Important information

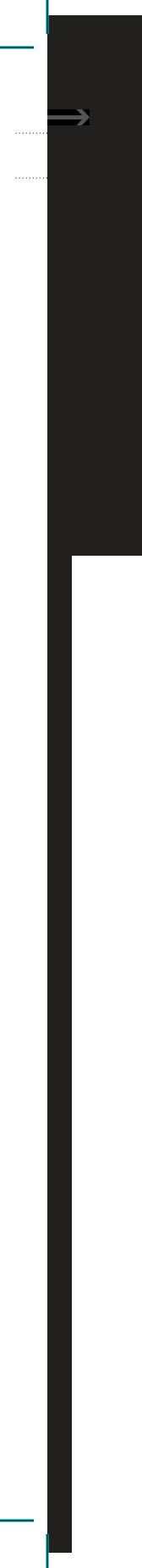
The information contained herein is for educational purposes only and does not constitute an offer or solicitation and may not be treated as an offer or solicitation in any jurisdiction where such an offer or solicitation is against the law, or to anyone to whom it is unlawful to make such an offer or solicitation, or if the person making the offer or solicitation is not qualified to do so.

All investing is subject to risk, including the possible loss of the money you invest. Investments in target-date funds are subject to the risks of their underlying funds. The year in the fund name refers to the approximate year (the target date) when an investor in the fund would retire and leave the work force. The fund will gradually shift its emphasis from more aggressive investments to more conservative ones based on its target date. An investment in the target-date fund is not guaranteed at any time, including on or after the target date.

IMPORTANT: The projections and other information generated by the Vanguard Capital Markets Model regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantees of future results. VCMM results will vary with each use and over time.

The VCMM projections are based on a statistical analysis of historical data. Future returns may behave differently from the historical patterns captured in the VCMM. More important, the VCMM may be underestimating extreme negative scenarios unobserved in the historical period on which the model estimation is based.

The Vanguard Capital Markets Model® is a proprietary financial simulation tool developed and maintained by Vanguard's primary investment research and advice teams. The model forecasts distributions of future returns for a wide array of broad asset classes. Those asset classes include U.S. and international equity markets, several maturities of the U.S. Treasury and corporate fixed income markets, international fixed income markets, U.S. money markets, commodities, and certain alternative investment strategies. The theoretical and empirical foundation for the Vanguard Capital Markets Model is that the returns of various asset classes reflect the compensation investors require for bearing different types of systematic risk (beta). At the core of the model are estimates of the dynamic statistical relationship between risk factors and asset returns, obtained from statistical analysis based on available monthly financial and economic data from as early as 1960. Using a system of estimated equations, the model then applies a Monte Carlo simulation method to project the estimated interrelationships among risk factors and asset classes as well as uncertainty and randomness over time. The model generates a large set of simulated outcomes for each asset class over several time horizons. Forecasts are obtained by computing measures of central tendency in these simulations. Results produced by the tool will vary with each use and over time.



PERFECTING THE DECUMULATION PHASE IN INDIVIDUALLY-FUNDED PENSION SYSTEMS

RODRIGO ACUÑA¹

- ¹ *Rodrigo Acuña's degree is in Business Administration from the Catholic University of Chile, with specialisation in Economics, and he has postgraduate studies in applied macroeconomics from this same university. He is a partner and director of PrimAmérica Consultores, lecturer at the Management Development Centre of the Catholic University of Chile, in the Diploma Course on Investments for the Long Term and Retirement, and external advisor to the International Federation of Pension Fund Administrators (FIAP). He has been an executive of pension and financial institutions and an international consultant for governments, multinational bodies and private sector investors on matters of social security and savings programs.*



Executive Summary

Public pension policies in Latin America have concentrated on improving the regulations and institutional framework of the accumulation stage in the individually-funded systems. This is understandable while systems are still young. However, the growing maturity of several of them requires public policies to resolve the challenges arising in the decumulation phase in a suitable and timely manner.

Without reforms, many Latin American pension systems will end up paying lower than expected pensions to only a few members. In addition to adjusting the main parameters of the system, such as contribution rates and the official retirement ages, it is urgent to correct the design of benefits in order to limit authorized withdrawals by members during their active lives, or on retirement, increase the percentage of members receiving pensions, lower the conversion costs of pension balances, and reduce the risks of the decumulation phase.

The regulations must guarantee the existence of an efficient pension market offering future pensioners the possibility of transforming savings accumulated in a pension flow at the lowest possible cost, allowing them to choose between different pension modes, fully aware of their respective characteristics, and how they respond to their needs. If these challenges are not adequately met, the cost in terms of fewer pensions, lower pension amounts, and higher risks for members, could be significant. The efficient development of pension market should also be encouraged, in order to prepare the systems for a growing demand of benefits.

The main obstacle to a growing demand for pensions is limiting such growth by allowing the full or partial withdrawal of the funds accumulated in individual accounts, and the existence of contributory PAYGO systems in some countries, that substitute or complement the individually-funded system. An important challenge for stimulating an educated choice of the most appropriate pension modes, is to invest in education and technical and independent advisory services, which does not occur in Latin America (except in Chile).

On the supply side, the main difficulties for its development are found in the low scale of transactions due to growth limitations; the setting of minimum pension amounts; pension adjustments indexed to the minimum wage, and restrictions on competition, especially in the life annuities market, resulting from the lack of financial instruments that enable matching pension payment obligations with investments, the existence of outdated official mortality tables, and the presence of a number of legal uncertainties.

I. Introduction

For a long time, and particularly in Latin America, the attention of analysts and public pension policy has focused on the problems and challenges associated with the installation of individual savings systems and issues related to the savings accumulation stage, such as contribution amounts and how to manage them, including the investment of the pension funds. The explanation is that these are young systems, in which the vast majority of members are still active in the labor market. Nonetheless, some of these systems have already matured (Chile), or are beginning to do so (Peru, Colombia, Mexico and Uruguay). This maturity is manifested especially in the growth of the number of pensioners (see Table 1).

TABLE 1
EVOLUTION OF THE NUMBER OF OLD-AGE PENSIONERS

Year	Chile		Colombia		Mexico	
	Number of Pens.	P/M (%):	No. Pens.	P/M (%):	No. Pens.	P/M (%):
2012	643,794	6.9%	13,837	0.1%	62,853	1.2%
2013	676,836	7.1%	16,729	0.1%	70,057	1.3%
2014	673,774	6.9%	20,268	0.2%	78,407	1.4%
2015	728,931	7.3%	25,409	0.2%	89,334	1.5%
2016	792,788	7.8%	32,003	0.2%	87,015	1.4%
2017(1)	824,778	8.0%	37,466	0.3%	86,603	1.3%

(1)CHILE: AUGUST; COLOMBIA AND PERU: JULY. URUGUAY AND MEXICO ARE NOT INCLUDED BECAUSE THEIR NEW SYSTEMS DO NOT YET HAVE MEANINGFUL NUMBERS OF OLD-AGE PENSIONERS.
NOTE: P/M= THE PENSIONER/MEMBER RATIO.
SOURCE: FIAP, FEBRUARY 2018.

It is therefore appropriate and necessary to pay attention to the specific issues involved in the decumulation stage of pension savings. This pension note presents a synthesis of a FIAP study on the subject, which included five Latin American countries,² highlighting the main conclusions of the study, identifying the most relevant lessons and presenting reform proposals that seek to contribute to improving the decumulation stage.

II. Development

Challenges of the decumulation stage

The main challenges for regulating the decumulation stage include the need to guarantee the existence of an efficient pensions market offering future pensioners the possibility of transforming savings accumulated in a pension flow at the lowest possible cost, allowing them to choose between different pension modes, fully aware of their respective characteristics, and how they respond to their needs. If these challenges are not adequately met, the cost in terms of fewer pensions, lower pension amounts, and higher risks for members, could be significant. For example, a variation of half a point in the life annuities sales price entails a difference of 6% in the amount of the pension that can be financed.³ Another example: pensioners who choose programmed withdrawal are exposed to the risk of a reduction of their pensions over time, a characteristic that must be clearly explained to them. In fact, estimates for the Chilean case show that after 10 years, pension amounts drop to approximately 90% of the initial amount, and subsequently continued to diminish. Indeed, the amount of the old-age pension does not only depend on the mechanism used for transforming the accumulated savings into a pension stream. The sufficiency or insufficiency of accumulated savings during active life is a central question: do the accumulated pension savings suffice for financing the desired pensions for the required time? Hence, in addition to the challenge of ensuring that accumulated savings are efficiently transformed into a future pension flow, there is an even greater challenge of getting workers to accumulate sufficient savings to finance their target pension.

In this regard, it is important to remember that there is an urgent discussion on this issue in Latin American countries with individually-funded pension systems because the available evidence suggests that the vast majority of workers are not accumulating sufficient savings for accessing pensions equivalent to a significant

2 FIAP: "Decumulation Stage of the Individual Saving Pension Systems in Latin America: Diagnosis and Proposals."

3 Estimates in the case of a male pensioner in Chile, who retires at 65.

portion of their salaries on retirement. The figures are worrisome. Considering the combination of contribution rates, retirement ages and contribution densities observed in Latin America, it is estimated that average workers' pensions in the countries with larger systems will be somewhere between 30% and 49% of their taxable income in the last couple of years of working life. This is a result below the expectations of members, which should draw the attention of those responsible for public policies governing pensions (and the pension funds management industry). Together with providing the members of these systems with the information that will enable them to adjust their expectations to their reality in a timely manner, the necessary adjustments must be made to the system's parameters to ensure that workers, especially those who contribute regularly, can finance pensions that are reasonably proportional to the salaries they contributed on.

Fulfillment of the purpose of the pension systems is threatened if the design of the benefits is not reformed

The fundamental objectives of a pension system are preventing people from falling into poverty in old age and ensuring an adequate flow of income (replacement rate) to members during retirement, in order to prevent their standard of living from dropping significantly.

If the existing benefits design is not corrected, the fulfillment of these goals in the contributory pension systems in Latin America is threatened. This is not just about granting insufficient pension amounts. The challenge is greater, because if deep reforms are not made, a high percentage of members will not receive pensions. In three of the five countries studied (Colombia, Mexico and Peru), the regulations allow the vast majority of members, or all of them, to withdraw the accumulated savings in their individual accounts on retirement, without forcing them to transform anything part of them into pension flows (Table 2).

The individually-funded systems in some countries are also used to mitigate different problems or social needs of members during the active stage, such as unemployment, illness, housing, education or marriage, since they are allowed to withdraw funds from their accounts for those purposes, without being obligated to subsequently return the funds (Table 3). These withdrawals will aggravate the impact of low contribution rates, the official retirement ages, informality, the limited coverage of the systems and insufficient contribution density, on the accumulated balances and the benefits received in retirement.

TABLE 2

AUTHORIZATION TO WITHDRAW BALANCES AT THE OFFICIAL RETIREMENT AGE

Country	Chile	Colombia	Mexico	Peru	Uruguay
<i>Official retirement age</i>	M: 65 W: 60	M: 62 W: 57	M: 65 W: 65	M: 65 W: 65	M: 60 W: 60
<i>Withdrawal of balances at the official retirement age</i>	Only Freely Available Surpluses (1)	Yes, full withdrawal when the pension is less than the minimum wage (USD 251 per month) and the member has not contributed for a total of 1,150 weeks (22.1 years)	Yes, full withdrawal when the number of weeks of contributions is less than 1,250 (24.0 years)	Up to 95.5% of the balance can be withdrawn, regardless of the contribution periods	No

(1) FREELY DISPOSABLE SURPLUS. THE MAXIMUM FDS THAT CAN BE WITHDRAWN IS THE EXCESS BALANCE OVER WHAT IS NECESSARY FOR FINANCING A PENSION GREATER THAN OR EQUAL TO 70% OF THE AVERAGE SALARIES AND TAXABLE INCOME DECLARED IN THE LAST 10 YEARS PRIOR TO RETIREMENT, AND AT 100% OF THE MAXIMUM PENSION WITH SOLIDARITY CONTRIBUTION.

(2) 2017, CONVERSION TO USD AT THE EXCHANGE RATE ON 08/31/2017.
SOURCE: FIAP, FEBRUARY 2018.

TABLE 3

WITHDRAWAL OF BALANCES IN THE INDIVIDUAL MANDATORY SAVINGS ACCOUNTS

Purpose	Chile	Colombia	Mexico	Peru	Uruguay
<i>Unemployment</i>	No	No	Yes	Yes	No
<i>Housing unit</i>	No	Guarantee (1)	No	Yes	No
<i>Terminal disease or cancer</i>	No	No	No	Yes	No
<i>Marriage</i>	No	No	Yes	No	No

(1) NOT REGULATED OR APPLIED.
SOURCE: FIAP, FEBRUARY 2018.

Improving and expanding pension options is another important challenge

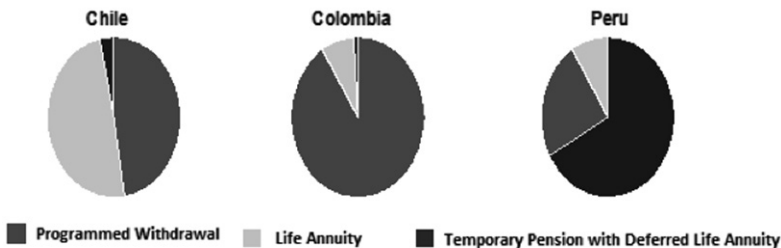
In practice, the pension mode selection options for retiring members are very limited due to regulations that suppress supply and demand (Graph 1).

The main obstacle to a growing demand for pensions is limiting such growth by allowing the full or partial withdrawal of the funds accumulated in individual accounts, and the existence of contributory PAYGO systems in some countries, that substitute or complement the individually-funded system in four of the five countries studied. Furthermore, extending effective freedom of choice between

different pension modes requires investment in education and technical and independent advisory services, which does not occur in Latin America (except in Chile). Adequate advisory services would contribute to well-founded mode selection and reduce the risk of a poor decision, which could entail high costs, especially in the case of an irrevocable decision.

On the supply side, the main difficulties for its development are found in the low scale of operations, due to limitations to the growth of demand; the setting of minimum pension amounts; pension adjustments indexed to the minimum wage, and restrictions on competition, especially in the life annuities market, resulting from the lack of financial instruments that enable matching pension payment obligations with investments, the existence of outdated official mortality tables, and the presence of a number of legal uncertainties, generated, for example, by the lack of rules and regulations complementary to the law, and the granting of pension benefits through judicial proceedings (Colombia).

GRAPH 1
PARTICIPATION OF PENSION MODES IN THE STOCK OF PENSIONS PAID IN 2017



(1) ONLY THE LIFE ANNUITY MODE EXISTS, AND IN MEXICO THE DEVELOPMENT OF PENSION MODES HAS BEEN LIMITED, MOSTLY DUE TO THE TRANSITION OF PENSIONS FROM THE FORMER REGIME.
SOURCE: STATISTICS OF THE SUPERINTENDENCY OF EACH COUNTRY.

A highly positive aspect observed in the countries of the region is the creation of electronic and mandatory pension amount consultation and offer systems, whereby all the offering institutions simultaneously receive the information of retiring members, and the offers sent by these institutions are presented to members, helping to increase competition and lower information and marketing costs (to different degrees in Chile, Mexico and Peru).

Pensioners are exposed to a number of highly unnecessary risks

The main risks are those associated to interest rates and the return on investments, longevity, the solvency of institutions offering pension modes, and legal risks.

Members close to retirement face a significant risk in the conversion of the balances accumulated during their active stage into a pension, which depends on the trend and variation of the discount rates used for the calculation of the programmed withdrawals and the life annuity prices offered by the insurance companies. For example, it is estimated that in Chile the pension amounts offered in life annuities fell between 33% and 38% from 1998 to 2017, due to the reduction of the real annual sales rates of the life insurance companies (Graph 2).

GRAPH 2

CHILE: REAL ANNUAL LIFE ANNUITY SALES RATES



SOURCE: SUPERINTENDENCY OF PENSIONS, CHILE.

In the programmed withdrawal mode, the rules and regulations governing the investment of the mandatory pension funds allow members who are five years or less from the official retirement age to be exposed to up to 80% of their variable income portfolio, and pensioners in some countries have an exposure of up to 45% in these types of instruments. This entails a variability risk, and eventually a loss of value in pensions that is excessive for the average member, who has little knowledge and education in financial matters.

Retirees who choose this mode are also exposed to the longevity risk and a systematic reduction in the pension amounts received. None of the countries studied have a longevity insurance that fully covers this risk to pensioners (except switching to the life annuity mode). Furthermore, in the countries studied, with the exception of Chile, programmed withdrawal amounts are calculated using mortality tables that are not regularly updated, and are not dynamic. This implies higher pension amounts in the initial retirement stage, and a more accentuated decreasing profile over time.

On the other hand, pensioners in most of the individually-funded systems who opt for life annuities, partially or fully assume the solvency risk of the insurance companies. This risk is primarily controlled through regulations governing the constitution of reserves, maximum indebtedness, investments that support the fulfillment of the commitments undertaken by the companies, and the balance between assets and liabilities. Only Chile (partially) and Colombia grant State guarantees to pensioners of all the insurance companies, should they fail to comply with their pension payment commitments.

Members face legal risks due to the failure to update the laws governing the pension systems, which have not adjusted the main parameters of programs, and do not define matters that are fundamental for determining the amounts of the benefits received by retirees. In fact, the political process has led to several delays in decisions on parametric changes in contribution rates and official retirement ages, in response to increases in life expectancy and lower interest rates, and the returns on the investments of the pension funds. All the above severely affects the ability of the systems to finance adequate pension amounts.

The retirees of the pension system also face specific legal risks in the decumulation stage, arising from the rules and regulations that define the characteristics and conditions of the pension modes and the calculation of benefits, specifically the official mortality tables, the discount rates used for calculating the necessary unit capital and the survival pension beneficiaries.

Another legal risk that has a significant incidence on the pension system in some countries, is the ratio between pensions and wages. In Colombia, pension amounts must be at least equal to the minimum wage, and in Uruguay, pensions are adjusted in accordance with the variation in the average wage index. Life insurance companies in Colombia have also faced significant legal risks due to judicial decisions that have granted pensions to new beneficiaries in the individually-funded system, after subscribing life annuity contracts, without the companies being able to adjust the value of the pension in all cases.

Most relevant lessons

The main lessons that emerge from the study, and that are relevant for the design of the regulations governing the process and the pension modes authorized in an individually-funded savings system, are the following:

- In order to ensure that pension markets expand and develop, regulations that unnecessarily depress the demand for pensions must be avoided (authorization of withdrawals).
- Pensioners must be allowed to choose between pension modes that protect them from the investment and return risks (life annuities) and others that enable them to assume those risks (programmed withdrawals).
- Choosing between different pension modes is a complex matter. Hence, there must be regulations and institutions in place that help pensioners to decide between the available alternatives.
- Special attention must be paid to the quality of rules and regulations governing pension modes and pension markets, because they have a significant impact on the pension risk.
- The existence of an institutional framework that ensures the regular and technical review of the parameters of the pension system would help to improve the quality of pensions.

Proposals for improvement

On the basis of the findings and lessons learned, some proposals for improving the characteristics of pensions are presented below. Several of them have already been applied in some countries. These proposals are suggestions that undoubtedly need to be defined and developed in detail and will depend on the particular conditions of each country and the social security system in which they would be considered desirable and feasible. The proposals are classified according to the desired objective.

1. Increase the number of pensioners (and pension amounts)

- a) Encourage postponement of the retirement age.
 - i. Authorization to postpone the retirement age; continue working while receiving a pension, and freely decide whether to contribute or not when continuing to work after retirement.

- ii. Authorization for those who defer the retirement age to freely withdraw part of the additional balance of accumulated pension savings.
 - b) Instead of authorizing the total withdrawal of the accumulated balances in individual accounts on retirement, as occurs in some countries, allow the free withdrawal of part of such balances, subject to the condition of maintaining the necessary capital to purchase a certain minimum pension at a later date.
 - c) Calculation of pensions with special tables in the case of workers with lower life expectancy.
- 2. Ensure that authorized fund withdrawals will not harm the pension**
- a) Allow withdrawals only by individuals who defer the retirement age.
 - b) Allow withdrawals of part of the balance but demanding that they be returned before the retirement age and adjusting the latter if the withdrawn funds are not returned.
 - c) Allow early withdrawals only when their intended use is to purchase insurance against circumstances with an extraordinary economic impact once they have retired (for example, dependence and catastrophic health insurance coverage during retirement).
- 3. Reduce uncertainty regarding the value of the conversion rate of the balance of savings accumulated into a pension flow**
- a) Guarantee minimum rates of return (or replacement rates) for pension savings, subject to contribution densities.
 - b) Ensure the conditions that allow the development of different pension modes.
 - c) Advance purchase of life annuities.
 - d) Improve the regulations governing the formulas for calculating the rates used for calculating programmed withdrawal pensions, and improve the constitution of reserves in the case of life annuities.
 - e) Establish or strengthen centralized pension contribution systems.



4. Lower the pension mode risk

- a) Reduce the programmed withdrawal longevity risk.
 - i. Review the formula used for calculating programmed withdrawal.
 - ii. Implement advanced old age insurance
 - iii. Mandatory purchase of life annuities.
 - b) Lower the risks of life expectancy tables.
 - c) Lower the solvency risks of the pension providers.
- 5. Create an institutional framework that supports a process of regular review and adjustment of the key parameters of the system.**



CHAPTER III

SAVINGS HABITS IN THE REGION

RICHARD JACKSON. Voluntary pensions in emerging markets.

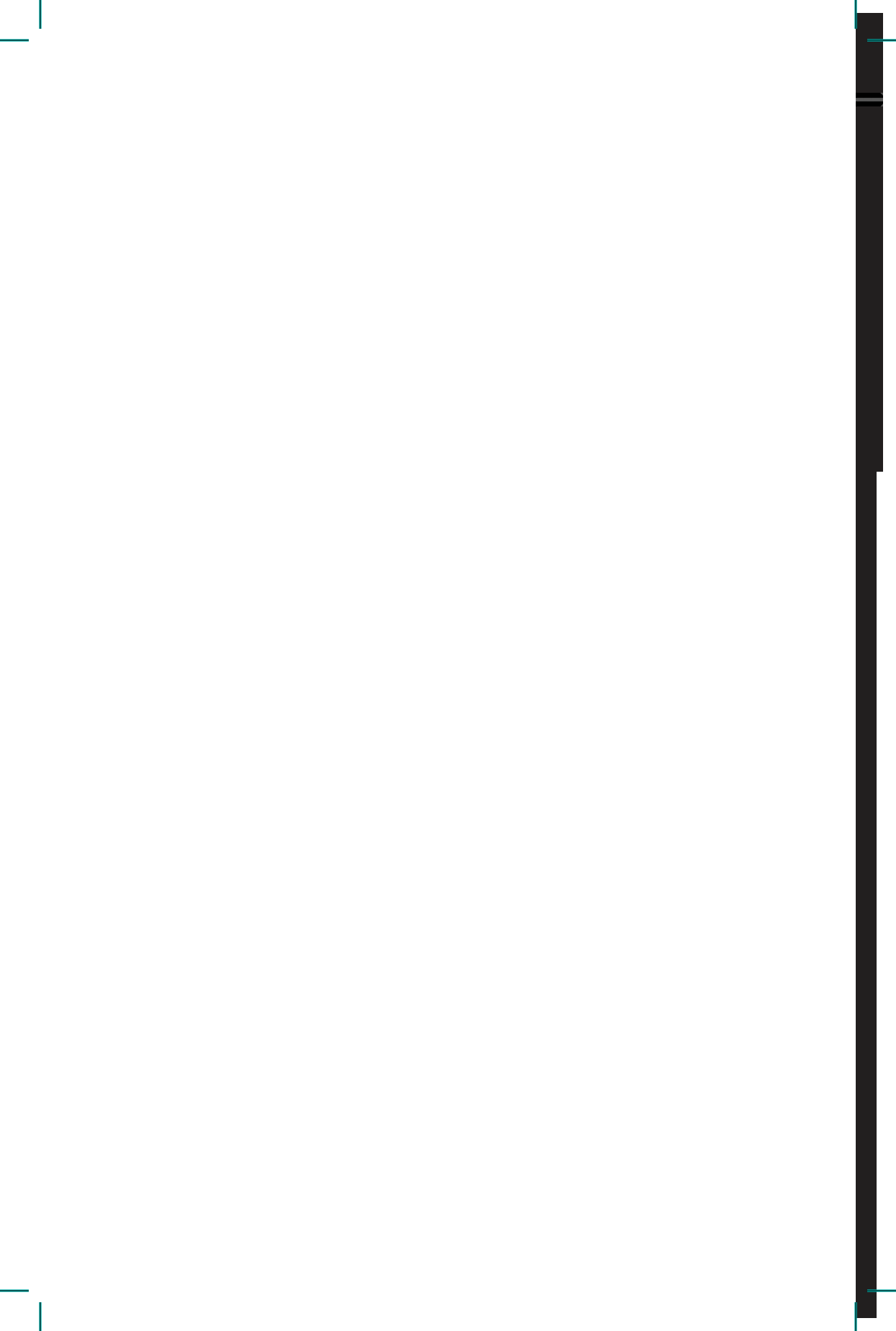
DAVE GOODSELL. The Millennial myth: what we don't know about the next generation of investors.

VOLUNTARY PENSIONS IN EMERGING MARKETS.

LEOPOLDO SOMOHANO.

AUGUSTO IGLESIAS.

RAFAEL PUYOL.



VOLUNTARY PENSIONS IN EMERGING MARKETS

RICHARD JACKSON¹

- ¹ *Richard Jackson holds a Ph.D. in history from Yale University. He is nationally and internationally recognized as a leading authority on global aging. He is the founder and president of the Global Aging Institute (GAI), a nonprofit research and educational organization dedicated to improving understanding of the economic, social, and geopolitical challenges created by demographic change, and especially population aging, in the United States and around the world. He is also a senior associate at the Center for Strategic and International Studies (CSIS) and a senior advisor to the Concord Coalition. Prior to launching the Global Aging Institute, Richard was director of a research program on global aging at CSIS. Jackson is the author or co-author of numerous policy studies. Jackson regularly speaks on aging-related issues and is widely quoted in the media.*



Executive Summary

Rapid population aging in emerging markets, together with the typically low coverage and low benefits of their mandatory pension systems, could lead to a large percentage of their workforces lacking adequate pensions or sufficient savings in retirement. It is therefore of paramount importance that governments implement reforms that ensure adequate old-age protection for tomorrow's growing number of retirees.

The success of emerging markets at ensuring retirement security will increasingly depend on their success at constructing robust voluntary pension systems. Although all eight of the countries analyzed (Brazil, Chile, China, Hong Kong, India, Malaysia, Mexico and Thailand) have made a promising start, they all still have a long way to go if their voluntary pension systems are to play a significant role in improving retirement security. With the right reforms, voluntary pension systems could help to shore up the deteriorating retirement income prospects of formal-sector workers. They could also provide a degree of retirement security to informal-sector workers, including self-employed workers, who constitute a very important portion of the labor force in emerging markets and who currently enjoy little or no retirement security at all.

Governments have focused their efforts on expanding the coverage of mandatory pension systems for too long - without much success - while failing to devote adequate attention to promoting voluntary pension systems. I suggest a change of strategy. In particular, I propose a series of measures, based on lessons learned from the experience of the developed countries, that would broaden and deepen voluntary retirement savings. Implementing automatic enrollment, together with auto-escalation, is critical for increasing the enrollment of employees in voluntary pension plans. New economic incentives targeted at the broad middle class, such as government flat subsidies and matching contributions, are also crucial. Informal-sector workers must be offered special treatment, in the form of additional incentives and greater flexibility, to motivate them to enroll. Appropriate investment policies

must also be designed that ensure the highest possible return on savings during the accumulation phase of the pension lifecycle. So must appropriate withdrawal policies that provide workers with suitable alternatives for accessing their savings during the decumulation phase.

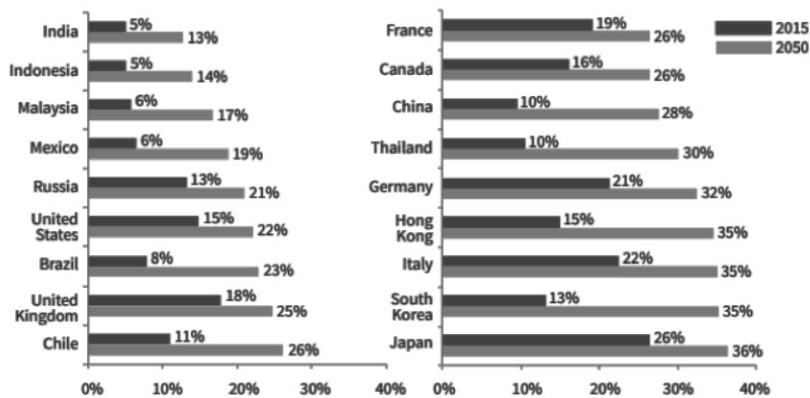
I. The Coming Crisis in Retirement Security

The developing world is about to undergo a stunning demographic transformation with profound implications for retirement security.

By the middle of this century, the populations of many Latin American and Asian countries will be as old or older than the population of the United States (see Graph 1). The aging of today's emerging markets will create enormous social and economic challenges. As the demographic transformation proceeds in coming decades, businesses will face a deficit of young workers, while families will have to address a surplus of frail senior citizens. The tax burden will increase and economic growth will slow down. What is perhaps most worrisome, retirement insecurity could increase dramatically.

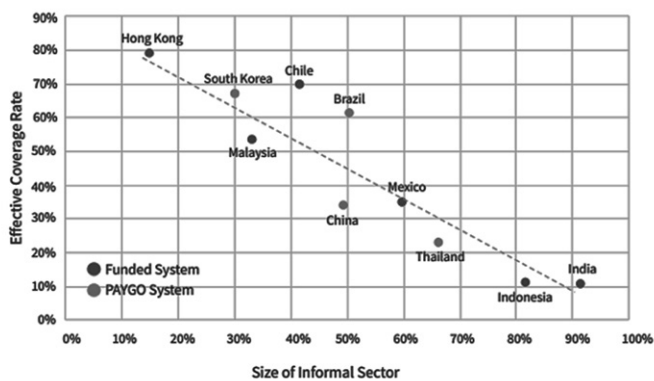
The economic vulnerability of tomorrow's retirees is due in part to the limited coverage of mandatory pension systems in countries with a high degree of informality in their labor markets. As can be seen in Graph 2, coverage under mandatory pension systems is highly correlated with the size of the informal sector. Even workers who contribute, moreover, often do so irregularly, which means that they will receive inadequate benefits. Participation rates are generally lower for lower-income workers, women, and employees of smaller companies. The participation of the self-employed is also very low, since they are often entirely exempt from contributing.

GRAPH 1
ELDERLY (65 OR OLDER), AS A PERCENTAGE OF THE POPULATION IN 2015 AND 2050



SOURCE: JACKSON (2017a).

GRAPH 2
EFFECTIVE MANDATORY PENSION COVERAGE RATE AND SIZE OF THE INFORMAL SECTOR IN THE MOST RECENT YEAR FOR WHICH DATA ARE AVAILABLE

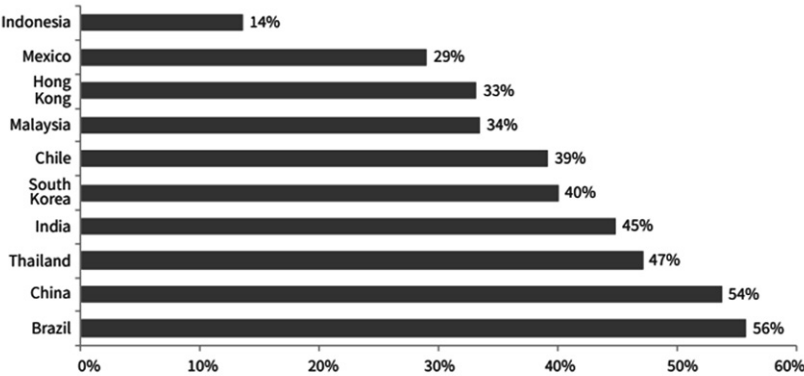


SOURCE: JACKSON (2017a).

Yet even for workers who contribute to mandatory pension systems for their full careers, retirement insecurity is growing. Emerging markets with mandatory PAYGO pension systems are finding it increasingly difficult to maintain the adequacy of benefits as fertility drops and life expectancy increases, resulting in an increase in the ratio of retired beneficiaries to contributing workers. From Brazil to China, many are being compelled to make dramatic reductions in replacement rates for future retirees.

In principle, emerging markets with mandatory funded pension systems should be better prepared to deal with their approaching aging waves. Yet in practice, they may be no more successful at maintaining retirement security than those with PAYGO systems. In the individually-funded personal accounts systems of countries like Chile, Hong Kong, and Mexico, contribution rates are too low to finance adequate replacement rates (see Graph 3). In the centrally managed provident funds of countries like India and Malaysia, low rates of return, together with pre-retirement withdrawals and low early-retirement ages, similarly undermine adequacy.

GRAPH 3
FUTURE MANDATORY PENSION SYSTEM REPLACEMENT RATES FOR FULL-CAREER WORKERS



SOURCE: JACKSON (2017a).

It is unlikely that alternative sources of income can fill the void left by inadequate mandatory pension systems. With family size shrinking, tomorrow's retirees will not be able to rely on the support of their extended families to the same extent as current retirees. Employment opportunities for the elderly may also be limited in rapidly developing markets in which older workers do not have the required skills to participate in the growth sectors of the economy. At the same time, increasing life expectancy will expose tomorrow's retirees to the growing risk of outliving any personal savings they may have.

All of the above suggests that the success of emerging markets in ensuring retirement security will increasingly depend on their ability to build robust voluntary pension systems. Until recently, many policymakers assumed that expanding voluntary pension systems should be a low policy priority in societies where mandatory systems cover only a fraction of the workforce. But it is precisely the limited coverage under mandatory systems that makes expanding voluntary ones so important. Nor is it true, as policymakers also often assume, that expanding voluntary pension systems would merely benefit the affluent. To the contrary, they have a central role to play in improving the deteriorating retirement income prospects of middle-class workers. They can even help to improve the retirement income prospects of workers in the informal sector, who currently enjoy little or no retirement security at all.

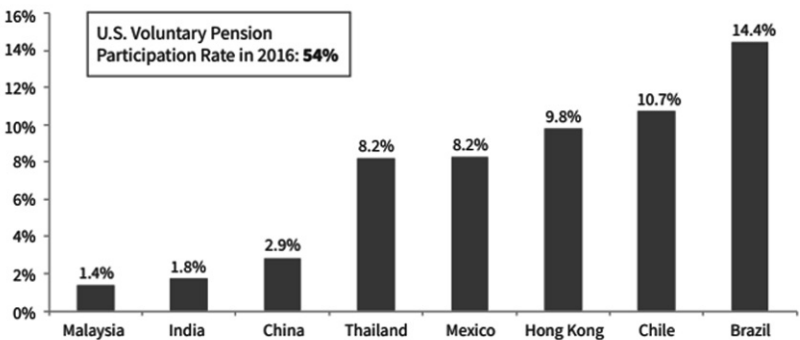
II. Current status of the voluntary pension systems

The countries covered in Jackson's report are Brazil, Chile and Mexico in Latin America and China, Hong Kong, India, Malaysia and Thailand in Asia. The existing voluntary pension systems in all of these countries have several positive characteristics in common. Most of the systems are exclusively defined contribution, which well suits them to the needs of tomorrow's mobile workforces and aging populations. Also, all of the systems receive at least some kind of favorable tax treatment designed to encourage voluntary retirement savings. They also benefit from well-developed fund management industries to invest the savings and highly professional regulators to enforce rules and standards.

Nonetheless, there is also a negative common denominator in the voluntary pension systems of all eight countries: their low level of coverage. As can be seen in Graph No. 4, among the countries in the sample Brazil, with 14.4% of the workforce participating, has the highest coverage rate, followed by Chile, with 10.7% participating. These participation rates are very low compared to those in the United States, where 54% of the labor force is enrolled in voluntary pension plans. In addition to low enrollment, the voluntary pension systems of the countries studied have very low amounts of assets under management in relation to their

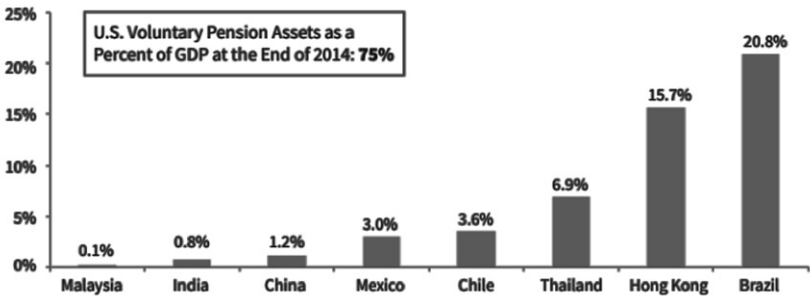
GDPs. Indeed, these amounts exceed 15% of GDP in only 2 of the 8 countries (see Graph 5).

GRAPH 4
CONTRIBUTORS TO VOLUNTARY PENSION SYSTEMS FOR FORMAL-SECTOR WORKERS,
AS A PERCENTAGE OF THE LABOR FORCE IN 2015 OR 2016



SOURCE: JACKSON (2017a).

GRAPH 5
ASSETS UNDER MANAGEMENT IN VOLUNTARY PENSION SYSTEMS FOR FORMAL-
SECTOR WORKERS, AS A PERCENTAGE OF GDP IN 2015 OR 2016

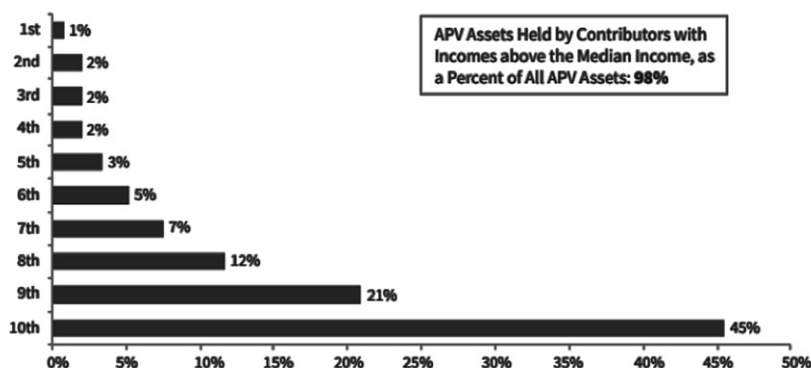


SOURCE: JACKSON (2017a).

As things stand, enrollment in voluntary pension systems is not only restricted to a relatively small fraction of the labor force, but it also tends to be very skewed by income. Excluding special voluntary systems for workers in the informal sector, the majority of enrolled members are high-income workers, who benefit more from the preferential tax treatment and often have salaries that exceed the tax ceiling of the mandatory pension system. Although some countries have recently taken modest steps to make their voluntary pension systems more attractive to lower- and middle-earning workers, these measures still fall short of what is required. Even in Chile, whose Voluntary Retirement Savings system (APV, by its Spanish acronym) includes some special incentives targeted at the middle class, participation is limited largely to workers in the upper levels of the income distribution. In 2016, two-thirds of APV contributors had incomes in the top income quintile, and nearly half of them had incomes in the top decile (see Graph 6). The distribution of APV assets is even more skewed, with 98% being held by workers with incomes higher than the median income.

GRAPH 6

CHILE: APV CONTRIBUTORS PER INCOME DECILE IN 2016, AS A PERCENTAGE OF ALL APV CONTRIBUTORS



SOURCE: JACKSON (2017a).

III. Strategies for strengthening voluntary pension systems

Achieving meaningful progress in the expansion and deepening of voluntary pension systems for formal-sector workers will require far-reaching reforms. As emerging markets consider reform strategies, it will be important to look at the experience of developed countries that have successfully managed to increase enrollment. To succeed, they will have to take advantage of the lessons of behavioral economics in order to overcome the inertia and myopia of workers. They will also need to put in place new economic incentives targeted at lower- and middle-earning workers, as well as follow global best practices during the accumulation and decumulation phases of the pension lifecycle. The main lessons learned from the experience of the developed countries are as follows.

1. Soft compulsion: automatic enrollment and auto-escalation

The experience of the developed countries shows that it is important to change the means of enrollment in voluntary pension plans sponsored by employers from an opt-in to an opt-out model. In other words, all workers should be automatically enrolled in the plans sponsored by their employers. If they do not wish to participate, they would then have to actively choose to opt out.

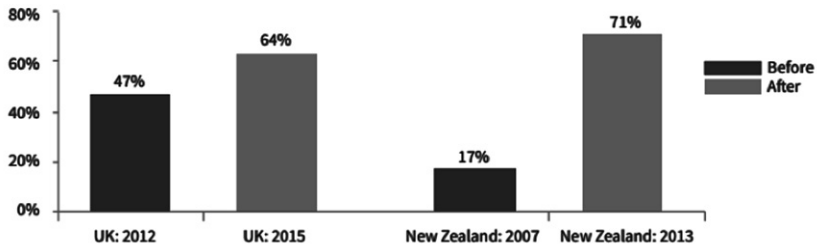
In the U.S., some employers have taken automatic enrollment a step further, applying a mechanism known as “auto-sweeping” in which workers who have opted not to participate in voluntary pension plans are periodically re-enrolled. On each occasion, those workers who do not wish to be enrolled must again decide to opt out.

New Zealand (KiwiSaver in 2007) and the United Kingdom (since 2012) have gone even further, implementing automatic enrollment nationwide. Governments require employers to enroll their employees in an occupational pension plan, though workers can still opt out. In practice, voluntary pension plans are mandatory for employers and voluntary for workers.

Automatic enrollment has been successful in countries that have implemented it, the most notable examples being New Zealand and the United Kingdom. Enrollment in voluntary pension plans sponsored by employers rose from 17% of the labor force in New Zealand before automatic enrollment to 71% after it. In the United Kingdom, enrollment rose from 47 to 65% (see Graph 7).

GRAPH 7

PERCENTAGE OF THE WORKFORCE ENROLLED IN AN EMPLOYER-SPONSORED PENSION PLAN IN NEW ZEALAND AND THE UNITED KINGDOM, BEFORE AND AFTER AUTOMATIC ENROLLMENT



SOURCE: JACKSON (2017a)

Behavioral economics can not only be used to increase the proportion of employees enrolled in employer-sponsored pension plans, but also to increase their savings by means of “auto-escalation” once they are participating. The evidence suggests that if workers are enrolled at a high contribution rate, they will tend to opt out of the plan, whereas if the initial rate is set lower and then automatically raised over time, more workers will remain in the plan. Together with automatic enrollment, auto-escalation is now a part of global best practice.

2. Economic incentives

Economic incentives are also important for encouraging voluntary pension savings. Traditionally, these have taken the form of tax benefits or preferences. In the usual arrangement, contributions can, up to certain limits, be paid out of pretax income, investment earnings accumulate tax-free, and benefits are taxed in retirement, when income (and hence marginal tax rates) will presumably be lower.

Because income tax systems are usually progressive, traditional tax benefits disproportionately favor higher-income workers, precisely the group with the highest enrollment in voluntary pension plans in emerging markets and with the least need of government subsidy. To encourage voluntary retirement savings among middle- and lower-income workers in these countries, other kinds of economic incentives, such as fixed government subsidies and/or matching contributions, should be offered in addition to traditional tax benefits. Again, the

experience of the United Kingdom and New Zealand shows that these types of economic incentives can help to promote VPS.

3. Accumulation phase

Encouraging enrollment is only the first challenge faced by countries when building robust VPS systems. Once workers are enrolled, it is essential to have measures in place that, to the extent possible, maximize the returns earned on their savings and ensure that their savings is preserved for retirement.

First of all, for any VPS plan to be successful, it is essential that assets be invested in a globally diversified pension portfolio. Government regulations limiting foreign investment are particularly harmful.

Another critical design issue involves the degree of discretion that should be granted to workers regarding the way their savings are invested. Although mandatory retirement savings systems can strictly limit the investment alternatives they offer members in order to maximize returns, international experience shows that in the case of VPS systems it is important for savers to have greater discretion in order to encourage participation. The key is to strike the right balance between paternalism and choice.

Global best practice is moving toward combining default funds that incorporate life-cycle investment principles with a limited number of additional fund options. There are two basic life-cycle fund models: target-date funds and target-risk funds, or multifunds. In the former, workers are assigned to a default fund whose risk profile is suitable for people with their expected retirement date. As that date approaches, the combination of assets in the fund gradually switches from riskier to more conservative assets. In the latter, the risk profile of each fund remains unchanged, but workers are transferred to new and more conservative funds as they get older. Although each model has its advantages and disadvantages, the target-date fund model is preferred in the developed world.

Another area where it may be necessary to make compromises is investment guarantees. Although such guarantees can be costly and counterproductive, in some countries there is a widespread popular feeling that workers should receive at least some degree of protection against the risk of investment losses. Guarantees on the rate of return are a particularly bad idea, since it would encourage fund managers to switch investment portfolios to lower-risk and lower-return assets, and members would assume the cost in the form of lower benefits. The least costly and damaging option is to offer a nominal capital guarantee, which in effect promises a zero rate of return during the working lives of participants. Nominal capital guarantees are

especially valued by workers, who are comforted by the promise that they will always get back at least what they paid in.

It is also important to establish reasonable rules regarding preretirement withdrawals of VPS savings. Ideally, of course, all VPS savings would be preserved until retirement. If such a rule were enforced, however, it would greatly undermine incentives to participate by workers with liquidity constraints. Here the compromise that most developed countries make is to authorize advance withdrawals, but to limit, penalize, or otherwise discourage them.

Last but not least, there is the issue of limiting administrative fees. The best approach is to promote competition among fund managers. Global best practice frowns on regulatory caps, which may distort investment decisions and have unintended and self-defeating consequences.

4. Decumulation phase

Many experts believe that voluntary pension systems should require the annuitization of account balances, at least up to some minimum threshold. Others, however, argue that the need to protect retirees against longevity risk must be balanced against their need to have funds on hand in the case of an emergency and/or their desire to leave a bequest. The optimal solution, and the one recommended by the OECD, may be to combine programmed withdrawals with a deferred lifetime annuity beginning at age 80 or 85.

Another very important issue to consider is the age at which VPS balances can be accessed without penalties. This age is currently as low as the mid-fifties in some countries, which is not in accordance with the needs of rapidly aging populations.

5. The role of employers

In the majority of developed countries, voluntary pension plans sponsored by employers (also known as collective voluntary pension savings, or CVPS) have been the most effective and efficient way of expanding the VPS coverage of middle-income workers. These types of pension plans may not always be the best alternative in emerging markets, however, since they cannot be extended to the informal sector and work better in economies dominated by large employers than ones dominated by small and medium-sized enterprises.

Nonetheless, emerging markets should encourage CVPS wherever possible. There are two proven ways to do this short of making coverage mandatory. The first is to require automatic enrollment and the second is to offer more favorable tax treatment

to employer pension plans than to personal plans. Together with the implementation of automatic enrollment, governments should establish minimum contribution and matching contribution thresholds for employers, as well as maximum thresholds for vesting periods. At the same time, they should link more favorable tax treatment to non-discrimination tests, which require that some minimum percentage of a firm's workers be enrolled in the plan.

While non-discrimination tests are important, if they are too strict they may end up discouraging CVPS. A reasonable balance might be to set initial tax benefits and minimum enrollment rates at relatively low levels, but increase the generosity of tax benefits if employers attain higher enrollment rates. Similarly, setting very high minimum contribution rates for employers could lead them to reduce wages, which would in turn lead workers to resist the implementation of CVPS plans. As for vesting periods, policymakers need to balance the goal of preserving savings with the desire of employers to enhance employee retention. While a 2 year vesting limit might be optimal, perhaps 5 years is acceptable.

6. Special treatment for the informal sector

A growing number of experts are concluding that voluntary pension systems are a better long-term response to the problem of retirement insecurity for informal workers than non-contributory social pensions, since the latter encourage informality. Non-contributory pensions also make a sizable portion of retirees dependent on social assistance and vulnerable to reductions in benefits due to mounting fiscal pressure as populations age and the number of elderly grows.

Because VPS systems do not have these disadvantages, many countries (particularly in Asia) are designing special programs for informal workers. There are considerable challenges involved in extending VPS to the informal sector, beginning with how to collect contributions. Economic incentives may also need to be more generous than for formal workers, and should include significant matching contributions by the government. Furthermore, in order to encourage workers to enroll, they should be offered greater flexibility in everything from contribution levels to the rules governing preretirement withdrawals.

7. Financial literacy

Finally, whatever specific reforms emerging markets implement, they should be accompanied by a broad financial literacy campaign, involving both the government and financial industry providers. Workers in emerging markets have very low levels of financial literacy, which will undoubtedly limit their ability to understand the importance of VPS for their futures. As part of this effort, workers must be informed



of the level of pension benefits they will receive through the mandatory pension system in order to discourage unrealistic expectations and draw attention to the need for voluntary retirement savings. To be effective, financial literacy campaigns must obviously conform to the institutional and cultural realities of different countries.

References

Jackson, Richard (2017a), "Voluntary Pensions in Emerging Markets: New Strategies for Meeting the Retirement Security Challenge." Global Aging Institute. Available at: <http://www.globalaginginstitute.org/assets/client-assets/common/downloads/publications/2017-Voluntary-Pensions-in-Emerging-Markets-EN.pdf>



THE MILLENNIAL MYTH: WHAT WE DON'T KNOW ABOUT THE NEXT GENERATION OF INVESTORS

DAVE GOODSSEL¹

- ¹ David Goodsell is executive director of the Durable Portfolio Construction Research Center, a research program dedicated to objective analysis and reporting on issues and trends important to investors, their advisors, money managers, employers, governments and policymakers. In this role, Goodsell leads global thought leadership initiatives for Natixis Global Asset Management. He oversees a team of independent and affiliated researchers, analysts and writers who track the major developments across the markets, economy and investing spectrum to understand attitudes and perceptions influencing the decisions of investors. He has conducted more than 20 in-depth research studies since 2010, encompassing insights from more than 50,000 individuals in 29 countries. Widely recognized as a source of primary data and insights, the Research Center publishes findings that have been featured in *The Wall Street Journal*, *Barron's*, *The Financial Times*, *L'Agefi*, and a range of financial publications around the globe.



It is a very important fact that we need to understand better how these young investors, Millennials, are adapting to this world today and walking up in the future.

I am going to look at Millennials in three ways. First, we are going to start looking the definition of who these individuals are, taking a look on how do they invest and who do they trust. Second, we are going to look at some of the misperceptions and conceptions they have about investment. And finally, we are going to get close on how they look at values, goals and long-term plans.

The leading edge of Millennial might

I will challenge that everything we think about Millennials is wrong. We all know the assumptions, the stereo type (self-obsessed, dismissed as trivial and assumed not to be interested in building wealth), but these kids come out of school looking for goals. They are actually much different than the stereo type. In fact, what we found if we look at things, these folks were born in 1980 and 2000 and the oldest Millennials turns to 37 years old in 2017. That doesn't sound like a kid from a school, it sounds of somebody who has been living and working, building a career, taking time to start a family, studying, buying a home, and they show with good indications of who they are as industrials.

Millennials are a powerful adult economic force: they are goals-focused and risk-conscious; they have their retirement in sight and believe investments can help produce social good. In Latin America we talk about having 167 thousand individuals in that age between 1980 and 2000. To get this information we did a survey we did in the USA and in this we spoke to individuals, institutions, Defined Contribution (DC) plans participants and mini industrials. We are talking about 50,000 individuals worldwide, in 30 countries, and we prepared 25 reports. We also worked with the Massachussets Institute of Technology (MIT) in a really unique research partnership, integrating big data and behavioral finance.

The 2017 Global Survey of Individual Investors included 8,300 investors from 26

countries. 1,200 investors are from Latin America, with 356 of these investors being Millennials (see Figure 1).

FIGURE 1
THE DATA BEHIND THE DISCUSSION



SOURCE: NATIXIS GLOBAL ASSET MANAGEMENT.

Among 356 Latin American Millennials with USD 100,000 or more in investable assets, we find distinct patterns of beliefs that could make or break their success. On average, Latin American Millennials are 30 years old; 55% of them are women and 45% men; 42% is married, 36% is single, 18% is living with a partner and 4% is separated or divorced (see Figure 2).

FIGURE 2
CHARACTERIZATION OF MILLENNIALS IN LATIN AMERICA



SOURCE: NATIXIS GLOBAL ASSET MANAGEMENT, 2017 GLOBAL SURVEY OF INDIVIDUAL INVESTORS.

When we come to AFORES in Mexico, one of the things we consider interesting is to show if individuals are moving from participation to engagement. In Mexico we see only 41% of individual AFORE accounts are held by Millennials, and they have 27% of the pension assets. So, participation may not yet translate to engagement. Age and income are clear factors. Can education and access help accelerate savings behaviors? It is important to start to educate on how we move our plans over time we live in.

Risk, trust and misplaced assumptions

One thing we must understand is that, emotionally, we all tend to be the product of the time we are living. And Millennials come on a certain time. We enter the work force at the time the financial crisis was on and it was hard the fraction for the career, it was hard to find credit to buy the things we needed. Millennials are more conservative than you may think: 2 out of 3 of Millennials say they are comfortable taking risks to get ahead; and this makes sense with the age, because young investors are more aggressive, can take more risks and the idea is to make mistakes having more time.

Are your participants' expectations aligned with the risk tolerance of Millennials? Their return expectations are high: they need a rate of return of 10.3% above the inflation to achieve their goals. However, the problem is that Millennials are not really prepared to take risks. 73% of Millennials choose safety over investment

performance, and 64% say that volatility undermines their ability to reach long-term goals. Is to say, if you give a Millennial a chance to choose safety, they will choose safety, but this doesn't sound the way to approach that high level of return required. So, we need to educate them and teach them what is the connection between returns and risks.

Millennials can trust the people more than what they trust their phones. The 83% of Millennials in Latin America say they use smart phones and according to our survey, the generation is about 7% in air traffic.

When asking the question "Who do you trust when making investment decisions?", we find that they trust their advisor more than they trust their families or co-workers. The reality is that Millennials need a professional help for making big decisions, but they trust what they read in the financial media or Facebook to make decisions. This leads to really important conversations on how to invest.

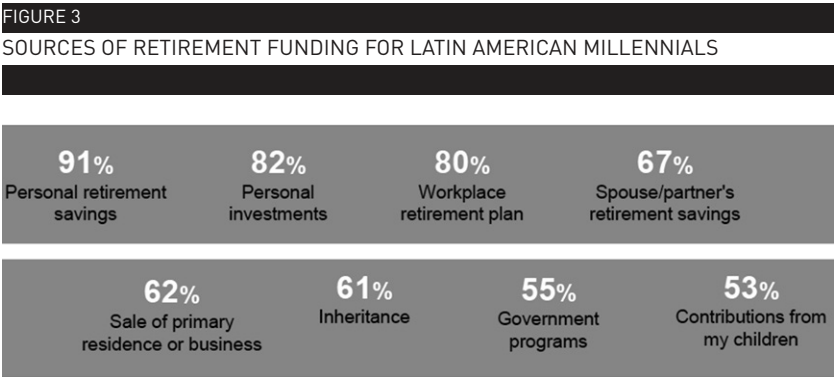
Millennials have misperceptions and investment expectations. For example, our survey found that 70% of Millennials say index funds are less risky, but this is not true, and the reality is that passive investment has no risk management. Also, 72% say passive investments will protect them on the downside, but the reality is that up or down, passive investments deliver market gains and market losses.

The other aspect is that Millennials assume they give access to the best opportunity. Six in ten say passive investments provide access to the best opportunities, but the reality is that passive investments include every opportunity, whether is good or bad.

Values, goals and long-term plans

Millennials have goals are in sight, but they need more definition. 7 in 10 of Millennials have clear financial goals, and 6 in 10 have a financial plan in place to achieve them. However, 68% of the younger investors we spoke with have an investment horizon for their investments less than five years.

Regarding retirement, Millennials are personally responsible, but depending on family. According to our survey, Millennials plan to stop working at age 61, and live for 23 years in retirement. Only half believe government benefits will be available when they retire, and 8 in 10 believe the responsibility to fund retirement is theirs (see Figure 3). Also, 8 in 10 have a figure in mind for retirement savings. So, +these are all very positive things that we see, but we have to teach about the map, we need to educate more on where do the sources of retirement income sources come from.



SOURCE: NATIXIS GLOBAL ASSET MANAGEMENT, 2017 GLOBAL SURVEY OF INDIVIDUAL INVESTORS.

How much do Millennials need for retirement at the end of the day? Well, only 57% have determined their retirement income needs, and only 49% have estimated their expenses/liabilities during retirement. I challenge that we need to teach individually things more like an institution: people must understand how these liabilities look like over the long-term, what are the challenges and then calculate how much they need in retirement.

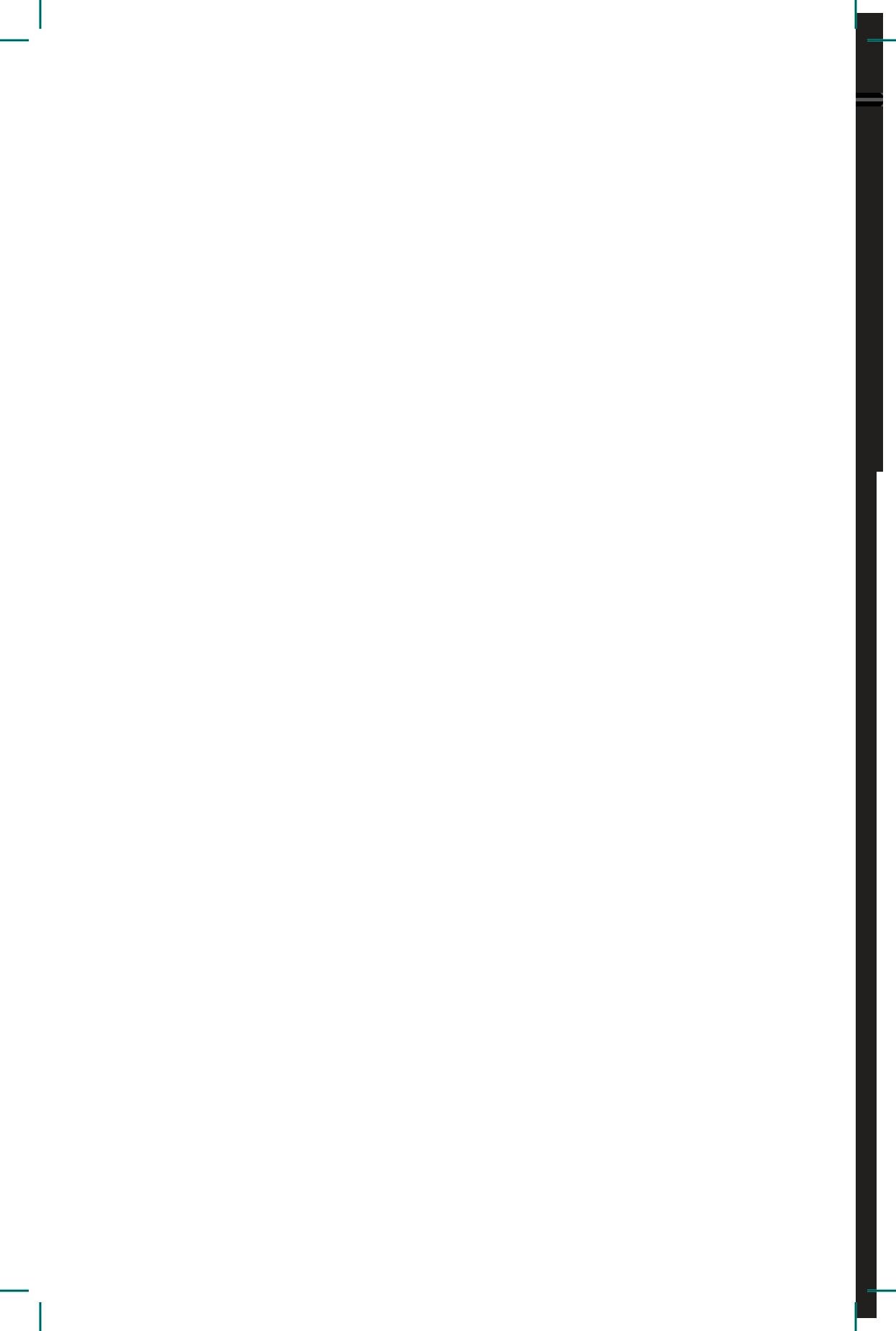
Millennials have a different kind of value investing. In fact, 81% of Millennials believe it is important to make a positive social impact with their investments. So, they think they need to invest in companies that match or reflect their personal values:

- 77% believe that it is important to know if their investments are doing social good.
- 75% believe there are companies that they don't want to own because those companies violate their principles.
- 70% believe if a company had negative ethical or environmental issues, they would sell the stock.

Conclusions

We saw who the Millennials are, what are their misperceptions and who do they trust, and what their values and goals are in long-term. We propose:

1. **An investment education**, not educating people with the tools they have, but educating them on how much investments work, getting an understanding between risk and return. That will help participants to better understand their plan selection and their investments and to increase voluntary savings.
2. **Professional advice**. 6 in 10 prefer personal advice to digital platforms. Access to advice may be a key step toward building better financial habits. Example: 45% of US advised participants maximize plan contributions.
3. **Investment selection**. Getting Millennials to engage with their retirement savings may mean aligning investments to the issues that matter most to them. ESG investing may create a more personalized experience. In fact, 71% of US Millennials would increase contributions if investments were doing social good.





VOLUNTARY PENSIONS IN EMERGING MARKETS

LEOPOLDO SOMOHANO.

AUGUSTO IGLESIAS.

RAFAEL PUYOL.



Moderator: Mr. Leopoldo Somohano

Mr. Leopoldo Somohano is a Chartered Public Accountant and, since 2008, holds an Executive MBA from the IPADE Business School. He is a global executive with more than 27 years of experience in the financial services sector in Mexico, Latin America and the USA. He currently serves as the Corporate Director of Strategic and Commercial Development of the Principal Financial Group, and as Chairman of the Financial Services Committee of the American Chamber of Commerce in Mexico. He has held senior positions at the Principal Financial Group in Mexico since 1997, including Finance, Human Resources, Marketing, Business Development, CRM and Strategic Planning.

Panelists:

Mr. Augusto Iglesias

Mr. Augusto Iglesias is a Business Administrator with a Post Graduate in Economics awarded by the Chilean Catholic University and a Master's Degree in Economics from the University of California, Los Angeles, United States. He is currently a partner and Director of PrimAmérica Consultores, a consulting company focused on the areas of social security, insurance and finance. During his professional life he has served in sundry positions ranging from Undersecretary of Social Security in Chile (from March 2010 to March 2014), AFP Habitat's Studies Manager, researcher at the Centre for Public Studies (CEP) to the Institute of Economics of the Chilean Catholic University. He has also been a consultant to international organizations, including the World Bank, the IDB, ECLAC and the United Nations; as well as with governments and private institutions. He has advised on projects concerned with pension reform to sundry foreign governments. He was also a member of the Chilean Presidential Advisory Council for Pension Reform during 2006.

Mr. Rafael Puyol

Mr. Rafael Puyol holds a degree and a PhD in Geography and History from the Spanish Complutense University, Madrid (1971). He is Professor of Human Geography and also the Honorary Headmaster of the latter university. In addition, he is vice president of Institutional Relations of the I.E. Business School and Chairman of the Board of the I.E. University. He created and was the first Chairman of the Population Group of the Association of Spanish Geographers. Amid other key and noteworthy positions held, he has been a member of the Board of Directors of the Spanish Chapter of the Club of Rome; and 1st Vice President of the Royal Geographical Society. Currently, he is the Patron of four Foundations (namely Fundación Banco Santander, Fundación Independiente, Fundación Caser and Fundación Instituto de Empresa); and a member of the European Foundation Centre and he Hague Club.

Mr. Leopoldo Somohano:

It is a pleasure for me to be here during the second edition of this forum, to take up the issue of the importance of voluntary savings as one of the pillars to improve pensions; and at a time we must bear in mind the demographic circumstances in which we find ourselves together with the challenges we face due to an aging worldwide population. What is the perspective of the demographic bonus for Mexico? How many more years do we have to take advantage of this bonus, and adopt the timely/relevant political decisions and bring them to fruition?

Mr. Rafael Puyol:

Usually we speak of a single demographic bonus and I think we must talk about several demographic bonuses. As regards the demographic bonus which is usually spoken about is the one which corresponds to such eminently young and well-educated population, together with the opportunities within the labour market constituting a source of wealth for the countries where this situation is happening. As it happens, sometimes we tend to forget about two other demographic bonuses which also play an important role in the societies' development. One is the woman.

The entry of women into the labour market has been a real revolution, which has had some other consequences from the demographic viewpoint; such as the fertility drop in many of today's societies. Even though nowadays the situation manifests itself in different terms, since there are many countries in which the women, whenever asked about what they would wish to get in exchange for having a child (or a second child if they already have one), they usually say what they need is a job.

Therefore, things have changed a lot to the point a job currently does not constitute a factor for a fertility curbing down, but rather a condition which favours it in many societies. And we have a third demographic bonus, represented by an older population. At this point in time, the increase in average life expectancy, that is the increase in longevity, is something which is noticeable everywhere.

The fact is that people at 60, 65, and even 70, are still rated as young. We usually say that today a 70-year old individual is like a person aged 60 some 15 or 20 years ago. Therefore, as we are perfectly aware, we have gained years to live with the challenge now being to gain life quality over the years.

Reverting to the question regarding the first demographic bonus represented by the young individuals, the situation in Mexico is particularly sensitive. Bearing in mind the two fundamental demographic variables, and which condition so many things from the economic and social viewpoint, Mexico is already beginning to be

in a situation which suggests the need to introduce some safeguards or measures for correcting the future negative effects of this situation.

I mean the following: Mexico currently has a fertility rate of 2.2, which means being on the verge of a generation renewal. After having reached a fertility rate of just over 5 a few years ago, the Mexican evolution has been so fast as it is the case in almost all Latin American countries, with some few exceptions. On the other hand, the percentage of Mexican people over 65 is 7%.

According to the projections we currently hold, these two variables (fertility rate and percentage of people over 65) are going to evolve very fast, to such an extent that it is predictable that by year 2022, the fertility rate will drop below 2.1. The latter is the critical threshold for a generation renewal; with the percentage of adults over 65 to exceed 10% and coming close to 18% in a short period of time.

Therefore, Mexico still has time but not an excessively long spell, to take advantage of the benefits that its demographic bonus stemming from its young population structure. Thus, given the possibility of things becoming somewhat critical when the percentage of people over 65 exceeds 10% and when the fertility rate falls below 2.1 children per woman as it is bound to happen, Mexico has time, but not much; to adopt safeguards aimed at avoiding the negative consequences this double process of falling fertility and aging may cause.

Mr. Leopoldo Somohano:

Chile has presented Mexico with a crystal ball to see what can happen to us if we do not implement reforms to our system anytime soon. In that sense, what are those reforms which both the Mexican individual capitalization system and those of other countries throughout the region can ensure the pension system becomes both stronger and sustainable over time?

Mr. Augusto Iglesias:

I understand the question refers the approach for implementing a reform policy. Undoubtedly, the answer depends very much on the specific conditions in which any adjustments to the pension systems in each country are being considered, but given such warning, when one looks at the successful pension reform processes, there are a couple of repeating elements.

First of all, these countries managed to impose their vision of a pension policy as a State-endorsed one, and this means they became fully aware that what one does, in terms of pensions, has very long-term effects. More often than not such effects do

not reach those who are making decisions but future generations instead. Therefore, when such vision is adopted in contrast to a conjunctural vision - which decides reforms for the effects that are going to have immediately effect - it will benefit one or the other specific group, then a difference is made.

I think that, if we look at the case of Chile, we can observe this too. In Chile, looking at the last two major reforms we have implemented so far (one that we made to our very successful pension system in 2008, and the one we are discussing now); one can notice that the main difference between the two, is that the first was made with a very long-term view; and on which a broad consensus was built between the political sectors before submitting the project to Parliament.

The reform we are discussing now has not been formulated with that vision and the government decided to send a reform project to Parliament without having an agreement, even of the previous basic things, a fact which is proving to be somewhat riskier when compared to the previous experience.

The other feature element of successful reforms is the construction, prior to the reform being implemented, of an agreement or a majority opinion concerning its technical area. Many of the last reforms which have come to our attention, not only in Chile but in different parts of the world and which have been successful, have been preceded by a technical work. The latter has often been organized via a commission specifically designated for this purpose; and which has formulated a basic common diagnosis and thereafter has submitted specific suggestions/proposals.

The politicians in these countries have received - for their subsequent political analysis - very well elaborated and supported proposals. Indeed, they have not been proposals produced as a result of a political discussion, but technically formulated instead. Only then they have been submitted to discussion in the political arena, and this we notice is the case in several European countries and, again, it is the case in Chile too, particularly with the reform introduced in 2008.

So, to sum up, by looking at the pension reforms becoming a State policy, and build a technical agreement serving as a support to the reforms, it appears there are at least two elements that should be borne in mind while persevering with a pension reform drive.

Mr. Leopoldo Somohano:

How can we move forward with the pension reforms? What core features should they have?

Mr. Rafael Puyol:

I am not an expert on pension issues. I am more inclined to read and understand demographic issues, but I think the first thing I have to say is that the efforts of the various governments should focus on the improvement of the systems that most Latin American countries have adopted so far, which are variants of individual capitalization.

Going back to a different system, such as the one of centralised distribution, does not make the slightest sense from a demographic perspective, and, therefore, what the State has to do is, on the one hand, from the demographic angles is to avoid the evils that the European population has experienced, and try to ensure the fertility rates remain at reasonable levels.

You cannot influence aging rates; indeed aging is a positive thing, it is a social achievement, even if it is not a neutral phenomenon and, therefore, we must address it adequately by ensuring its negative consequences do not explode in our hands.

That said, from the pensions' viewpoint, what governments must implement are initiatives aimed at keeping in place a system which has been shown as viable in a much better way than the pay-as-you-go system.

Mr. Augusto Iglesias:

I will take this opportunity to emphasize the importance of developing the Voluntary Pension Savings (APV) as a mechanism for improving the pensions. I never talked to Richard Jackson beforehand. We have heard his presentation now and we note it is in total agreement with one of the messages which I have already quoted.

We stated that the Voluntary Pension Savings (APV) is not only a way towards improving pensions of those who are already undertaking mandatory savings, but it is a way to increase the coverage of the pension systems for reaching people who do not have the capacity to make savings on a regular basis. The APV scheme also appears, and I am thinking in the context of Mexico, as a particularly efficient way to increase the contribution rates.

When imposing the savings mandate becomes a complex issue because of the labour market realities, instead of making this mandate of a higher contribution compulsory, then turn it into a commitment to be observed by the employers to offer voluntary savings plans to their staff complement who wish to take them.

By adding the foregoing automatic enrolment and liquidity condition, it seems to



me an effective way to convince workers to opt for an APV scheme entails giving them the possibility of using such savings for some unforeseen event - at least for some time - before such savings are automatically frozen for pension purposes.

What I am proposing here is an APV system, which allows, for instance, the workers who have already made this saving, to withdraw a fraction of it during the first, second or third year and allocate the money to another purpose. But if they have not incurred in such savings, then a part of it must be frozen exclusively for pension purposes.

To sum up, I believe that developing the Voluntary Pension Savings (APV) is a path which particularly our countries in Latin America - with very large informal sectors - we must fully explore; and I subscribe 100% the message which Richard Jackson has transmitted onto us.



CHAPTER IV

THE INVESTMENT OF PENSION RESOURCES IN PRODUCTIVE PROJECTS

CÉSAR ESTRADA.

OSCAR VELA.

LEÓN DE PAUL.

SERGIO MÉNDEZ.

ALONSO DÍAZ.

Moderator: Mr. César Estrada

Mr. Cesar Estrada is a Chemical Engineer graduated from the Tecnológico de Monterrey and holds an MBA from the Kellogg School of Management. He is director of global services and products focused on Private Capital funds with State Street. Previously, he was responsible for the operations of private equity services focused on the growth of private credit, infrastructure and hybrid funds. Prior to joining State Street, Mr. Estrada was director of corporate banking at JP Morgan, where he was responsible for the launch of the laboratory focused on new products and advanced analysis. Furthermore, he leads the launch of the private equity and real estate funds service at JP Morgan.

Panellists:

Mr. Oscar Vela

Mr. Oscar Vela holds a Bachelor's Degree in Economics from ITAM and a Master's Degree and a PhD in Economics from the University of Chicago. He has worked as an academic at ITAM and at the University of Chicago. He is currently Head of the Insurance, Pensions and Social Security Unit of the Mexican's Ministry of Finance and Public Credit. Prior to joining the Secretariat, he worked as an economist for Emerging Markets at Barclays Capital and at the General Directorate of Economic Research of Banco de México.

Mr. León de Paul

Mr. Leon de Paul is an Actuary and holds Diplomas in Applied Statistics, Corporate Finance and Stock Market Finance. He currently leads the Risk Management Unit of Afore Banamex and has a track record of 19 years in the industry, with considerable experience in areas such as market risk, credit risk, liquidity risk, operational risk, risk in information technology and actuarial risk as well as in development and implementation of risk systems. In addition, he has participated in the Risk Committee of the Mexican Association of Retirement Fund Administrators (AMAFORE).

Mr. Sergio Méndez

Mr. Sergio Méndez graduated from the Autonomous Institute of Mexico (ITAM) as a Bachelor in Economics. He has more than 22 years' experience in the financial guild. He is currently Investment Director of Afore XXI-Banorte (CIO). Previously, he served as CIO of Santander Asset Management and Prudential Financial, both in Mexico City. He also served as Managing Director at Nafinsa Securities in New York and as Vice President of Inverlat Securities and the stock exchange brokers known as Serfin.

Mr. Alonso Díaz

Mr. Alonso Díaz holds a Law Degree from Universidad Iberoamericana and a degree in Economics from the Instituto Tecnológico Autónomo de México (ITAM). He is a Founding Partner of Gerbera Capital, an investment platform specialized in Private Equity / Venture Capital, Real Estate and global management of financial portfolios. He is currently a board member of Grupo Diestra and is a board member of sundry companies of the Gerbera Portfolio and is an Independent Director in several Funds. Furthermore, he is Chairman of the Board of the Mexican Association of Private Equity (AMEXCAP).

César Estrada:

To start with, I am going to share some global investment trends with regards to some alternative assets, specifically investment funds in infrastructure and private credit; which are rated as two key ways of fostering economic growth.

In a recent survey of 500 institutional investors regarding alternative assets, 20% participate in 5 of 6 alternative asset categories (private equity funds, hedge funds, private credit funds, infrastructure, real estate, and natural resources). About a third of the investors do not participate in any of these six or are attached to only one. The remaining 47% participates in two, three or four of these alternative assets.

Infrastructure and private credit funds have the lowest share of institutional investors, which is hardly surprising, because these two classes of alternative assets are the most recent. For instance, private credit is a phenomenon of the post-American crisis. Prior to such crisis, it was very small and was considered by the institutional investor as a subset of *private equity*.

Likewise, the infrastructure and private credit are the asset classes where the investor has shown the greatest interest in investing and increasing their portfolio allocations. This investment interest is likely to continue in the foreseeable future.

If we go a little deeper into infrastructure, what are we talking about? Here we speak of many things, of very varied definitions. Some of the most important infrastructure categories are transportation, communications, energy infrastructure, water and waste treatment and, in each of these categories, there are many types of assets.

For instance, in the case of transportation we can see railway infrastructure for both passengers and cargo, port infrastructure, airports, highways, and airports. Each of these assets has a business model and revenue generation which are more mature than others, some more transparent than others and the institutional investor is looking for that clarity and transparency in the relevant economic models.

How are infrastructure projects being financed? Historically and currently, the world governments continue to be the main source of financing. The municipal, state, regional, and federal governments, via their the tax collection drives, through debt raising initiatives in the capital markets; chiefly through schemes with the private sector.

This is how PPPs (Public Private Partnerships), Climate Investment Funds (CIFs), privatizations and a multitude of alternative variants of them have emerged and been adopted; some of which are more successful than others in different parts of

the world. For the future, it is expected that these schemes will be used in a much more significant way.

The institutional investor, regardless of the scheme, is looking for four things: the project makes economic sense; the process of selecting partners is clear and efficient; the risks must be suitably aligned between the government and the investment partner and that the project generates appropriate returns, adjusted to the risk.

Since the seventies, real investment in infrastructure as a percentage of GDP has been declining. Nowadays, the world's annual investment in infrastructure is around US\$ 2.5 trillion and there are estimates stating it should be above US\$ 3 trillion to even maintain economic activity at the current rate by year 2050.

This financing gap presents a great problem for the world and potentially represents a great opportunity for the institutional investor. Private investment funds in infrastructure still have a small share in this financing.

If we think that about US\$ 60 billion worth are raised each year in new private capital investment funds to invest in infrastructure; this is less than 1% of the total which must be invested in infrastructure at a global level.

Everything points to this status must be changed, because the institutional investor has money and is very aligned to this type of asset and its relevant risk, return and duration profiles; not to mention the foregoing is coupled with the fact most world governments are cash-constrained and not very keen to continue this kind of financing.

There is some evidence that this is changing this year, because the size of investment funds allocated to infrastructure is changing not at a progressive level, but at a staggered level. In early 2017, two companies (Brookfields and Global Infrastructure Partners), each raised funds of US\$ 15 billion to invest exclusively in infrastructure projects.

At that time both broke records, there were no private capital funds which in the past had come anywhere near such magnitude; albeit that record was soon broken. By May 2017, Blackstone came up with a fund of US\$ 40 billion going exclusively to infrastructure, which when being leveraged will become US\$ 100 billion, which was unthinkable in 2016. Indeed, never anyone had envisaged a figure like this could ever be raised.

Turning to private credit, since banks and traditional financial institutions have reduced the granting of credits to the medium-sized and small industries - since



they did not remain as profitable for them in the new regulatory environment - new alternative forms of credit began to show up and which have started to fill in this gap.

Private credit funds, perhaps the most popular, have already reached US\$ 600 billion; they have grown 14 times since year 2000 and they are on track to reach a trillion dollars by 2020.

There are many economic sectors which are benefiting from private credit; more than a third is the small and medium-sized industry and it is interesting to mention that, in the case of the United States in particular, alternative sources of credit such as private credit, already represent a greater source of credit than the banks themselves.

One of the success stories worth sharing with you is the so-called BDCs (Business Development Companies), which are regulated vehicles, set up via tax incentives for encouraging investment in the U.S. small and medium-sized industries. The growth of these investment vehicles has been exponential.

Before the financial crisis there was only US\$ 2 billion in credits granted through these investment scheme, and today there are more than US\$ 80 billion worth of credits and there are many companies scattered all over the United States, which have benefited from this credit scheme.

There are already more than 50 BDCs operating in the United States, some are private and are quoted/transacted in the Stock Exchange. Some of the benefits that these companies see in private credit are its flexibility in the structuring stage, the flexibility in the terms and conditions of loans and the speed of credit decision-making by private equity funds vis-a-vis what it takes from a bank.

Credits are of all sizes, but about half fall in a range of US\$ 25 million to US\$ 100 million and the duration of these credits typically ranges from two to six years, but in recent years their repayment timing has been expanding.

The phenomenon is not exclusive to the United States. This is happening, not in the same way, but largely in Europe, at a slightly slower pace and to a much lesser extent; albeit with a future projection. We see many of our clients starting to participate in this type of investment in Asia Pacific as well.

As far as the institutional investor is concerned, this one has now shown a fierce appetite in terms of investments in private credit. Pension funds, both public and corporate, want to maintain the same investment step or increase it. And this is not

surprising when we see how pension funds evaluate them from the performance viewpoint; this is the reason why they want to continue investing in such asset class.

All the foregoing points to the fact that infrastructure funds and private credit funds are something that are here to stay, since they have proven to have a positive impact in promoting economic development; and in the provision of an investment instrument which has a low correlation with other markets and which offers both diversification and an attractive return.

Now let us turn to the interactive panel with this question: How have the pension funds, the AFORES, evolved in their investment capabilities in alternative assets?

Sergio Méndez:

I think the evolution has been very fast. It has really been an asset which began to unfold between 2008 and 2009. I could say that much of the portfolio has not yet matured, but we currently have a series of very interesting projects. The truth is that I also see the investment teams of the investment processes have already adapted to this type of assets. We have done a very important job trying to adapt and inform the committees, to do everything encompassing any investment of this style (from choosing a manager, portfolio design, type of strategy to be carried, where to put it, watch for the trends, etc.).

It is very interesting to note how regulations are taking and putting you towards the growth of different asset classes. It is also very important to mention the capacities that have been generated within the AFORES themselves.

We are missing several steps yet, but I think that several groups have already made important investments in talent, in teams and in processes within this context. The AFORES' investment committees are already much more specialized in this type of asset.

Perhaps the most important thing is that this whole process has translated into better opportunities for the investment of workers' savings and we, as AFORES, are maintaining always a fiduciary responsibility, returning part of those savings to the economy and closing a productive virtuous cycle.

In addition, now the regulation is much more modern, according to the much more advanced generations of investment instruments.

César Estrada:

Would you like to comment something from the risk management point of view?

León de Paul:

What are the risks involved? The first risk is that of insufficiency, which is when you have an objective and it is not fulfilled; It is the greatest risk of all the AFORES, and it is difficult to talk about such a topic. The second most important risk we have is concentration, which has to do with the way in which the system was created and with regulatory issues; all which have been changing and evolving. In Mexico, the concentration in projects and in certain types of companies is very high, due to the country's nature.

What we are seeing as alternatives are very good options from the viewpoint of risk diversification. There are many of the benefits of structural reforms that you cannot become exposed to in public markets. Then, all these benefits we must try to capture through alternative investment instruments. This also helps to creating companies that will one day be public and help us to have a greater diversification. Such is what we are doing right now.

The strategy of the fund must be given a certain priority. The investment team of AFORE Banamex has this as a priority, that is, it sees it as a diversifying factor; as an asset class with a giant potential. Therefore, in AFORE Banamex there is a team of 10 people dedicated exclusively to this asset class. So, basically what we are looking for is also people with 10 to 15 years of experience doing exactly this, because we see it as an anchor.

In addition to the above, we are working with the regulators to try and suggest changes that make sense for all. And at the same time, we are collaborating with the Mexican Association of Private Capital (Amexcap), to have the funds which are suitable for the investment strategy we have.

César Estrada:

What options do the local regulations provide for productive financing through institutional investors?

Óscar Vela:

We currently have a very dynamic agenda of calls and meetings, where we are all working together to see which the next step is to consider in the regulatory and

market creation drives and continue generating new instruments which can channel retirement savings.

It has already been said, but it is necessary to repeat it. In the virtuous circle about which we speak today very naturally, and which we already see embodied, has been crucial to building a system (which has already been operating for 20 years now) that, by law, forces people to segregate resources for their retirement.

We have a set of professional managers competing to seek the best possible performance (subject to a risk for maximizing that level of long-term pension), by channelling these savings onto productive activities. This virtuous circle closes because this investment generates a non-uncontrolled growth, that is, with low inflation, thus leading to greater savings.

The above is rated as, or it looks very easy to implement, but it has not been like that. The system is what it is now, because it has gradually evolved both in terms of regulations, as well as in the professionalization of the teams and the development of the market itself, together with the country and its structural reforms.

Although at the initial stage, almost the entire portfolio was invested exclusively in government debt, nowadays of the total of resources managed (approximately 15% of GDP), only half is in government bonds and the other half is in a diversified portfolio, which needs to diversify even further.

The greater diversification which is required, must be gradual and must go hand in hand with an environment of rules allowing the investment to become transparent and well channelled.

Diversification has grown rapidly. We started seven years ago, with the logic of creating public vehicles to channel infrastructure projects through the Development Capital Certificates (CKDs)¹ and the Real Estate Investment Trusts (FIBRAS)².

We have spent these seven years just accompanying these first investments and now with structural reforms opening a new range for all, new instruments and new projects; all which with an important complexity on how to structure and channel the resources.

Regulations have been accompanying this evolution and dynamism, always trying to set in place instruments once they are public; that do not lose such transparency notion and so there is a market discipline and a possibility that the AFORES and their committees are held accountable at all times.

So, we are talking about a system which is still linked to a public regime, but generating as much more dynamism as possible, coupled with more flexibility and accommodating the projects that coming to us via our doorstep and are almost in front of us.

We want the regulatory logic in Mexico to feature a steady dynamism over time. Today we have a set of vehicles allowing us to channel the pension fund investments. However, given the complexity and speed at which times are changing, that set of instruments cannot be static.

1 *The Development Capital Certificates (CKDs) are Mexican financial instruments placed by the Mexican Stock Exchange and which belong to the Development Capital Market and serve as a vehicle for the financing of activities and projects of sectors with long-term returns, such as infrastructure, mining and communications, to name a few. These titles were introduced in 2009, together with the change in the regulations of the National Commission Savings System for Retirement; and due to the need to enter the financial market with the AFORES' great monetary mass and the lack of liquidity on the part of the development companies. In this way, they serve as another alternative for the portfolio of Mexican investors.*

2 *FIBRAS are trusts focused on the acquisition or construction of real estate intended for leasing or acquiring the right to receive income from the lease of said assets; as well as granting financing cover for these purposes. Its objective is to encourage and stimulate the development of the real estate market in Mexico by offering diversification of investments in a portfolio of properties for minimizing risks, and to integrate small, medium and large investors – foreigners and nationals alike – be those individuals and institutions; all which are allocating their investments onto large-scale projects.*

At all times the regulations will be trying to accommodate, in conjunction with administrators and private equity developers, whatever changes are required to improve the efficiency of the process and investment diversification alike.

César Estrada:

Finally, how is the productive deficit in Mexico being covered? What success stories would you like to mention?

Alonso Díaz:

There has not been a better time in the history of our country to invest in private capital. I say this because currently in the Mexican Association of Private Capital (AMEXCAP), we have registered more than 120 investment funds, about US\$ 51 billion of committed capital - of which the AFORES have around US\$ 7 billion - which is more of what the AFORES throughout the system have been investing, for instance, in the Real Estate Investment Trusts (FIBRAS).

AMEXCAP includes four strategies or four private equity umbrellas, unlike what happens in other associations or in other countries: (i) growth capital or *private equity*; (ii) *venture capital* or entrepreneurial capital; (iii) real estate and infrastructure; and (iv) energy. Each of these has some peculiarities which depend on where we are and what is being done.

Perhaps it is important to demystify what the investments of private capital are. We basically do three things, and with those three things the fact is that more value is generated for investors and for the economy than in any other type of asset.

The first thing we do is search, and we are very selective about the projects in which we invest via any of these four strategies. Of every 100 prospects, maybe we invest in one or two. This rigorous selection makes returns to be above average.

The second thing we do is that once the investment is made, there is an active participation in the creation of value; it is not simply a matter of handing over the money - unlike investments for instance - which are in public markets, where the whole transaction is between investors. In none of these operations does the money gets to the company, so it can grow; in private capital ventures such money enters the company or the project and with that, such is built, contracted and it grows into.

This is supplemented by the intelligence of the manager, his/her *network* and experience; which help generating better corporate governance and a better decision-making. This second activity explains why private capital generates higher returns than other types of *asset classes*.

And the third thing we do is look for the buyer who is willing to pay the best price for the asset. Sometimes, such buyer is the public market, sometimes it is another fund, sometimes it is a strategic buyer. By adding these three activities, you can perceive and understand why the return on investments in private capital is greater than that of the rest of the assets.

It is important to clarify this, because what we are doing is not different from what each of the AFORES do when they are choosing the instruments or the *securities* which they add into their investment portfolio. The only difference is that we are doing it in a private market, which has a number of inefficiencies, but which allow us to capture more value than in the public market.

Sergio Méndez:

While tackling the question, I would put forward two things. The first thing is that what the AFORES represent really is 15 percentage points of internal savings and for such savings we must look for their proper fitting in place. Alonso said it very well, look for strategies and opportunities in which we have returns which convert the workers' retirement a better and more viable proposition.

We know the challenges to the contributions. Now we are talking on the side of investments; on one side of the equation. I believe that a success story is that when an affiliate's money can be invested in oil wells, in electricity generation, in wind farms, in hotel strategies, on roads, etc.

That is the most important thing that must be communicated to the affiliate; that it is his money we do manage, and which has been entrusted to us; which we will be accommodating within the real economy, always adjusting for any risk eventuality and fulfilling in the best possible way our fiduciary responsibility.

I think that in general all AFORES have grown. Obviously, it is a process that has been developing and has been going on for 20 years, and there are still many challenges ahead concerning the investment regime.

Precisely, part of what we do from the side of AMAFORE and the AFORES themselves, is to try and talk a lot with the regulator to see where our best efforts should go to. We have a very important and very close communication to see what we can do to improve the investment regime.

León de Paul:

We have spoken about the fact there is a very important issue with the population

growing old. We have also discussed about the size of the Mexican domestic savings not being large enough. There are few regions in the world which can steadily finance their long-term growth by using only domestic savings.

What are the AFORES doing to deal with this? Attract capital. I think this move makes a lot of sense now; what is important is the amount of money the AFORES have for bridging over the financing gap of all the Mexican projects. So, if we are to secure a closing of this gap, it is crystal clear it will not be possible to accumulate enough resources with the current rules.

For the AFORES it will always be very positive to be able to attract foreign capital, since it means there are many projects in Mexico and implies we can choose and diversify the pension funds. The problem is they are projects far too big for us.

So, what we must do is to be able to attract external capital between the funds and AFORES; and be able to fund forward all these projects. The good news is that there is a window of opportunities; investors are turning their attention to Mexico because yields are soaring (compared to the rest of the world) and the demographics are still good. This window of opportunities is small, and it will not last long.

In about 12 years' time the demographic bonus in Mexico is going to end and we do not know when the interest rates will start raising elsewhere in the world. So, we are trying to take advantage of this window, working very fast in trying to fill these projects we must use to grow forward.

We must attract capital, provided we have the demographic bonus, we must put the money to work, until external factors hold it back. The good thing about all this is that this is the direct foreign investment which reaches private markets, and it cannot go away so easily.

In addition, this already helps to generate the infrastructure. Such is the part we can help with; all these AFORES projects and investments do not have the volatility prevailing in the markets or public assets.

Óscar Vela:

I would like to answer in terms of a very basic structure of supply and demand. We could talk about a financing shortfall if the range of projects in front of us requires a level of capital which is not in the market. We can discuss also which are the sources of funding that we have ahead of us, as well as about the current financing model which is no longer the one traditionally applied by Mexico; when only the government was practically the only actor which implemented the large infrastructure projects through its own large companies.

You may well recall Petróleos Mexicanos (PEMEX); the Federal Electricity Commission (CFE) or the Ministry of Communications and Transportation (SCT). For decades these companies were the ones that channelled all the major infrastructure projects. That model is no longer in front of us, it is no longer available.

The model we now have in front of us is a conjunction between institutional investors, notably the AFORES, but we also have an important insurance sector that must be added, individually or in conjunction with the government; through the so-called Public-Private Partnerships (APP). The latter have become a success story. Some PPPs will develop the renovation of the Mexican public hospital structure, while others will modernize the roads' structure among other potential initiatives. These are mechanisms where the government, together with the private sector, will co-invest forward.

Paul de León was right when he said the size of the projects implies that the amount of financing needed requires other public-private partnerships - national and foreign alike - and where we must invite co-investors by means of the instruments we have for channelling such resources.

I also see a very good news forward in the form of a glass almost full which, with the reforms we have ahead of us and which are barely taking off, and with a regulation allowing for dynamism - and also granting room for this public-private interaction - I believe we will be able to close this gap.

In each sector where they tell us that a co-investment project can be landed to adequately channel the savings, then the gap does exist, because the projects are so vast that they require a high level of funding. Therefore, the mechanisms for achieving this is via local institutional investors, either in the form of co-investments with the government or together with other foreign institutional investors.

Alonso Díaz:

The only place where success appears before work is in the dictionary. That is, we are in the best time there has been in history, but that does not mean we are satisfied or that we are at a point where we can fulfil the responsibility our position of privilege imposes on us in the economy; and on the role we must play as investors, as administrators, as entrepreneurs, as businessmen.

I am going to name some of the things that are already hindering the development of investments. For instance, in infrastructure investments, there are three issues that are fundamental to a genuine and swift channelling onto the projects.

First, there is no projects' standardization in the sundry Secretariats, so that any manager, for instance, turns up at the Health Department and assumes they are going to build and equip a hospital. One will realize that the way in which the tender call and the bidding of such project is completely different from that of a bridge in the SCT, or that of an educational project within the Ministry of Education.

In plain English, there is no standardization, which in turn generates inefficiency. Usually the projects are not finished and – at short notice - they are put out to a tender call but lacking the rights of way. There is a job we must manage and agree better with the authorities. That certainly is already being done, but it takes some time.

Second, in addition to the foregoing, for instance the PPP regulation does foresee a specific destination of the funds received by the Secretariats and allocated to the payment of infrastructure projects. However, if it was another modality which was implemented, it arrives in the budget of the Secretariat together with what must be paid for other expenditure outlays. So, such entails the prompt payment of infrastructure projects is not necessarily generated. Therefore, when you are not sure of the payment date, there is a high risk and capital cost which must be built into these projects.

I am going to illustrate a case of real estate. In real estate, probably the most we suffer with the funds is the corruption issue. It is a local issue, not a federal one. Then, any delegation, or any municipality where you have to call on or where you want to do the work is a problem. In *venture capital* funds, for instance, whenever making an investment, the fundamental concept is that you can diversify the risk and compensate some strategies that lose with some of the ones that win.

This is something which in Mexico is still not feasible, since we do not have a specialist instrument for investment funds allowing us - in a clear and transparent way - to do that. The funds we manage are operating with a borrowed instrument, which is a working trust doing what it must do, but it is not the ideal one.

To give you an example of what happens in other countries, in Spain private capital investments are exempt from taxes, which for the AFORES may not be a relevant issue; but it is a very important factor so that we can accompany the investment of the AFORES with other investors.

All the foregoing is to ensure the projects do not all have the same risk-return profile, because with this impossibility of building a portfolio, then the investments must be arranged in such a way which minimizes the probability of a loss, even if the return profile is not the best.



Finally, as the third key issue, is the matter of *private equity* investments; one of the most important things we need to do here is to sort out the inhibition we will have on the fiscal front when moving out of the venture. The normal thing for *private equity* companies is, whenever they go to the Stock Exchange, they are bound to incur in a penalty.

Here we have a competitive disadvantage - in very important fiscal terms - whereby the businessman, the entrepreneur or the private investor, by going public has to pay a rate of 35%, unlike what happens in other countries where you do not pay or pay much less.

These barriers are issues that we must address and have to work on. One of the advantages is that they are identified, and the government is willing to consider how to sort them out and is prepared to work together with the rest of the interested parties.



CHAPTER V

PENSION FUNDS' SOCIAL RESPONSIBILITY

STUART KIRK. Slaying the three ESG dragons: inconsistency, hypocrisy and the beast of unintended consequences.

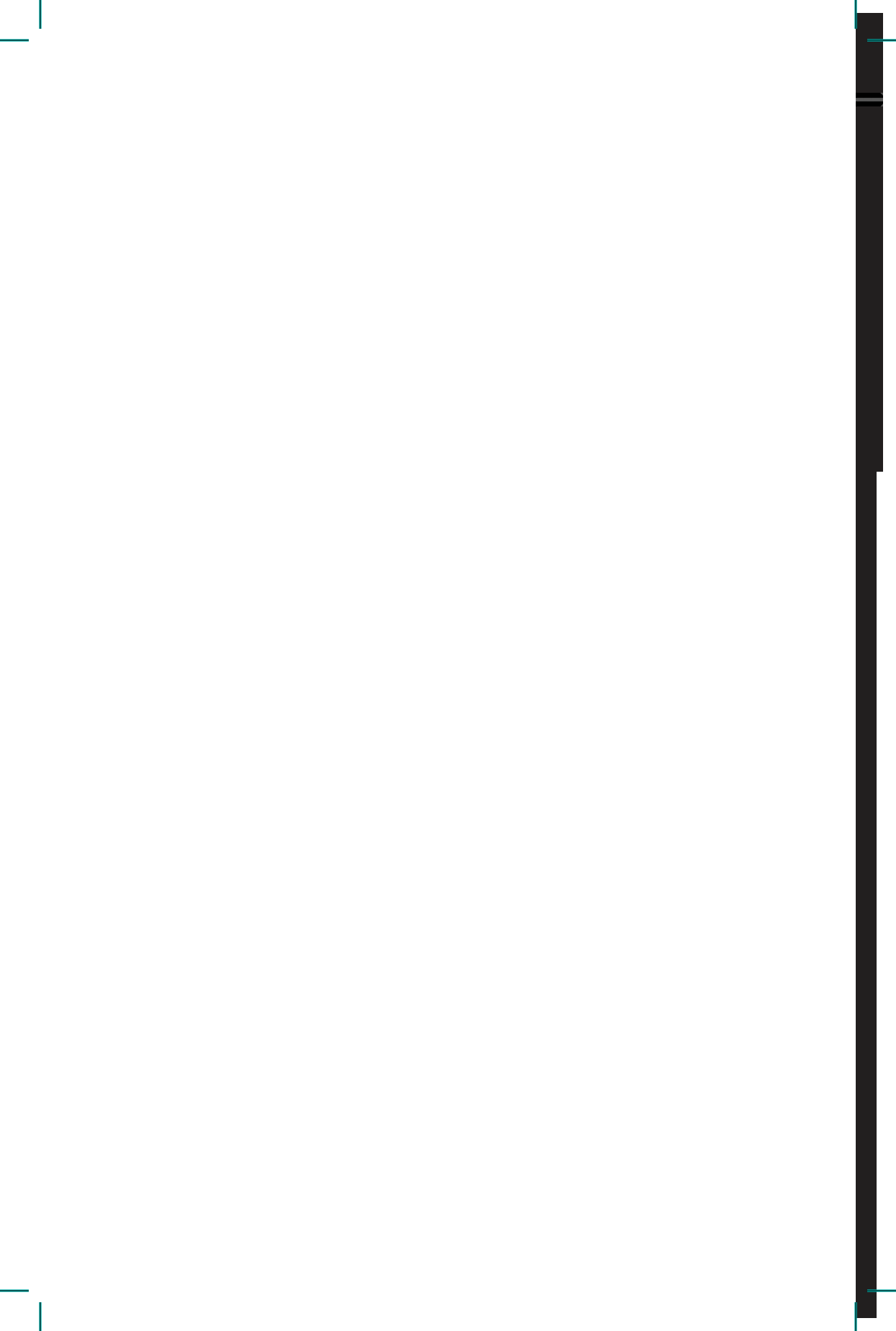
GREEN BONDS AS A BOOST TO THE MEXICAN SUSTAINABLE DEVELOPMENT.


JOSÉ-ORIOL BOSCH.

SAM GILL.

ENRIQUE SOLÓRZANO.

JUAN MANUEL VALLE.





SLAYING THE THREE ESG DRAGONS: INCONSISTENCY, HYPOCRISY AND THE BEAST OF UNINTENDED CONSEQUENCES

STUART KIRK¹

- ¹ *Stuart Kirk has a masters degree in economics from the University of Cambridge where he was president of the Union Society. Currently, he is Head of the research institute at Deutsche Asset Management. Before that he was a member of the research exco at Deutsche Bank where he ran thematic and multi-asset research and wrote flagship publications such as db140 and Konzept magazine as well as speeches and articles for senior management. Prior to re-joining the bank Stuart was a journalist, editing the Financial Times's influential Lex column. He has been a management consultant at Oliver Wyman and started his career as a portfolio manager at Deutsche Asset Management.*



Twenty years ago, I as a young portfolio manager put together a paper from my bosses saying that we should get into the Environmental, Social and Governance (ESG) criteria². I was mostly ignored and 20 years later you can hardly believe just how hope ESG now is. It is hard to me to describe the feverness of the ESG of the north hemisphere. Many people believe in the ESG and the academics who support ESG are being paid for by people who are investing in ESG. However, there is still a big criticism of the ESG, which is reflected in what I call “the three dragons” or accusations:

1. The first argument is what I call inconsistency. There are too many barriers, the logic is not very impressive, the data is poor and the arguments are weak.
2. The second big bucket is what I put in the title of hypocrisy. Who are you to tell us about the investing? The charge of hypocrisy is a big and difficult one and I think it needs to be addressed.
3. The third charge is the charge of unintended consequences.

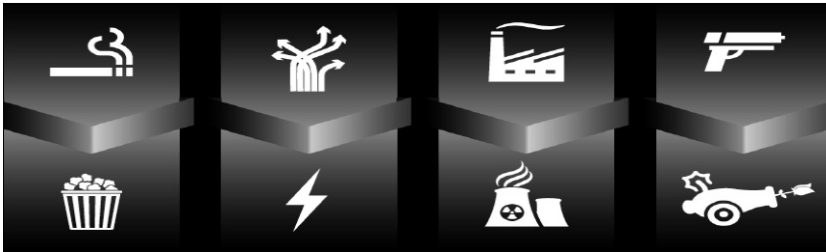
1. The accusation of inconsistency

The accusation of inconsistency is still the most common criticism of ESG and has three main angles of attack. First of all is what I call “horizontal inconsistency”, which is due to the difficulty of ranking good and bad. The second one is what I call “vertical inconsistency”, a criticism related on how you know how to stop. And the third one is what I call “temporal inconsistency”, which arises because of societal norms change over time.

- 2 *Environmental, Social And Governance (ESG) criteria is a set of standards for a company's operations that socially conscious investors use to screen investments. Environmental criteria look at how a company performs as a steward of the natural environment. Social criteria examine how a company manages relationships with its employees, suppliers, customers and the communities where it operates. Governance deals with a company's leadership, executive pay, audits, internal controls and shareholder rights.*

Supposed horizontal inconsistencies come from the fact that definitions of good and bad can differ between investors. For example, looking at Figure 1, on the left, why are we so upset by smoking a criticism when we know that fat and sugar killed 500 million people in the world last year due to type 1 diabetes which is very serious? Why do we care about diversity in the border, and why don't we care on the stress word? Stress is the single biggest cause of absentism in the workplace, but ESG pays the total. There are some people who clearly believe in nuclear, but nuclear has risks. Other people believe in coal, but they have risks. No one can agree, likewise the Gas industry firmly believes in disarmaments, others believe in a country rights to defend themselves.



FIGURE 1



SOURCE: DEUTSCHE ASSET MANAGEMENT.

Horizontal inconsistencies can also arise when analyzing a company, business line, country or even financial statements. There is a company on the Figure 2 that plant more trees than any other in the world, it has more recycling than any other firm in the world, but it also supplies 90% of the tobacco. The ESG industry has very little to say as a company. Another company in the same Figure is clearly an oil company, but it invests a billion dollar in renewing energy; it is very difficult to know if that company is good or bad. Likewise, a company in the same Figure is a Company of EB batteries but have a governance problem. That company has a toxic culture.

FIGURE 2

Amcor	Shell	
		
Uber	Samsung	Pfizer
Revenues?	Profits?	Cashflow?

SOURCE: DEUTSCHE ASSET MANAGEMENT.

These are very difficult issues for the ESG industry to resolve and I am going to tell you how to resolve them. Likewise, data is a very big problem. At the moment the ESG industry crunches data like a first-year university student. It is subsidized by revenues. Now, for those who run money the revenues are more less irrelevant. Who cares with the twenty per cent of the company's revenues are related to something bad? What about if those 20% of revenues are equal to 20% cash flows? There is no cash flow level data. There is no profit level data. How do you compare between good and bad between two companies based on a top line metric?

Vertical inconsistencies can come from long supply chains and the fact that globalization has connected everything. Where do you stop? So, we know we don't like coal mining very much and everybody agrees, what about the truck makers who take the coal away from the mine, what about the time makers that puts away the wheels on the truck, and what about the rubber maker that puts the rubber, etc. (commodity traders all the way up to the accounting).

Given the global supply changes and globalization, we need an answer to define the boundaries of what we are trying to do in sustainable investing, because at the end of the day all of us are complices. How can you exclude a coal company from the portfolio and ultimately not an accountancy firm? A temporal inconsistency is a classic. Forty years ago, my mother was sat from working from contest when she got married, she was allowed to have a hostess on a plane and marry. Today we can even believe that is possible. Even when I started running money as a treasurer manager, I could smoke in my desk, no one could believe that anymore. What we think is good and bad, changes. Who knows whether in 2027 we look back, we can't

believe people eat donnuts or drink cola or go and get a coke from a shop. Likewise, who knows what will happen down the road in terms of politics. Perhaps a lot of things we believe in terms of military and weapons and arms will change. Let me tell you that everything we try to do in terms of arms exclusion from portfolios will go out of the window. We need an answer to this as well.

2. The accusation of hypocrisy

The charge of hypocrisy is simple but powerful because it extends to every corner of the investment landscape. This is a really big issue because it is controversial and all of us can be accused of that. So, companies can look at individual investments and say why they should listen to industrial investors. You drive cars, you travel by air, you have boats, we know you like cheap energy and you can play a lot when you do not get it, you increasingly like having fun, you complain a lot when you do not get it, you like to minimize tax, you are not protected, you don't sleep at night and sell arms manufactures. These are legitimate points and we need an answer to them and it is even worse for institutional investors, because they want to take the lead on ESG issues.

3. The accusation of unintended consequences

The final dragon we need to slay is unintended consequences, that can be hard to spot or may not make an appearance for years. For example, we all believe electric cars are a very good idea, but it turns out if some of the cobalt in cathodes is possibly dug out by child labourers in the Democratic Republic of Congo and profits could benefit warlords; also, lithium batteries profits are likely supporting some companies with governance issues. We also believe that coal production is a bad thing, so we close coal mines in the developed world, and this leads to a higher demand for dirtier coal from countries such as Indonesia. Clearly, these are not intended consequences.

In addition, there is the philosophical issue of prioritizing the future over the present, which is a big topic for wealth funds. For example, everybody firmly believes that corporate long-termism is a good idea, but the long run has unintended consequences. A lack of short-term accountability can lead to profligacy, waste and over-investment. Also, companies can suffer lower asset-turn and reduced returns on equity, and countries can suffer low economic growth, falling wages, unemployment and deflation. Long-run focus causes short-term instability, which precludes objective.

So, something that starts being a good idea could often have issues that you do not think about. This is a point that gets raised by the critics of the ESG and we need to recognize that this is a criticism and have an answer to it.

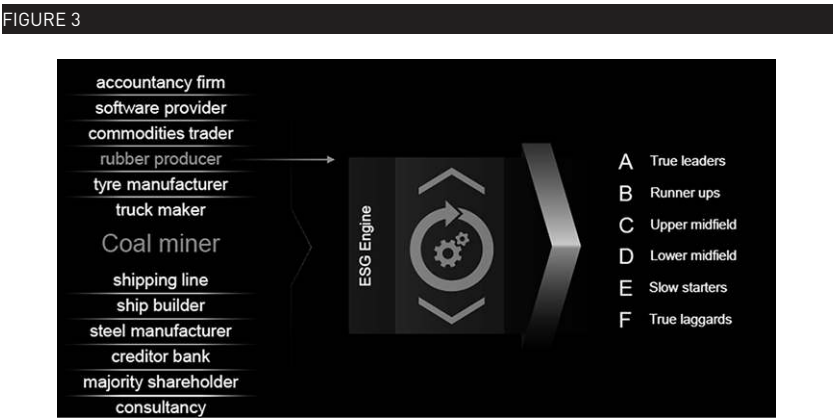
Slaying the dragons of ESG

To win over sceptic and ensure that ESG embeded into ivesting forever, we need to slay these dragons.

The first one is the horizontal inconsistency. The best weapon against this accusation is to admit to grey areas, not proselytize and invest heavily in research. You may do your effort even faster in spending money on research and collaboration. Hopefully with the time the industry will move to a point of view about they truly believe. That is what happened with climate change and tobacco. It was science at the end of the day that moved the debate.

But as well as research we can use clever tools and our brains. The problem of vertical and horizontal inconsistency can be solved via the process of aggregation and ranking, and ultimately trading. For example, take again a company that invest in planting trees and also produces tobacco or makes oil and invest in renewable energy. How do you think about companies like that? Basically, you ultimately need to rank them.

At Deutsche Asset Management, we have a very sophisticated ESG ranking engine where you put in all key variables and obtain a ranking of companies in a country (from “true leaders” to “true laggards”), according to ESG principles. In this way, the whole global supply chain as well as each individual company can be put though an ESG engine and ranked (see Figure 3). This approach takes a lot of efforts and the data needs to get better.



SOURCE: DEUTSCHE ASSET MANAGEMENT.

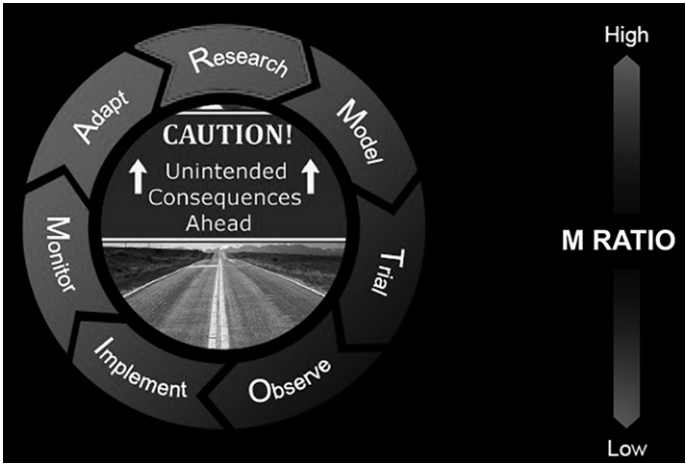
What about temporal inconsistency? Temporal inconsistencies are hard to slay. You can't forecast the future and it rarely pays to front run societal norms. You can look into the future, but if you try to change it you will be causing other problems and also very rarely pays to go against the norms of the day. So, the first thing we could do in the industry, is leave the politics to the politicians, respect democratic rules, invest in ESG related research, and the most important thing is to be flexible and alert to change and respect different views.

Now, in terms of hypocrisy there is nothing forward, except to become, as investors, best practice when it comes to ESG. That means holding management to accountability, complete transparency, holding financial metrics, voting on every single share we own (active ownership), signing up to as many affiliations and groups bodies if possible, and also putting money in an office (impact investing).

And finally, for the unintended consequences, you just have to believe in trial and error. By definition, unintended consequences are impossible to stop and trying to prevent them will have unintended consequences. Actually, trial and error is a very powerful tool that we use inside the clients and we should use more of. So, we must invest in a certain way, we can begin a small trial and we can observe what the trial does, we can implement it and we can change it if we see there is a problem taking into account the M-ratio³ (see Figure 4).

3 The M-ratio is a measure of the health of a player's chip stack as a function of the cost to play each round. In simple terms, a player can sit passively in the game, making only compulsory bets, for M laps of the dealer button before running out of chips. A high M means the player can afford to wait a high number of rounds before making a move. The concept applies primarily in tournament poker; in a cash game, a player can in principle manipulate his M at will, simply by purchasing more chips. A player with a low M must act soon or be weakened by the inability to force other players to fold with aggressive raises.

FIGURE 4



SOURCE: DEUTSCHE ASSET MANAGEMENT.

In conclusion, the three dragons of ESG can be slain with a mix of research, analysis, humility and best practice behavior (see Figure 5).

FIGURE 5

	Dragon	Weapon
Inconsistency		"Your logic is weak and confused..." Research & rankings
Hypocrisy		"Who are you to talk anyway?" Best practice
Unintended consequence		"Your do-gooding makes things worse!" M RATIO

SOURCE: DEUTSCHE ASSET MANAGEMENT.



GREEN BONDS AS A BOOST TO THE MEXICAN SUSTAINABLE DEVELOPMENT

JOSÉ-ORIOL BOSCH.

SAM GILL.

ENRIQUE SOLÓRZANO.

JUAN MANUEL VALLE.

Moderator: José-Oriol Bosch

José-Oriol Bosch holds a BA in Administration and Finances awarded to him by the Universidad Panamericana (UP). Since 1 January 2015 he has performed as Director General of Grupo Bolsa Mexicana de Valores (BMV). His experience track record extends for more than 30 years in the financial markets, starting his professional career at Inverlat Casa de Bolsa and later at Citibank Mexico. Since 1992, when he joined J.P. Morgan, he has served in sundry positions in New York and Mexico, until his appointment to the BMV. His noteworthy positions held range from Managing Director of J.P. Morgan Chase and Co. (USA); Chairman and CEO of J.P. Morgan Casa de Bolsa to Deputy General Manager of Banco J.P. Morgan (Mexico).

Panelists:

Enrique Solórzano

Enrique Solórzano holds a degree in Economics granted to him by the Technological Institute of Mexico (ITAM). He is currently the CEO of SURA Asset Management Mexico and Co-Chairman of the Advisory Committee on Climate Finance. His track record in the Mexican financial sector exceeds 25 years. Since 2013, Solórzano has been the Managing Director of Afore SURA; with his previous position – since 2007 – being the Investment Director of Afore SURA (previously known as the ING retirement fund in Mexico); that is the acquisition date of the fund by the Santander retirement entity. Solórzano began his professional career at BBV-Probursa in 1985. Prior to his arrival at Afore SURA, he was the director of the retirement fund investment entity of Santander until it was sold to ING Group in 2007.

Juan Manuel Valle

Juan Manuel Valle is a graduate in Economics from the Autonomous Technological Institute of Mexico (ITAM). He is also a Master in Public Policies and Economics from the School of Public Policies of Princeton University. Mr. Valle is also the General Director of AFORE

21Norte and Co-Chairman of the Advisory Committee on Climate Finance. Last but not least, he has been the Mexican representative and member of several international organizations such as the Global Association for Financial Inclusion of the G20, as well as a member of the Working Group on Protection of Users of Financial Services of the Organization for Economic Cooperation and Development (OECD).

Sam Gill

After starting his career at Google, Mr. Gill led the Environmental Investment Organization (EIO), a non-profit research organization that ranks the world's largest companies for their greenhouse gas emissions and released information. In 2014 he co-founded ET Index Research to carry out at a commercial level the work of EIO. Sam is the author of Environmental Tracking 3.0 and is a member of the Board of Directors of a human rights NGO. He is also mentor to several other young companies in the climate change sector.

José-Oriol Bosch:

I would like first to start by commenting on what is the role of the Mexican Stock Exchange (BMV) and what has to do with this issue.

As you know, the function of a Stock Exchange is to facilitate the transactions of resources between supply and demand, ensuring such exchange does takes place and, to such effect, the BMV must have in place the relevant regulations, infrastructure, technology and also, at the proper time, create the suitable products. As regards the latter function, the BMV has also been very active in recent years.

The AFORES are very familiar with the Certificates of Development Capital (CKDs) for instance, which were created in 2009. We left behind a local and global financial crisis and with resources in short supply for financing new projects and companies that are yet to secure their relevant size or *track record*; but at the time there were resources in the AFORES whose only need was to create a product. Hence, they created the CKDs, which has been very successful in recent years.

Then the Infrastructure and Real Estate Trusts (FIBRAS) were created, and some six new products are now in place since the past year and a half. Within the definition of Equity Instruments, the FIBRA E was created, thereafter the Certificate of Investment Projects (CERPI) was set up and the last innovation was the *Special Purpose Acquisition Company* (SPAC).

As regards the debt angle, there were three new products, which were the Sustainable, Green and the Social Bonds. The Sustainable Bonus encompasses the other two. The Green Bonds are basically aimed at financing clean energy and/or sustainability projects alike, whereas the Social Bonds are for financing some projects aimed at reducing poverty and increasing employment, welfare and health.

As we speak, 21 billion MXN have already been placed in these types of bonds (in Green Bonds the figure was 3 billion, in Social Bonds the allocation was another 4 billion and 14 billion went to Sustainable Bonds).

The foregoing figures are nothing compared to what has been allocated elsewhere in the world. To give you an idea, the Green Bonds throughout the world since 2007 (the year in which the first bond of this type was placed) until 2017 their total amount exceeds US\$ 100 billion, but during the first year (that is 10 years ago), the amount was US\$ 2 billion.

Not only products are created by BMV, but companies too. In 2014, the Stock Exchange created a company called Mexico CO2 with the support of the Ministry of

Environment and Natural Resources (SEMARNAT) and the British Embassy. This company has basically been advocating/promoting all these types of projects.

Also, in 2011 the sustainable IPC was created and in 2016 so was the Advisory Council on Climate Finance, of which various financial associations are members, including AMAFORE, the Multilateral Commercial Development Bank, the Rating Agencies and the Issuers listed within the Stock Exchange.

In mid-2017 an Investors' Declaration was also signed for promoting all types of green investments, and was subscribed by more than 70 institutional investors as well as by some associations, including AMAFORE. Its focus has been basically to consider how the climate change and its well-known associated environmental problems can be suitably supported.

When these topics are discussed, the effects of greenhouse effect gases are usually singled out, and such are usually referred to all chemical compounds in a gaseous state, such as carbon dioxide (CO₂) which accumulates in the Earth's atmosphere and absorbs all the infrared radiation that comes from the sun. Carbon dioxide then causes a warming effect and its consequent higher temperatures and other associate effects: droughts, melting glaciers, floods and all the drastic changes we are witnessing all too often.

Unfortunately the trend, as described above, has not changed with its effects going from bad to worse and, as a result, several initiatives are being implemented at a global and local level. One of them was the Paris Agreement signed two years ago, and where the Mexican government has committed itself to contributing with very important efforts.

Also in the case of the AFORES, apart from participating in all the roles I have mentioned, there is also an interest in ensuring a drop in the CO₂ level entailed in their current investment portfolios. Precisely, to talk about this rather complex topic, we have invited Mr. Sam Gill, who has all the relevant experience in Europe and Latin America, and where Mexico has taken a leadership position.

Sam will be telling us about his analysis of a portfolio of a pension fund – chiefly on its average CO₂ content and how it could be decarbonised – together with the impact and risks it has had in environmental terms and if, at any time, there could be some changes in the investment policies implying the setting of maximum limits for any investment drive in "green companies".

Sam Gill:

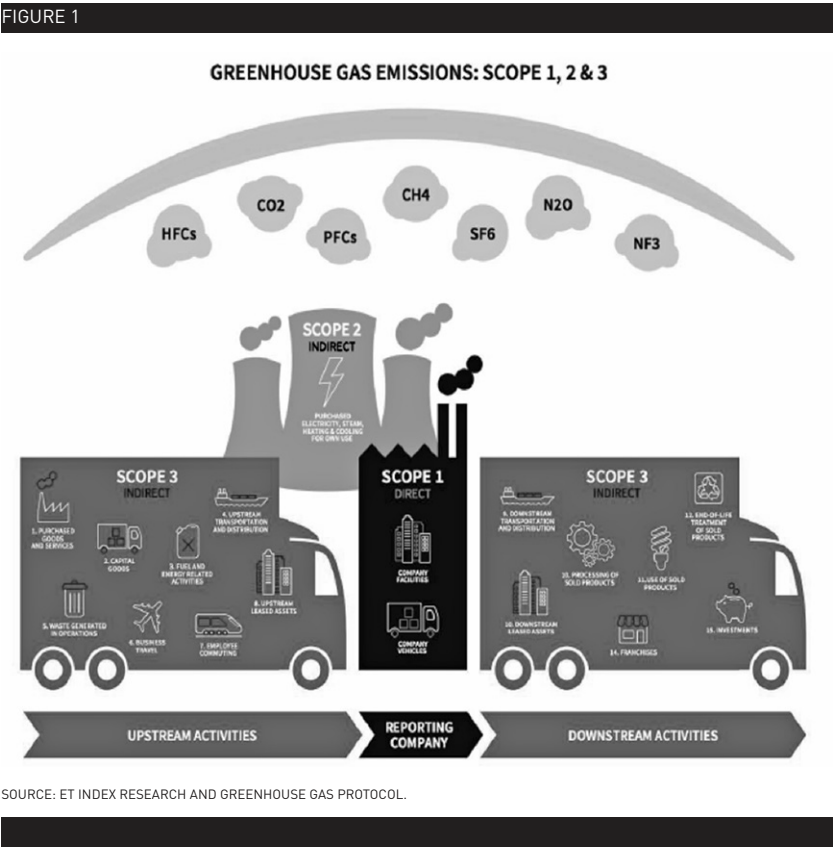
Decarbonization for a better market performance

I am from a company, ET Index Research, where we help ambassadors identify, understand and manage carbon and climate related risks.

An historic agreement to combat climate change and unleash actions and investment towards a low carbon, resilient and sustainable future was agreed by 195 nations in Paris, in December 2015. The universal agreement's main aim is to keep a global temperature rise this century well below 2 degrees Celsius and to drive efforts to limit the temperature increase even further to 1.5 degrees Celsius above pre-industrial levels. Additionally, the agreement aims to strengthen the ability to deal with the impacts of climate change. That means that the world is on track to reduce carbon emissions, by 50% by the year 2050 and by 100% by the year 2100. That is basically the projection we are now on.

Within the world of common accounting, we have nationally agreed a framework which divides greenhouse gas emissions. There are seven different greenhouse gases. So, for example, methane is a very important gas and effectively when you are accounting for a Company, you divide it in 3 categories called "Scopes" (based on guidance from the Greenhouse Gas Protocol), depending on the company's level of control over the source activities. The three scopes of emissions are defined as:

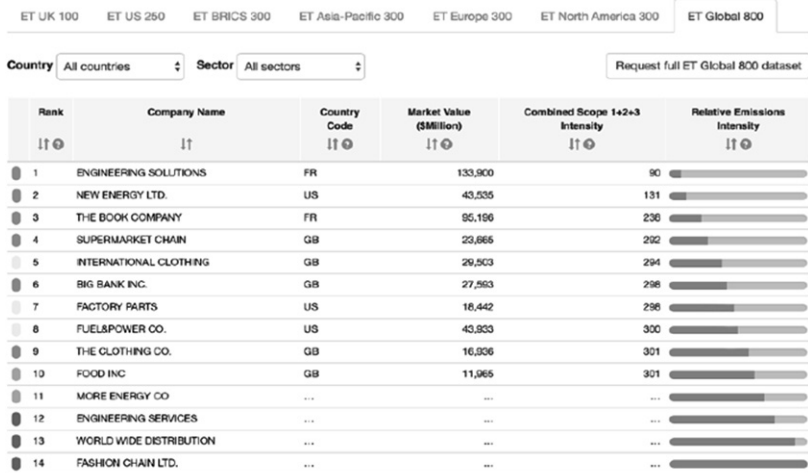
- Scope 1: direct emissions from sources owned or controlled by the company and includes emissions from mobile combustion, stationary combustion, process emissions, and fugitive emissions;
- Scope 2: indirect emissions from purchased electricity and purchased co-generation for heating or chilled water; and
- Scope 3: indirect emissions from all other sources that occur as result of company operations but occur from sources not owned or controlled by the company. (see Figure 1).



What we find across the world systematically is that, on average, 75% of an industry sector's carbon footprint is attributed to Scope 3 sources (25% can be attributed to Scope 1 and 2). So, if you really want to have a complete panorama of the overall exposure, it is very important to think about of the supply chain as well.

ET Index Research produces a yearly public ranking of the largest companies, according to their combined intensity of the three scopes of emissions (see Figure 2).

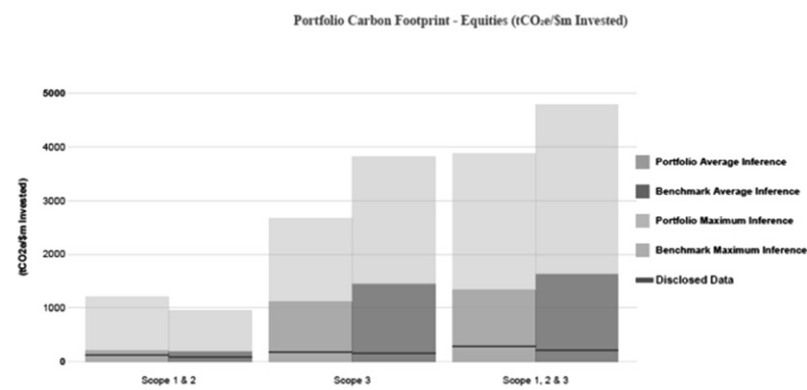
FIGURE 2



SOURCE: ET INDEX RESEARCH.

When we talk about intensity, we think about the total tons of CO2 divided by million dollars of revenue, so we can normalize the data for the different company sizes. Figure 3 shows the portfolio carbon footprint for equities, that we did for AMAFORE, just taken from an example to the average portfolio and some Mexican and international companies. We are comparing to the left-hand column (the AMAFORE portfolio) with the right-hand column (the benchmark). The benchmark is the global accuracy of the portfolio, so the Figure 3 is showing the energy measures and the intensity. When you combine these measures together, the accuracy for the portfolio is lower than the benchmark. We find that equities portfolio is more intensive in carbon emissions in scope 1 + 2, and it has a lower carbon intensity for scope 3.

FIGURE 3



SOURCE: ET INDEX RESEARCH.

The world’s government has committed to have no more than 2 degrees Celsius of temperature and unfortunately if we go above 2 degrees then we make feedbacks that actually leads to a measure of high temperatures, which is not very good for anyone, including the economy. Imagine that the AMAFORE portfolio is actually represented by the global economy and we translate that into a total budget, so we can work out the total amount of tonnes of CO2 and will represent that the economy looks like the AMAFORE portfolio. The portfolio must be lower than the benchmarks, and in terms of science we are achieving a value of 2 degrees and we can see that portfolio has a lot of rooms for improvement (see Figure 4).

How do we help investors to decarbonize and to reach the limit of global warming in 2° C. We essentially create low carbon indexes, linked to the ET Carbon Ranking. Just to give you an example on when we tilt the portfolio so away from the highest companies to walls the more carbon efficient. We are still including all the companies in the portfolio. So, this is not about excluding companies, it is really on re-allocating capital based on companies position in a public transparent common market. We find that actually the more carbon you take out the more performance we are observing. What happens if you want to achieve a reduction in carbon intensity of more than 70%? Figure 5 shows the example of the Global 1600 Low Carbon Transition Index, which since 2012 has obtained a yearly return of 1.44% (versus the MSCI World), with a reduction of 72% in carbon emissions.

FIGURE 4

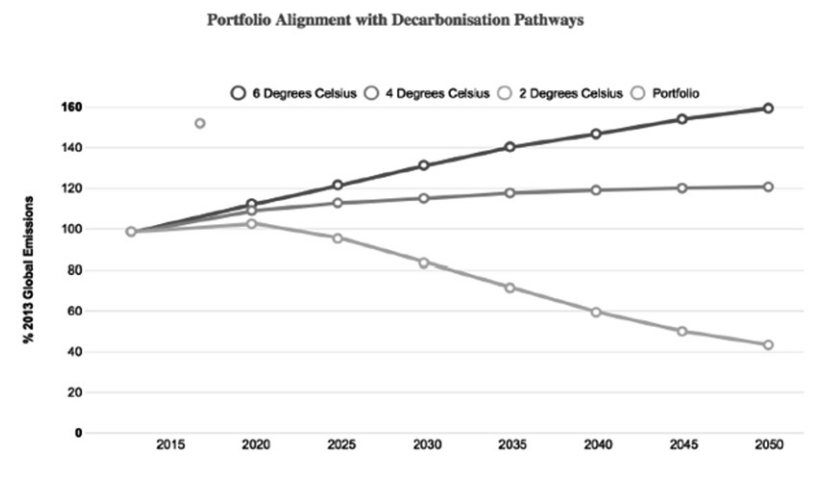
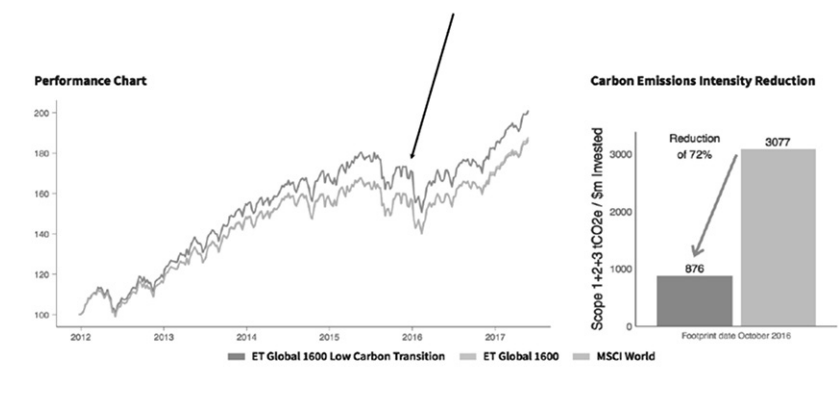


FIGURE 5



José-Oriol Bosch:

I think it would be a good idea to listen now to the AFORES' point of view on this analysis.

Enrique Solórzano:

As just stated very well by Mr. Bosch and Sam, this is an analysis which shows that investment portfolios can do something to cooperate in curbing down the emission of greenhouse effect gases; chiefly by means of investment deploys. The analysis that we have just been presented with is unprecedented, and entails two extraordinary conclusions for me. One is the fact that our effort to try and influence a change in the attitudes of the companies in which we invest can become measurable; there are techniques to quantify what is the carbon footprint of each company and what efforts they can make to reduce it over time.

The fact that we are important investors, and together with all the members of the Climate Finance Advisory Board, gives us the power to apply pressure on the companies where we invest; for them to improve their carbon footprint over time and implement also the proper efforts for reducing these emissions.

There are techniques that would help us to direct our portfolio towards those companies which perform better than others, not only in Mexico but globally. 50% of the companies where we invest the AFORES, either in *equity* or in corporate bonds, have coverage of the company represented by Sam, whereas the other 50% does not have coverage and, therefore, do not have detailed information as to what are their plan for reducing emissions.

Therefore we could, through our investment departments, induce the Mexican companies to hire these services and make public whatever efforts they are implementing towards reducing their emissions. In the medium to long term, we would have much better data about where to direct our investments during such medium to long term.

The second discovery which strikes me as tremendously important is that by doing this, we generate a *performance*. As demonstrated by Sam, who has done a *back testing* of the portfolio investments exposed to companies which are showing a more beneficial impact on the environment; this investment generates higher yields than portfolios which are passively distributed. That is very good news because it means that, by implementing such drive, brings along a beneficial effect to the emissions' reduction plan.

I think that Mr. Sam Gill's presentation is a novelty one, which compels to voice a couple of questions. I saw in a presentation slide that the AFORES are located well above an investment pattern leading us towards an emission reduction trajectory, such as the one agreed in the Paris Agreement. Therefore, there is a lot of space for improving our investments aimed at causing such change. Am I properly understanding the result of the analysis and what would be the couple of recommendations to try to move in that direction?

Juan Manuel Valle:

I agree with what Mr. Solórzano has stated, indeed the presentation and the information contained herein is a novelty and, in the presentation, there are some relevant topics related to such novelty element. The information is already starting to be there, with more and more companies which, for a number of reasons, are arranging for such information to become available. The shareholders, the companies' owners and the investors alike are the ones who feel this is something they have to do; so this is something which can make a difference in opening or closing doors to them.

In some countries this process is much more advanced than in others, but the undeniable factor is that it is the predominant trend as to where we must be going. The most important evidence in the whole exercise is that this type of investment does pay off; chiefly because in the long term they are projects that will face fewer problems. Further to the point, they are projects that will show a better result at the end of their useful life. I believe that both the companies already registered with the relevant Stock Exchanges and their investors have a central role to play. The fact that information is not necessarily available today, does not imply that we cannot apply pressure for it to become available as quickly as possible.

If the Mexican pension fund entities start demanding this kind of information without defining how we are going to be controlling what we are doing; what we will be doing is sending a message to the market. Indeed, we are not going to merely ask for such information, we are going to demand it because we will be interested in using it as a suitable decision-making tool.

As Sam said, if we incorporate this information into our decision-making process, those entities with a very good *performance* or evolution in their emissions issues, will expect to have better access to resources. In doing so, they will continue with their projects and making investments whereas those that do not, should expect a fraction of their funding to be cut.

This is not going to happen overnight, we will not have the information from one

day to the next, but we must work in that direction. What Mr. Bosch and Enrique have said goes in that direction and we are already doing so. Furthermore, it has already started to work and already there is an instance which is evolving in a coordinated approach with all the key operators already active within the financial sector.

Many of the participant companies and associations are committed to continue with these efforts and I believe, on our side, that we will become their promoters, and our work endeavours will become a common feature. In such process we will have to learn about what is being done in other countries – get to know how to secure the suitable companies which will march alongside us – that is, companies with which we will be doing this and using the funds we are working with nowadays.

Part of what we have asked them is to assist in transferring onto us such *know-how* and show us how they undertake the evaluation in the countries in which they are investing; together with details of what kind of elements they incorporate in their analytical work; while considering the environmental, social and governance areas alike. Such request is crucial since these are aspects which integrate the principles of responsibility when it comes to investment issues.

I think it is an important step and I readily admit here the work and role performed by the UK government and its interest in working with Mexico and the Stock Exchange in sundry initiatives; which they have brought forward in a greater way. This factor will help us to take and use a part of those elements.

José-Oriol Bosch:

Enrique commented beforehand that we can measure, get an analysis and we could apply pressure onto the company for this type of project, but the question that comes up is concerned with the investor: for instance what would we be lacking? Other further relevant questions are: Would there be a lack of education preventing the investor from distinguishing one pension fund from another, and where will the carbon impact strike with a greater or less strength? Could the investor then adopt a decision? Is the investor ready or not to take such a step?

Juan Manuel Valle:

We still have to address the issue of the investors getting to know their own AFORE investments are placed in everything. That is a very important challenge. Undoubtedly, the issue of investors becoming aware and being able to differentiate/distinguish these investments, will take much longer. I believe that in the immediate term there is no doubt we have a fiduciary responsibility.

If in 40 years the administration entity will have some explaining to do, as to why a project which in theory, would be generating steady inflows - but due to some issues such as these – becomes subject to new regulations or a new tax. It follows that part of the value will be lost since it was not estimated initially, and we must be ready to respond.

The first thing we have to be absolutely certain about is that the all the decision-takers within the administrators have it perfectly clear. That is, our shareholders and our decision-making entities are the ones which have this perfectly understood, so that we can factor in our decision-making process; all this so as to give a preference or demand certain conditions to the investments concerned.

If one of the administrators comes out today to demand certain conditions or specific information, there is a risk that nobody will comply with what such administration entity is asking for; and which the other similar concerns are not demanding. This is a situation where you must decide what to do, if either you back out and decide not to continue pushing this or keep moving forward.

I think the first and the immediate thing to keep an eye on is the internal process. That is, I believe we have to be perfectly convinced and have all the elements handy and ready to use, prior to start sharing this information.

Enrique Solórzano:

Of course, I share 100% of what Juan Manuel says, and let me tell you that I think everyone here is certain this is not an individual effort of any administrator or of any company, but a collective effort we all have to undertake. It gives me great pleasure to state that in the Advisory Council on Climate Finance is represented here, with 95% or 100% of all Mexican investors. I am also happy to say that there is an enormous enthusiasm; with more and more information flowing in and much more interest in implementing this drive.

We invite everyone to participate in the Council as I believe there are very good ideas and good initiatives which are going to be adopted. Individually I think that we must first educate ourselves, since we all have a huge deficit in knowing what to do as investors promoting this type of investment and above all why. It pays for the sustainability of all our portfolios and generates better yields. I have thought a lot when I see two completely opposite companies, a company generating coal-based energy and an active wind power company.

Nowadays, there is already a differentiation between the bonds of a coal company and a wind company, albeit not a substantial one. The difference between the *spreads*

is quite small but I think that, given time, this will ensure its differentiation will be much larger. It is not going to be the case of clean companies having a lower *spread* than the market, but there is going to be a huge difference between the truly clean ones and those that are not so. This is logical because an investment in a company which is not sustainable, and bound to be heavily taxed because of its polluting effect, will not be able to pay its debts.

In our large portfolio, this it is a bit more difficult. I think the information that Sam brings us is very valuable. We are creating a specialist team to understand these issues, we are trying to create portfolios committed to reduce carbon and we are tremendously in need of support from people who know the subject.

Fortunately, there is also the good news that there are a lot of international and national organizations which do undertake advisory work encompassing this kind of issues. Furthermore, in coming years I believe we will be moving forward very quickly towards improving the investment in our portfolios and turn them into a more responsible status.

José-Oriol Bosch:

Going back to the comment made by Juan Manuel regarding the educational issue and the main challenge it probably is at a country level, and as to why there are no more investors; there are many factors. One of the main factors is the very limited level of financial education. If we see it in the banking scene, the reason would probably be the same; the widespread level of banking coverage is explained by such lack of education. Now, if there is no such education, not even the investors will be able to differentiate it.

Speaking of green, sustainable and social bonds, the investor does not know or will not differentiate an AFORE which participates in this type of bonds from another entity of this kind. If this is so, then why would the investor buy this bond? Should not there be a prize for the green issuer vis-à-vis the traditional issuer?

Juan Manuel Valle:

I do believe that over time there should be a prize for the green issuer vis-à-vis the traditional issuer. That will happen when we have more information, since nowadays we really know that there are many techniques to calculate what is the amount of CO2 emissions for an income of US\$ 1 million for each company. The market with that kind of information can then begin to discriminate.

If I have an issue with a *benchmark* with a ranking of 22,000 tonnes of CO2 per

million dollars of income, and I have another one which has 90,000 tonnes of CO₂ (like the company ranked s number 1 in Sam's presentation); surely you will start thinking that the one with 22,000 is not sustainable. Probably if you analyse such company further in depth, you see it with such criterium, you will discover that at some point in time the company may probably cease to exist and, therefore, your money will be at risk.

With only such data, the market is going to realize that it has to invest in the venture more closely to the 90,000 tons of CO₂ than the 22,000 equivalent per million invested.

Then it is clear, what is missing is information. I believe the great initiative of this analytical survey is to invite all AFORES, investment companies and insurers alike, to pressure companies into making a disclosure of their carbon footprint; so that we all have a thorough knowledge of where each one is and which is the *benchmark* of the Mexican market.

In this way all companies will try to be on a better standing than the *benchmark* and then, little by little too, we will be directing our investments towards where we consider this investment to be the most sustainable over time and will offer adjusted returns for such risk better than others.

In short, we must press for more information about this from the companies and analyse our portfolios while having a plan in place for converging onto better portfolios; so they offer us better returns over time.

Enrique Solórzano:

I fully agree, the awareness of a project's prospects in the medium and long term will force us to see with a different perspective the projects which maybe today or a year ago we would have seen in a very similar way. We will see them not so similar and that will end up in a difference in the prize or its depreciation; and not in a greater demand for one of the bonds, chiefly because in the end it will reward those companies giving or doing things well or better and this is bound to be reflected in the performance.

The companies that do things better will pay more in the end, because they will have a long-term sustainability about which, beforehand, there was no information. The *back testing* that can be done today allows us to infer such kind of results.

Juan Manuel Valle:

It is important to mention that the Single Financial Circular (better known as CUF for its Spanish acronym), which is about to be published, already includes some commitments/obligations and recommendations for the AFORES to conduct an ESG analysis and start to contemplate this factor within their investments. I celebrate it, I think it is something very important and which will evolve over time. We have to improve on this as much as we can.

José-Oriol Bosch:

Taking advantage of what is going to be published, there should be some kind of incentive. What would be the incentive they think would be worth putting in place? Sam, maybe you can tell us about the experience in the United Kingdom or other countries with regards to tax incentives used for encouraging this type of investment?

Enrique Solórzano:

I fully agree with Sam and I am against regulatory issues. In general, I do believe the information and the investors' decision on this case should be more than enough. Somehow, the incentives are already there, without them being a fiscal incentive. First and foremost, if they believe or not that the institutions are going to stop investing or otherwise, it is a great incentive.

The second incentive is that in the end the price of fuels becomes increasingly taxed over time, and the cost of having an intensive production of fossil fuels is not attractive. The decisions that many companies have taken for investing in wind farms or solar projects have to do with the certainty of supply; but also have to do with the fact that the cost of renewable energy today does turn investments in them into a very sensible and viable proposition.

José-Oriol Bosch:

Going now back to the Paris Agreement, as you may recall it was in mid-2017 when Trump warned the United States was opting out of the agreement due to its negative impact on the United States economy. Do you see any change in this case which could be due to this reason and that might be deemed as a probable short-term stance, against a challenge that we have had to endure already and for a very long term? Sam, please tell me what was the reaction to this announcement?

Juan Manuel Valle:

I think the message from the United States' companies and investors has been quite clear. I see no one running away from the subject, I see everyone looking for ways and means of how they can, individually, meet expectations and that should be enough. In the end, within a market like the United States, if the decisions adopted by companies and investors are in the direction of what they believe is right - and even if the US government may not agree - the latter will hardly stand to win in such discussion.

The Trump government cannot do anything if confronted by the decision of the companies and investors alike. If the latter two are convinced and committed, they will follow their direction in reducing emissions, while demanding their investments do comply with certain requirements and standards.

As regards the Mexico case, the position is almost identical. I do not think it will take much more than the effort we are undertaking hitherto from the Climate Finance Advisory Council; coupled together with the information and transparency issues aimed at reaching certain objectives.

José-Oriol Bosch:

If you have any final comments, I invite you to express them.

Enrique Solórzano:

I simply want to invite all those who are investors here to join the Consultative Council drive. Seriously, I am very excited about the existing interest and the number of people who show up at these meetings, especially younger people than us, and I believe they are going to do very interesting things.

Regarding the issue of incentives, I probably agree with what Juan Manuel says, but I think that in some countries the combination has worked. When one of us introduces tax incentives, then the problem is where the funding will be coming from. Eventually it has been discovered that the funding comes from highly polluting companies which are financing the less polluting ones.

The generation of the carbon-based bond market has not worked; therefore, it seems the governments must intervene to discourage some and encourage others. In general, the overall society goes along one way only, which is to try and reduce the emission of greenhouse effect gases.

José-Oriol Bosch:

If someone wants to participate in the Advisory Council, what should be done?
Whom should he/she approach and what does it imply?

Enrique Solórzano:

Each of the associations represented by AFORES, ranging from investment companies, insurance companies, banks and the financial sector have a representative. It is through these associations, than anyone interested in participating in this project can come forward. We have three or four working groups in which all those who have knowledge and enthusiasm are very welcome.

We are aware also that work groups are being set up by companies, where there is also a lot of work to be done. Perhaps in the future, we must bring together the two lines of work, the investors and the issuers or companies, so they can work together in this joint effort.

José-Oriol Bosch:

Many thanks to you all.



CHAPTER VI

HOW AND WHERE DOES AN EXTERNAL MANAGER ADD VALUE?

MARIANO RABADÁN.
GUSTAVO LOZANO.
DAN WALDRON.
CARLOS COSTALES.

Moderator: Mariano Rabadán

Mr. Mariano Rabadán is the Sales Representative in Latin America of Allfunds Bank.

Panelists:

Gustavo Lozano

Gustavo Lozano is the Country Manager of Pioneer Global Investments Limited, a company of the Amundi Group. His experience and track record in the financial market extends for 27 years to date. He spent 19 years in the market place and eight years in sales, covering a wide variety of assets. Before joining the company, he was at J.P. Morgan, Société Générale, ING Bank, Bank of America and Merrill Lynch. Mr. Lozano has an extensive record in currencies, fixed income, derivatives, alternative investment sales and, particularly, mandates.

Dan Waldron

Dan Waldron is Senior Vice President for ETF Strategies at First Trust. His experience in the industry entails over 24 years altogether. He has worked extensively in the development of investment products and their marketing. Prior to joining First Trust, he performed as Executive Director at Scudder Investments, a company of Deutsche Asset Management, where he was responsible for product research, development and management of open-end, closed-end, offshore and variable insurance funds. He has also held senior positions at Van Kampen Investments, a company of Morgan Stanley Investment Management, and at Fidelity Capital Markets.

Carlos Costales

Carlos Costales holds a degree in Business Studies from the Complutense University of Madrid and an MBA awarded by the Instituto de Empresa (IE). He is currently responsible for Iberia and Latin America at GAM, which he joined in May 2010. Previously, and for

seven (7) years, he worked at Morgan Stanley Iberia as Vice President for 7 years, first in Private Banking and then in the Asset Management Department. In 2003 he left the company to set up Atlas Capital where he was a partner, a boutique company specialized in M & A, Private Banking and Asset Management. Thereafter, in 2007, he joined the English group Scottish Widows Investment Partnership to direct and open its Branch in Madrid and, more specifically, take over the responsibility of their Iberia business. He previously spent seven years at Morgan Stanley, where he performed as its Vice President.

Mariano Rabadán:

I would like to start by inviting Carlos Costales to put forward his comments and tell us about GAM's experience in Latin America and in Mexico in particular; mainly by stressing how GAM has entered into investment funds area and what have they found in this market?

Carlos Costales:

Our experience throughout the Latin American countries has been very interesting and beneficial, to such an extent GAM is nowadays the largest asset management entity within the institutional and, chiefly, pension funds. Our international experience tells us that investment funds, such as ETFs and the mandates which are currently being granted, are totally complementary and each adds value.

In countries with the largest worldwide pension funds (for instance, Australia), this combination exists in the sense that many mandates are issued and, at the same time, there are investments in ETFs or investment funds; customarily based in Luxembourg and Ireland. In the case of Mexico our experience is slightly different since, from the viewpoint of private investors, everyone here is institutional and it is important to mention there are sundry supervisory entities/watchdogs keeping an eye on the investment funds.

With regards to institutional funds, the impression we have when talking to the sundry players is that most of them are inclined to favour investments in the relevant investment funds, but we have noticed that in some assets - such as ETFs - there are certain advantages in the sense of their greater transparency. That is one of the first messages I wish to leave: the investment funds and ETFs which currently exist are based in both Luxembourg and Ireland and can provide the essential confidence to institutional investors and regulators alike.

Currently it is arranged via the signing of clauses or confidentiality agreements - also known by their English acronym: NDA (Non-Disclosure Agreement) - usually on a regular monthly basis and not on a weekly basis as it is done in Mexico. The reason for not doing it on a weekly basis is due to the fact there are not so many movements being registered in the portfolios of investment fund vehicles; and therefore they have not been necessary so far.

From another viewpoint, another factor we have found in Mexico is the investors' reluctance, which may be triggered by the proximity of Mexico to the United States at this time; and following the 2008 financial crisis in Mexico. You may recall then there many bad *practices* or there were those famous hedge funds which did not

deliver the expected results; all which generated a deep financial and economic crisis in Europe.

Furthermore, the entry into force of the MIFID II Directive in January 2018, has generated a turnaround in all financial institutions, affecting the definition of what is an institutional, professional or private investor; all this with the aim of protecting them.

As of 1 January 2018 all funds based in Luxembourg or Dublin are subject to further regulations. ETFs are very valid assets which adapt to certain markets. Ourselves, we are proponents of their active management, and I personally believe that in the medium and long term it is a suitable form of management.

The AFORES are to decide who makes a consistent management. Of course there is a lot of talking focused on passive management in certain markets, but we think that, clearly, we must go for an active management that it is a complement to the passive one, since they do not exclude each other. My same reasoning applies to the investment mandates.

What can we provide as a management entity? Mutual funds provide flexibility when it comes to investing, that is, if after a period of inconsistency, the management team leaves, it works out very easy to change the manager, the management team altogether and/or the management entity. So there are many advantages which I think have to be complementary, and this is the job we are undertaking lately; that is to convey the benefits of investment funds. All this because the experience with them is positive while the regulator performs its investment control procedures.

Mariano Rabadán:

Now I ask Gustavo Lozano to voice his comments on the same question. However I wish you to focus on what you know best, the mandates.

Gustavo Lozano:

From our point of view, although the investment regime of pension funds has become more flexible, we see how the industry does not advance at the pace that should be expected; this clearly shows this is now facing several challenges which must be highlighted. We are convinced the use of instruments in international markets complements, enriches and protects the savings of workers. Thus, we are committed to a task of permeating the doctrine advocating both, the continuation of this diversification drive towards the outside world and stating the participation of asset managers at an international level will become increasingly important.



Within the challenges faced during the implementation of the investment regime in a way it complements and protects the portfolios, there are two issues to consider. First, there is the development of asset management capabilities which really contribute to the diversification of the investment portfolios. And second, is the evolution of regulations pertaining the investment regime, which we believe must be adapted dynamically and innovatively. We all know that the evolution speed of the market is far greater than what the authority usually can manage.

The first factor I quoted is clearly more in the hands of the pension administrators, while the second is a subject the regulator must address and be responsible for. The ability of the latter to introduce measures and regulations which assist with a continued evolution of the market and, more crucially, generate also the suitable protection conditions of the country's domestic savings.

Nowadays we can see how diversification is not only desirable but necessary for the protection of savings. Indeed, diversification can only be achieved through investment in other regions and assets. This is where we believe, as asset managers, that we will bring an added value onto the system.

I also believe that there are several issues that have to be considered if we are to continue investing abroad. On the one hand, passive strategies give the investor a swift entry and offer a range of investment options, ranging from the general to the most particular (such as sub-indexes, commodities and assets in particular); and this has clearly been basic for being able to implement a construction block strategy within the Mexican portfolios.

On the other hand, there are the mandates, which are clearly becoming tailored suits, adapting to local regulations and following the investment guidelines that each of the AFORES does transmit to us. These are increasingly strategic decisions, more permanent and comprehensive part of the long-term portfolios referred to the pension administration entities.

In terms of international diversification, we will consider an investment drive in short-term indexed funds and in active management funds through listings in Mexico. This is an important step, and the truth of things is that we do not see these investment alternatives as mutually exclusive. We believe the AFORES and other institutional clients can clearly integrate both the use of ETFs as mandates and funds listed in Mexico, in such a way they complement their international diversification profile.

Clearly there are additional challenges ahead. From my point of view, the integration of derivatives in the subject of international diversification is very important.

Derivatives are allowed, but we have to find a way to regulate them within the mandates; in such a way it allows us to venture into new assets.

Today, as everyone knows, we are managing to fund investment mandates in stock assets. However, it would be very important to achieve investments in currency coverage, in merchandise/commodities, in interest rates and in other things we really cannot tackle without derivatives.

It follows, therefore, that achieving a sound regulation, monitoring and control of derivatives in mandates is very important if we are able to continue evolving; so that the international management of diversification finds new business and coverage veins.

And last but not least, I believe an international diversification will have to face the fact that we are still very limited in the percentage that the AFORES can invest in international assets. As we know, there are important changes going ahead and leading to the fact that *Target Date Funds* (TDFs), for instance, are bound to cause a greater demand for stock assets. We must ensure that international assets have a greater capacity to buy these instruments because, otherwise, we will be limited and, worse still, facing a bubble-creation risk.

As I stated beforehand, from my perspective, I believe the existence of funds, ETFs and mandates, caters for different needs; it gives access to international markets with different natures and degrees of evolution to sundry or different clients. I think that in the end the key issue is to supply the country's internal savings with an international coverage instrument.

Mariano Rabadán:

Dan Waldron, could you please tell us about your experience, specially focused in ETFs? What was the barrier you found? What is the position of the portfolio management entity?

Dan Waldron:

First Trust is the Chicago based money management company, formed by 800 employees. We are a small company, with assets valued at approximately US\$ 150 billion. We are a market leader in many different aspects/products that changed us into the fund of fastest growth, but we do need mutual funds in separate accounts and millions of basic products in the United States.

We surround a multiple factor strategy, with an investment approach based on



academic and research studies. We currently have eight funds approved. Our experience so far has been fantastic. We are trying to build relationships. I think it is a form which understands that relationships take time and we want to build long-term relationships. We do not want any short-term relationships; thus we have a distribution set up here in Latin America and we are getting to know local firms which do understand us and are making lot of money.

We are trying to find lot of opportunities that we can fit in our portfolio and which complement with what others are doing. We are looking forward to work for the industries sector with specialized funds that appear to have worked for a long time here in Mexico; thus we are really looking for an exciting future here.

Mariano Rabadán:

Now I am going to invite Gustavo to state his viewpoints. The idea is that you tell us, from your perspective, what you have found from your experience in the AFORES, particularly focused on the mandates' issue.

Gustavo Lozano:

I would start by saying that the experience of these first five years of the Amundi project (formerly known as Pioneer) in Mexico, could be divided into several sections or stages. First, AFORES have typically been at the forefront of tackling new assets and new kinds of investment vehicles, since they were the first investors to do so. Because of the number of assets that the AFORES have and because of the size of the exposure and concentration in Mexico, this became an imperative necessity.

Thereafter we must ask ourselves how access to international markets through ETFs, while assuming the latter provides an important degree of diversification, it has certain limitations. For instance, when buying the NCI Europe, we are buying a composite index of 400 shares, whereas with a tailor-made mandate, we can have portfolios that are 40%, 50%, or 60% in well-selected stocks, buying the *record track*, the *expertise* and knowledge of these international management entities which, clearly, have much more experience than us in the Mexican market.

This is also a very important part, which can permeate towards Mexico the knowledge, the technology and the techniques of portfolio management, which I think does strengthen the overall system.

Following with the subject of investments, we can provide *stop picking* portfolios to the AFORES, since they are ideally finding an additional prize on the indexes, and that is what they hire: the expertise and the track record of the manager at an

international level. The challenges ahead clearly relate to the human and technical capacity of each of our potential clients to address the issue of mandates. We face challenges which range from the implementation of position management systems to risk management issues.

It follows that the strengthening of the entire regulatory and operational environment of each of the clients, determines the speed through which they access the mandates. This also gives rise to the importance of having other investment options in international markets. The funds indexed so far or the *active management* listed in Mexico, will surely bring a window of possible easier implementation to other types of clients which need this type of assistance to protect the savings of the pensioners in Mexico.

Then I insist on the subject. The challenges from the clients are very important in the subject of strengthening and the capacity to implement the incorporation of the mandates, as well as the regulation which must be opened as it has been doing so far. This move must be arranged in such a way to ensuring we have access to coverage strategies in portfolios of new assets and new countries (we just had the integration of five new countries to the investment regime), so this approach permeates a little more.

I insist once again it is imperative to turn the limitation of investment in international assets into a more flexible approach by the AFORES. There is no more waiting time left. Faced with the current degree of concentration of pension fund investments – a matter of great concern – an outward flexibility is something which has to be addressed now; because this is what is really going to provide from now onwards a comprehensive protection to the workers' portfolios.

Mariano Rabadán:

Carlos, where would be the fundamental difference that you see in a fund product, and where the door is not yet fully open regarding these products? Are they complementary or if it is really a legislation problem preventing them from going ahead? And/or is it the own *portfolio manager* the one which really chooses in what moments there must have a typology of products - or others - in place?

Carlos Costales:

Yes, as I said before, these are completely complementary products, and that is because both types of instruments do exist in the big financial markets of the world. That is, there are mandates, investment funds and instruments invested in passive management (ETFs). It gives me the sensation that, in the end, we are doing it; we are putting in place in dribs and drabs what should exist.

In Spain, for instance, when I started work in 1996, there were only two international managers to which one could have access, and at this time, 20 years later, the number of international managers is much greater and there are also mandates which coexist with the investment in funds.

The AFORES in Mexico, or the AFPs in Chile, are very important for the economy of a country from the financial and industrial point of view; so by not having access to investment funds such factor generates a limitation. It is true that there is a way to have international investment, but it is always through the mandate, but this seems to me more complex than simply as it happens elsewhere in the world when having access to investment instruments abroad.

What should regulators do? As all existing regulators in the United States, Europe, and Australia do - I mention these are countries with the highest net worth in pension funds - their task is to establish strict guidelines on what a pension fund can or cannot do.

In many countries in Europe, investment in hedge funds is not allowed, because due to past *bad practices* or memories of the financial crisis; such product does not exist anymore. It is mostly allocated to investment of the *family office* type or similar, which does not have those restrictions. There the funds have another set of restrictions, which in terms of diversification, they must comply with.

If regulators declare investment in European, American or Japanese markets (developed areas) and even within emerging markets fit; why should they limit investment only to mandates or ETFs? I am clearly a staunch supporter of the investment through active management.

Mariano Rabadán:

How do you see this in other countries in Latin America, for instance in Chile?

Carlos Costales:

In the end and of course, the regulator is the one which decides which asset is suitable for the pension fund, because you have to consider that they are savings for many people, so the regulatory issue is extremely important. In the end, what they have done in Chile is via mandate, ETFs or authorized investment funds, especially in Luxembourg and Ireland. Why? Because they comply with the community regulations.

As I said before, in Mexico from 1 January 2018, if it is possible by then, we will

be even more regulated than we were, even more transparent communicating to the investor what costs are being applied. Here everyone is incorporated, the private, professional and institutional investors alike. If one limits the investment universe, which is common to all countries and all regulators, by limiting the use of instruments implies a bit of new "putting doors to the field" and that is not happening in the Chilean market.

Dan Waldron:

I think the question refers to how we are working in terms of management. All things begin with the evolving relations around their needs, so we are trying to be that partner which has enlighten to you a market which is as good or better than a competition.

What can we do to help you drive your decisions and have a good confidence in the US market? We spend lots of time understanding that. At the end, the conversation usually turns up to a controversial path.

This is a discussion that we have tackled for the past ten years, because we develop most factors and ideas we could not find in the US market years ago. Therefore, we could compare between assets and liabilities and then we realized there is room in the portfolio for both types of investments.

We can have conversations about how you feel about certain factors, the seasonal effect of some factors, how to undertake the multiple factor approach with you and then try to match the right funds. We can spend a lot of time in talking about funds and taking right ports for money matching from these factors and getting rid of the financial capacity.

In Mexico they are all trying to up perform the market and not bit it, by taking a strict discipline approach to investing and really get back to the idea that people can really have funds and many my wish to go out onto a great performance in the United States; and they are trying to invest the funds where we can have great performance and more income.

Gustavo Lozano:

One issue that I think is important to analyse is how portfolios are being built in the international diversification area. From our point of view in Amundi, we note that the AFORES' central strategies are perhaps addressed by means of mandates. The latter gives them the permanence and the degree of a design sought and suitable for the implementation of their strategy or central vision.

We clearly see coverage strategies around the central vision. Having strategies in place around the central strategy which provide us with the risk coverage, to some extent will be very important. We are also seeing how we start looking for more tactical and punctual bets, an alpha generation, market volatility efficiency and perhaps the use of derivatives, listed funds, ETFs and mandates. The issue is how to get the industry to have access to all these layers, how to make the issue of mandates to permeate towards the 10 AFORES and not be a subject only valid to some.

Mariano Rabadán:

It would be interesting to know how far the fund management entity is willing to collaborate with what the regulators are currently demanding from us. To what extent can it be regulated at a level almost identical to that prevailing in Chile? To what extent is the fund management entity willing to have people *on site*?

Carlos Costales:

I have mentioned it before. Nowadays, at the end of the day, and to many of our European clients and in other parts of the world (chiefly Australians, Asians and Americans), we are supplying them with the information they want. Indeed, many of our investors ask us for the portfolios with a fixed periodicity – chiefly every month or on a weekly basis - because it is important for the regulator to know the investment percentages that we have in each equity share and in each country.

Once we monitor the portfolios day by day (although it is true that in some cases it may not be worth doing it on a weekly basis, because if you watch the variations of *portfolio managers* in the United States, in Europe or in Japan, in developed or in emerging markets alike, the variations are small), this information can be supplied/ exchanged between the regulator and us.

Another issue, as you said Mariano, is perhaps to register investment funds in the regulator to convey confidence that we meet a number of requirements. I suggest we do some *videocalls* addressed to the regulators with us to witness the amount of work performed this year with MiFID II¹. It is true that here in Mexico the defence of the investors has been done for a long time, especially on the individual, not on the institutional and MiFID II goes in that direction, it is a turn of the screw to MiFID I, to the regulation.

1 *MiFID is the Directive of the European Union on Markets and Financial Instruments (MiFID are its English acronym). The first MiFID Directive came into force in 2007 with the aim of regulating the EU legal framework for financial services and markets. MiFID II was approved in April 2014 and its enforcement date was set on 3 January 2018. It covers some aspects that MiFID I did not include, including the investment funds.*

I now end by emphasizing the key importance of assets' diversification of assets, since much of the profitability of a portfolio comes from the distribution of assets. So, to supply the AFORES' investment committee with new instruments such as these investment funds. I think it is entirely reasonable.

Gustavo Lozano:

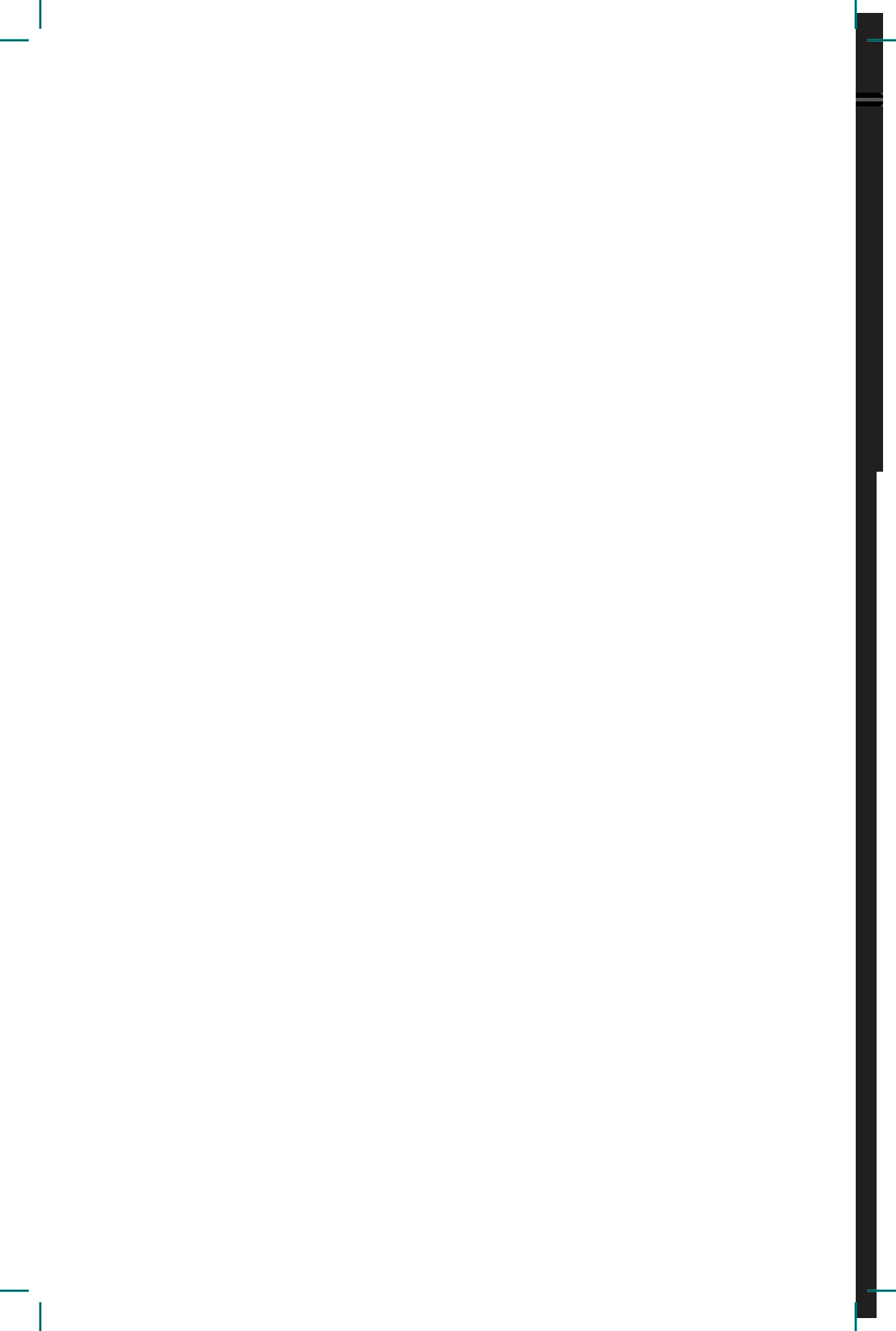
I would conclude that the Amundi experience during these past five years has clearly been shared with all the AFORES. It has clearly been an important learning curve. It has been crucial to notice the law and the CONSAR have been opening, evolving and turning flexible the rules to ensuring this vein of assets does become something more viable and accessible for the entire industry. Surely, we will have to continue working closely together with you; in the spirit of a continued transfer and strengthening of technology and better portfolio management methods. We will achieve it together over a long-term partnership.

Carlos Costales:

We at GAM have been less time in Mexico, and I hope this is the beginning of a great friendship. I believe that what we have discussed here leads us to conclude that we have to monitor the savings of families, which is the most important thing, and to learn together; as we walk hand in hand. We believe that from the point of view of active management we can contribute with our wealth of experience.

Mariano Rabadán:

Many thanks to all of you for sharing this interesting panel.





CLOSING WORDS

Dear Mr. Carlos Ramírez, Chairman of CONSAR and Dear Mr. Carlos Noriega, Chairman of AMAFORE;

My dear friends:

After two days of intense work, we can say these have been extraordinarily useful and we now leave with a feeling of having learned many things and have set FIAP as a platform for a useful exchange of experiences on what is happening and leading us to the strengthening and development of the sundry private pension systems based on an individual capitalization of contributions.

I think it is not the time yet to recount everything we talked about. However, I would like to mention some things that we should go away with as clearly recorded in our minds. Nowadays no one disputes - as it was the general tone of this meeting - that individual capitalization systems are the only ones called to solve the pressing problems of pensions; at a time when demography is pressing us to seek in earnest the suitable pensions for workers who are bound to live longer.

Such is a challenge we must take seriously. However, while noticing this is the



system which is destined to endure over time, we also leave with the feeling that if we do not try to introduce the amendments these systems require, such cannot be rated as sustainable along time.

During these few days we have analysed how during the life of all these systems of individual capitalization there have been changes in both the demographic aspect and in the labour market which have entailed that pensions are being paid in some countries and particularly in Chile - which is the one showing a higher degree of maturity - have not responded adequately to the workers expectations.

Therefore, it is important we assume the compelling need for all public policy makers to implement the necessary parametric changes (raise the retirement age and improve the contribution rate), as well as increasing the voluntary pension savings schemes and enhance the work formality/registration; all this so we can adequately respond to what the workers - who are in some way our customers - are requiring from us every day and in a growing demanding fashion.

Unfortunately, and despite our greater awareness and clarity on these diagnoses, many times the solutions sought are not those that are directed towards the best sorting out of these problems; and thus the easier path onto demagoguery is opted for.

Here is the reason why I believe it is us, the ones in charge and via these seminars, analytical surveys and round tables; who must try to seek and direct the solutions towards a suitable solving of the pension problem.

I would like to end by thanking Mr. Carlos Noriega and all our Mexican friends for the great reception and assistance we have received for this seminar and we hope the discussions and debate we have had will help us - in a joint effort with the private sector and the regulators alike - to promote these so pressing changes and ensure this system can respond adequately to the demands we are getting from our workers.

Thank you very much.

Guillermo Arthur
President of FIAP



CLOSING WORDS

I do not intend to summarize what we have learned in any way, but I believe all the papers presented and presentations made were very valuable, starting with the broader vision of the reforms which are taking place and, perhaps, taking the words of the Governor of the Bank of Mexico, the importance of the sundry structural reforms which are generating synergies; so the pension reforms have a positive impact which cannot be under estimated not only in terms of individual welfare but also in the development of a country.

In the case of AFORES, the words which attempt to reflect this event in some way would be: commitment, linkage, service, financial education, coverage, pension, investment in human capital, processes and good governance; plus voluntary savings, and *target-date fund*.

From the issuers expressions such as: "standardization, "development of administrators" and "the infrastructure gap" were also worth noting.

And I would say that even more important is the position we hear from workers talking about "commitments to reform", the concern for "the informality", the issues of "gender" and "savings". From our authorities their expressions of "necessary reforms", "long-term vision" and "a more dynamic regulation" were commonplace.



I think all the foregoing expressions synthesize an atmosphere of optimism about where we are likely to head onto.

The AFORES have been operational for twenty years already and, when looking forward, we have a vision with a clearer route to follow, chiefly by taking advantage of what we have all stated in this seminar.

First and foremost, I wish to acknowledge and state my word of thanks for the presence of our authorities; represented by the Head of CONSAR, Mr. Carlos Ramírez and particularly to our Undersecretary of Finance Mrs. Vanessa Rubio.

I would like to grant a special recognition to Mr. Guillermo Arthur, Chairman of FIAP, and to the vice presidents and members of FIAP for having the flexibility and openness to adapting to our Convention in terms of dates and having worked together on an agenda which I believe was relevant and valuable. For us it is a pleasure to have all of you who came from other countries, as we fully realise the effort required in terms of your time and dedication.

I also must thank the AFORES, for the support we received to carry out this convention and for the work in which they all got involved when tackling sundry but crucial aspects. And finally, my heartfelt gratitude goes to my collaborators within AMAFORE, particularly Octavio Ballinas, for the work he put into organizing this meeting, as well as the bureaus which have been working with us in setting up this event, and to all the exhibitors, panelists and coordinators alike.

Please bear in mind that I am looking forward to seeing you again within a year's time, when we will be celebrating the Third AFORES Convention.

Carlos Noriega
President of AMAFORE



CLOSING WORDS

Good afternoon to everyone, it is my pleasure to be here on behalf of the Undersecretary Mrs Vanessa Rubio and conclude this important event with a brief message. First of all, allow me to congratulate Mr. Carlos Noriega, who has performed a great job in presiding this important event with my gratitude going also to the financial authorities and, of course, to all the AFORES. Mr. Guillermo Arthur, thank you again for your presence. Indeed, the celebration of the FIAP event in conjunction with the AFORES has been a great idea and a major opportunity to join forces.

I believe this Second AFORES Convention demonstrates the relevance this industry is currently enjoying and which it has secured a remarkable position amid the country's public life. All this coupled with the deployment of its infrastructure which has been prepared for all of you with the attendance of world-class panelists. Indeed, it has really been a remarkable event, which leaves a very good taste in my mouth and I think it allows us to anticipate the consolidation of this event for years to come.

I simply conclude with four brief reflections about this event, which I am taking away with me. In the first instance, I think it is very clear from the presentations that we attended throughout these two days, that there is a widespread consensus that the world is experiencing a secular change in both demographic matters and in the overall structure of the labour market.

These two factors put together are placing a great pressure on the pension systems around the world - which calls for a swift adapting to a new reality - and which, certainly, will be an issue of the greatest relevance for the future of our countries during the next three decades.

It is important to highlight and reiterate, as stated here, that the issue of pensions and the challenge facing Mexico is also universal, not only specific to Mexico, but certainly to us as nation and Latin America as a whole. It will become very important and significant given the demographic transition the region is experiencing and that will accelerate from 2030 onwards. Then in that sense, our pension systems will have to adapt their operational framework to this new reality.

The next issue is the global retirement crisis. As pointed out by Robert Kapito and several other panelists, the world is not getting ready fast enough to face the demographic change about to land on us and, therefore, we are already late in tackling the challenge of offering comprehensive solutions to the people with regards to their retirement requirements during the next three decades. Such predictions were rife throughout the sundry sessions held during these past two days.

A third issue well worth repeating, and in which the Under-Secretary Mrs. Vanessa Rubio was very emphatic about in her inaugural speech, is that the pension systems for individual accounts have offered very positive results that cannot and should not be ignored; irrespective of the fact the challenges ahead of us are huge and, the reality is that in these twenty years since the pension system of individual accounts began, the headway secured so far has been important and we must not lose sight of it.

On 1 July, the CONSAR entity issued a brief publication, which I urge you read in case you may have not seen it yet, which talks about the twenty benefits secured by the pension system during the past twenty years since its inception. I believe that, without losing sight of the challenges, we must reiterate and emphasize that these benefits are in place today after twenty years of the system's creation.

And, last but not least, let me mention the pending challenges. The deficits of our systems are still gigantic. In a more macro viewpoint, as Mr. Augusto Iglesias, Mr. Rodrigo Acuña, Mrs. Carmen Pagés and others did point out which are the pending challenges and how the situation of informality, low coverage, low level of savings in general in our countries, are bound to jeopardize the achievements which have been accumulated over twenty years; should we afford in the coming years to do nothing and abstain from taking decisive decisions aimed at reforming and strengthen our social security and pensions system.

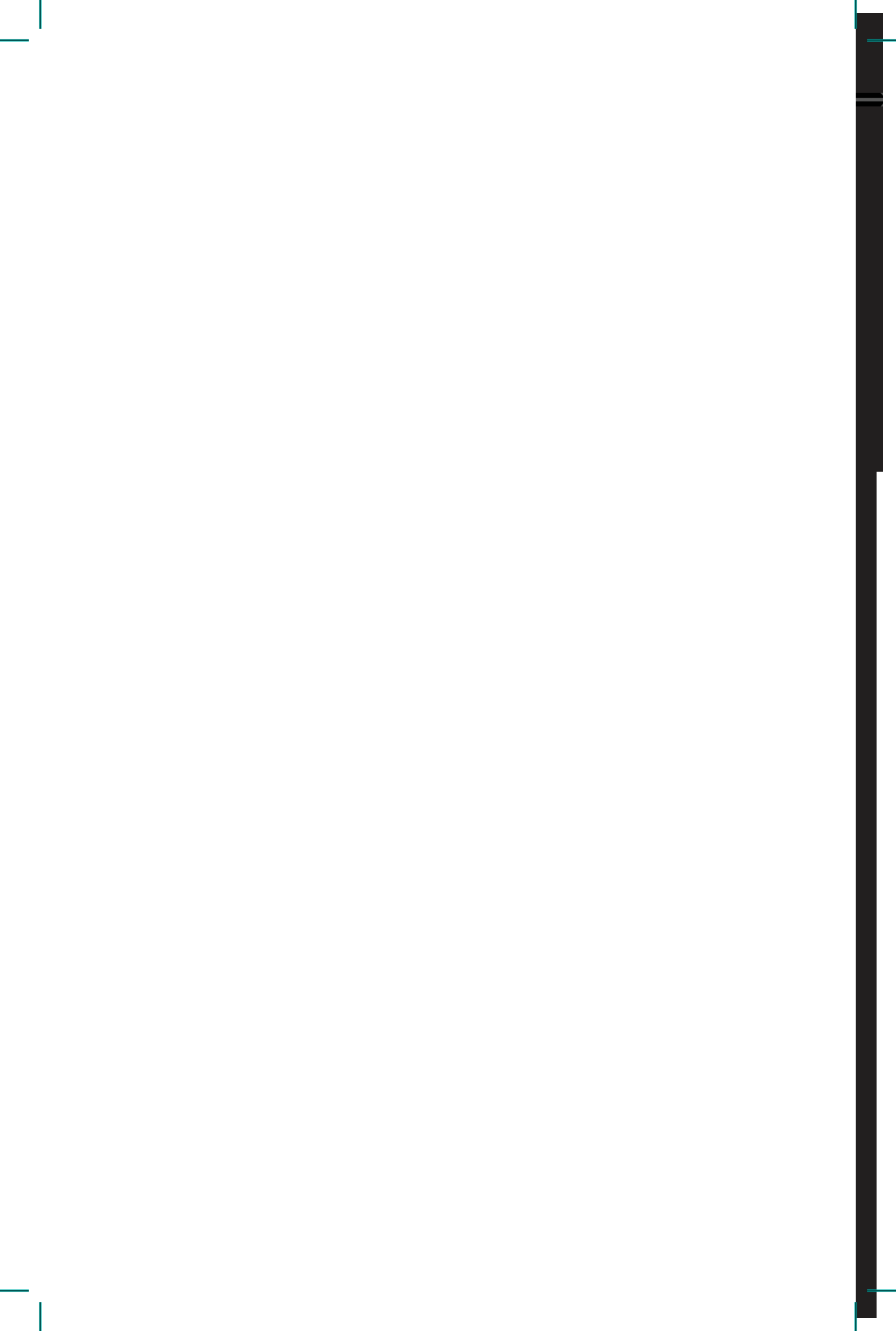
During these two days we have witnessed very interesting presentations on micro topics, which are the subjects monopolizing most of our time as regulators, but also from the general point of view of the daily performance of the AFORES. These range from investment in infrastructure to, fortunately, the ESG criteria which are now at the centre of global attention for pension systems. Such are coupled with the issues concerned with the low levels of return and profitability that are being observed in the world nowadays, and also where future returns will come from as topics of the greatest relevance.

To sum up, it has been an event where the main topics concerning the challenges that are bound to influence the pension issues have been addressed and tackled at a regional, countrywide and global levels alike. Thus, I must congratulate the organizers for having secured the attendance of a whole host of speakers enjoying their most senior levels of influence and regard for their views; which we have been privileged to see and listen to during these past few days.

It only remains for me to thank everyone for their active attendance and keen interest and, once again, congratulate the organizers for this important event and, and now formally declare the wind-down of this Second Annual Convention of AFORES and XV FIAP International Seminar.

Thank you very much.

Carlos Ramírez
President of CONSAR





EARLIER FIAP PUBLICATIONS

EARLIER FIAP PUBLICATIONS

One of the aims of our Federation is to make known the advantages of pension systems based on individual saving and support the governments that wish to adopt them. With this in view, one of our regular activities as a Federation is the organization of seminars and round-tables. As a result of these activities, FIAP has published fifteen books, which summarize the presentations given at those seminars, and are sure that these have contributed towards improving the literature on this subject. These books are described below:

“Regulación de los Sistemas de Pensiones de Capitalización Individual: Visiones de los Sectores Público y Privado” (Seminario Lima-Perú, diciembre 2002).^{1,2}

This publication tackles aspects such as the challenges of the new pension systems, the models and priorities of supervision, collection of contributions and management of individual accounts, coverage, regulation and supervision in the area of benefits, price formation in the social security industry, regulation and supervision of marketing and sales, and regulation and supervision of pension fund investments. The authors deal with these subjects from different points of view, which contribute to an enrichment of the debate on the subject of pensions in the countries that have carried out social security reforms, especially in Latin America.

- 1 This book is the only one on the list that was published not by FIAP, but by the International Labour Organization (ILO). However, it is included on this list because the seminar on the basis of which it was written was organized jointly by the International Association of Pension Fund Supervisory Authorities (AIOS) and FIAP.
- 2 This book is not available in an electronic version on the FIAP website.

“Pension Reforms: Results and Challenges” (Seminar held in Cancun, Mexico, May 2003).

In this book an analysis is made of the results of the new social security systems, both in Latin America and in Central and Eastern Europe, from the point of view of how they have influenced improvement in pensions and contributed to the growth and economic development of the countries. In order to do this, it reviews the rates of return of the investments of social security resources and matches them with the growth of workers' wages. At the same time, it measures the impact of the reforms on savings and investment, thereby attempting to measure the contribution that they signify for the economic development of the country. There is also an analysis of the main challenges in the social security area for the industry, the regulators and the political system.

“Pension Reforms in Eastern Europe: Experiences and perspectives” (Seminar held in Kiev, Ukraine, May 2004).

This book summarizes the experiences of social security reforms in the countries of Central and Eastern Europe, such as Bulgaria, Croatia, Hungary, Poland, Kazakhstan and Kosovo. Also presented are the main perspectives for reform in Slovakia and Macedonia. The common denominator in all these countries is that they possess individually-funded systems in expansion. The book follows with an analysis of the challenges for implementing reforms, in terms of the regulation and supervision of pension funds and their fiscal and economic impact. The book concludes with an analysis of the conditions necessary to ensure the success of the reforms.

“Pension Fund Investment” (Seminar held in Lima, Peru, November 2004).

This book contains a diagnosis of pension fund investment regulation in Latin America. It contains an analysis of the improvements to that regulation, dealing especially with the case of the multi-fund system in Chile, Mexico and Peru. It also looks in depth at the development of the capital markets and analyses the political risks of pension fund investment in the region. Among the most important conclusions to be drawn from the aforementioned subjects are the role of the return of the investments as a deciding factor in improving pensions and the need for greater diversification, including investment abroad.

“The Strengthening of the New Pension Systems: The Role of each pillar in the Solution of Pension Problems” (Seminar held in Cartagena de Indias, Colombia, May 2005).

This publication analyses reforms to social security systems that have included mandatory individual capitalization/funding systems in their second pillar, in response

to the criticisms and objections that are being 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 (non-contributory) programs in Latin America. The key issues of mandatory contribution programs in the second pillar are reviewed and experience in the area of voluntary social security saving (third pillar) is described. One of the most important conclusions arising from the discussion is that the criticisms made of the mandatory individual saving systems are seen to include aspects that, though part of social security, are not the responsibility of the contributory systems, as is the case of coverage.

"Pension Funds Investment Perspectives" (Seminar held in Santiago, Chile, May 2006).

This book discusses which the best investment alternatives for pension funds are. The facts show that 1% of additional return over the course of the whole working life of a member of a pension fund administrator may result in a pension that is 30% higher. To corroborate this, an in-depth analysis is made in this publication of issues such as the historic performance of the pension funds in Latin America, the regulation and control of investment risks, the best portfolios for social security funds, the characteristics of the multi-fund systems, the strategies for the international diversification of pension funds, the financial impact that occurs in the stage just prior to retiring age, and the importance of corporate governance in pension funds.

"Funded Systems: their contribution towards solving the pension problem" (Seminar held in Varna, Bulgaria, May-June 2007).

In the first instance, this book shows the political economics of pension reforms, taking into account the experience of countries in Central and Eastern Europe and also the pension reforms in Bulgaria and Mexico. Secondly, it analyses the results of the pension reforms for the workers, separating the effects on the labour market and on redistribution of income. An analysis is also included of the workings of the Disability and Survivorship Insurance (DSI) in the Chilean case. Thirdly, it shows how to structure an effective multiple-pillar system in the light of the new Chilean pension reform, the public/private ratio in the pension reform, the design alternatives for non-contributory pension programs (social pensions), and the fiscal effects of the pension reform in Chile. A fourth set of issues analyzed here concerns the investment policies and strategies of the pension funds, experiences and trends in multi-fund systems and regulation and monitoring of investment risk in mandated, defined-contribution pension systems. Finally, the book culminates with a number of different views of the prospects for the pension reforms in Europe.

“Pensions for the Future: Developing Individually Funded Programs” (Seminar held in Lima, Peru, May 2008).

This book analyzes the performance of the new pension systems in Latin America and Central and Eastern Europe, describes the progress of pension reforms in countries that have recently begun to implement them or are about to do it in the near future, and identifies best practices for improving the design of regulations in the individual capitalization programs. It examines issues related to the lessons of pension reforms, investments regulation, supervision models, coverage, pension options, pension business management, and disability and survivorship insurance in the cases of Argentina, Chile and Mexico. It also discusses the pension reforms in China, Philippines, Romania and New Zealand. It also analyzes the future of pensions in Peru, addressing the issues of pension coverage, quality of social protection, capital markets, and the supervisor’s vision. Finally, the book ends with a discussion on whether the battle of public opinion regarding the pension reform has been won.

“Investments and Payouts in Funded Pension Systems” (Seminar held in Warsaw, Poland, May 2009).

The book is divided into nine chapters. The first four chapters refer to subjects related to the pension accumulation phase, whereas the other five chapters show issues inherent to the payout phase. The first chapter of the book deals with the pension fund investment performance. In the second chapter, the book asks how much financial risk level a funded system may accept, showing the life-cycle risk perspective in the context of pensions. The third chapter shows a close relationship between economic cycles and pension funds. Chapter four shows the current tendencies of pension fund investments and presents the views of three outstanding speakers on infrastructure investments, thematic investments and Exchange Traded Funds (ETF), respectively. Regarding the pension payout phase, chapter five refers only to the issue of explaining the optimal pension modes in a mandatory pension system. Chapter six analyzes the market of annuities and programmed withdrawals under the commercial and descriptive perspectives. Chapter seven contains issues that are of vital importance for an adequate development of the pension market: the keys for success in the annuities market, the challenges involved in the selection of products during the payout phase and an explanation on why the funded pension systems will be more capable to face the demographic challenges than the PAYGO systems. The second-to-last chapter deals with the perspectives of the Polish pension system. Finally, the book finishes with chapter nine, where it is reviewed the future of mandatory pension funds in Europe and beyond, describing the financial crisis implications for the private pension funds, commenting the lessons derived from the crisis for the funded pension systems and stating the medium-term challenges to reform the mandatory pension funds in Europe and other industrial countries.

“Developing the Potential of the Individually Funded Pension Systems” (Seminar held in Viña del Mar-Chile, May 2010).

The publication provides the reader with several works that seek to identify means and instruments whereby pension fund managers can extend the contribution they make to solve the pension problem and, in more general terms, improve the quality of the population’s social protection. Papers presented by renowned academics and authorities are featured at the beginning of the book. They address the seminar’s subjects with a practical and objective focus aimed at highlighting the characteristics and concrete results of policies, products and organizational and management models that can serve as a reference for innovating and improving the processes and regulations of pension fund managers and regulators.

The book is divided into three parts. The first part, “How can the Coverage of the Individually Funded Programs be Extended?”, explores different ways in which the funded programs can extend their coverage to sectors of the population that are not currently engaged in pension saving. The second part, “New Products”, explores ways in which the pension industry can use its experience and capacity to advantage for attending to other social security protection needs of the population. The third part, “The Quest for Excellence”, is divided into three chapters. The first one, “Pension Information and Education,” analyzes the role played by financial education within the context of defined-contribution pension systems from the standpoint of the industry and the supervising agencies. The second chapter, “Ideas for Improving Operational Efficiency,” analyzes the organization and process alternatives that enable the operational management and efficiency of the industry to be improved. Finally, the third chapter, “Ideas for improving the impact of investments on local economies,” analyzes the investment alternatives available to the pension funds in housing, infrastructure and micro-companies.

“Advancing in the Strengthening and Consolidation of the Individually-Funded Pension Systems” (Seminar held in Punta Cana, Dominican Republic, May 2011).

This book provides the reader various studies analyzing different issues related with pension fund investment (best practice in the design of investment policies; impact of pension funds in the development of infrastructure projects and securitization of assets) and the benefits granted in the payout phase (pension options, advantages and disadvantages; replacement rates and adequacy of contributions), and also presents experiences and proposals that enable continued progress in strengthening and consolidating individually-funded pension systems, after the global financial crisis of recent years. Additionally, the book analyzes, from the points of view of the industry and the international organisations, the topic of the implicit and explicit public debt generated by pension systems, its accounting and impact on the creation and

development of individually-funded programs, in light of recent events in Central and Eastern Europe.

“Opportunities and Challenges for Individually-Funded Systems in a Globalised World” (Seminar held in Cancun, México, May-June 2012).

This publication look into the opportunities and challenges being faced by the authorities and administrators, to boost the development and stability of individually-funded pension programs and obtain adequate replacement rates in a globalised world, with more volatile financial markets, imperfect labour markets and more demanding clients.

The book is divided into three parts. The first part analyses the spheres of responsibility and limits corresponding to pension funds, in the performance and public information of the companies in which they invest the pension funds under their management, and how these can contribute towards the development of the corporate governance of such companies. The second part evaluates the extent to which the design and characteristics of the individually-funded programs, especially contribution rates and retirement ages, are appropriate and consistent with the replacement rate targets expected of such programs, given the conditions of the labour market and the trends in life expectancies. Also this second part examines the contribution that can be made by voluntary pension savings in funding pensions and meeting the defined targets. Finally, in the third and last part of the book are analysed the basic conditions required to ensure the stability and development of the individually-funded pension systems, and the opportunities and challenges being faced in order to improve their public image and strengthen their relationship with their members in a globalised world where clients have become increasingly demanding.

“Individual Savings: Better Pensions plus Economic Development” (Seminar held in Cartagena de Indias, Colombia, April 2013).

This book starts by giving the reader an analysis of the lessons learned from the international recession with regard to managing risk and investing portfolios. It then goes on to describe the pension reforms that have been implemented recently and the trends that are being seen in pension systems, especially in the programs based on individual funding, as also the impact of these and the effects that they may have on the efficient functioning of the funded programs and their consistency with the fundamental principles on which these programs are based.

The book also analyses the most significant challenges facing the pension systems in achieving the aim of providing adequate pensions for their members in the long term, pointing out the aspects of design and operation in which changes should be made

in order to enable the individually-funded programs to meet their target of providing adequate pensions, plus the limiting factors that are being faced due to shortcomings in the operations of other related markets. In particular, the book describes the virtuous circle between the development of the individually-funded programs and the countries' economic development, and finally it explains the interdependence between the labour market and the pension system and the experiences, lessons and recommendations that emerge for implementing public policies in matters of labour and social security.

"Reinforcing the Foundations of the Individually-Funded Pension System to Ensure its Sustainability" (Seminar held in Cusco-Peru, May 2014).

This book provides the reader with several papers, which based on the principles of economic freedom and individual savings, identify the mechanisms that enable underpinning the foundations of the sustainability of the individually-funded pension system. The book is organized into six parts: (i) Expanding coverage and promoting pension savings; (ii) Yield and risk management; (iii) Efficiency, competition and administration costs; (iv) The type and quality of pensions in the Individually-Funded Systems; (v) Corporate governance, transparency and relationships with members and pensioners; and (vi) Coexistence of alternative contributory pension systems. The book also, initially shows the work presented by the economist Herando de Soto, on the theme "Individual Savings and Economic Freedom". At the end the book shows the work of the 2011 Nobel Prize in economics, Thomas Sargent.

"Multi-Pillar Pension Systems: Investing in the Future" (Seminar held in Montevideo-Uruguay, September 2015).

This book analyses the lessons and recommendations stemming from experiences gained when applying the multi-pillar pension systems in sundry countries - including the so-called fourth pillar - and also tackles all proposals aimed at increasing the expected long-term investment returns and security, as well as the pension amounts the affiliates can get. The book encompasses 7 chapters: (i) Multi-pillar pension schemes showing the trends recorded amid OECD countries and what initiatives can be adopted for strengthening the multi-pillar pension schemes; (ii) Pension improvements and risk reductions, together with the analysis of topics such as the role likely to be played by a "longevity insurance" when it comes to an overall improvement of pensions; (iii) Promotion of the relevant pillars for the voluntary pension savings; (iv) Securing profitability increments via alternative investments; (v) Communicating with the affiliates and financial education issues; (vi) Financial integration of pension fund systems within the Pacific Alliance member countries; and (vii) The Regulator/ Watch Dog viewpoints. At the end of the book there are some noteworthy paragraphs highlighting the work contribution from Mr. Moshe A. Milevsky, a distinguished professor of the Schulich Business School, York University, who is also the Executive Director of the IFID Centre in Toronto, Canada.

“Opportunities and challenges of the investment of pension and voluntary pension savings funds” (Seminar held in Panama City, Panama, May 2016).

This book is organized into 4 chapters: (i) Optimization of the investment of pension resources”, which presents the experiences and proposals regarding the alternative investments of the pension funds; (ii) “Future challenges for the investments of the pension funds”, which analyses the impact of demographic trends on the capital markets and pension funds, and measures that can be adopted to expand the range of financial instruments in which social security resources can be invested within the countries of the Pacific Alliance; (iii) “Corporate social responsibility and corporate governance”, which sets out the experiences, lessons learned, trends and best practices in corporate social responsibility, corporate governance and sustainable investment; and (iv) “Enhancing the contribution of voluntary pension savings to the provision of pensions”, which describes the current situation of Voluntary Pension Savings (VPS) in Latin America and the lessons that can be learned from different experiences to encourage this type of saving, stimulate collective VPS and encourage the participation of low and middle-income workers. In the initial chapter, the book presents the paper delivered by the renowned economist Felipe Larraín, on the topic “Latin America and the emerging countries on the global stage.”, followed by the study by Rafael Rubio, Doctor in Constitutional Law, on the topic “Communicating in times of mistrust.”

For your information, these publications are available in an electronic version on the FIAP website, <<http://www.fiapinternacional.org>>, in the “Publications/FIAP’s Books” section. Copies of these publications may be obtained writing to e-mail: <fiap@fiap.cl>.

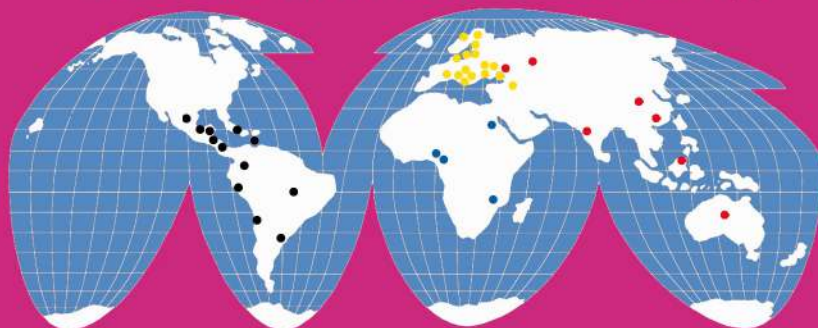


THIS BOOK WAS PRINTED IN THE WORKSHOP OF
PROCOLOR S.A.
EDUARDO HYATT 572 - PROVIDENCIA
WWW.PROCOLOR.CL
PHONE:[56-2] 28218800
SANTIAGO - CHILE

Lately, FIAP also organized seminars on "Alternative Assets" and "Voluntary Pension Savings," which were attended by experts and regulators of all the FIAP member countries. FIAP maintains fluid contact with the pension regulators of all FIAP member countries and international agencies dealing with pension issues (OECD, ILO, IDB, IMF and the World Bank).

Finally, FIAP is carrying out studies that are relevant for the individually-funded systems, also gathering statistics of interest to the member countries, which are available on the website: www.fiapinternacional.org. FIAP's publications include the Pension Notes, which are brief documents addressing different matters of interest in the area of pensions, some publications being: "A longevity insurance to contribute to financing old-age pensions in the Individually-Funded Systems" (No. 18); "Demographic trends make the PAYGO systems unviable" (No. 21); and "As the pension systems mature, it has become essential to improve the regulation and institutional framework of the decumulation phase" (No. 23).

COUNTRIES WITH REFORMED SYSTEMS (1)



● LATIN AMERICA
AND THE CARIBBEAN

● EUROPE

● ASIA AND THE
PACIFIC

● AFRICA

Chile	1981	Poland (2)	1999	Australia	1992	Nigeria	2005
Peru	1993	Sweden	1999	Kazakhstan	1998	Ghana (**)	
Colombia	1994	Latvia	2001	Hong-Kong	2000	Egypt (***)	
Uruguay	1996	Bulgaria	2002	China	1997	Malawi (**)	
Mexico	1997	Croatia	2002	India (*)	2004		
El Salvador	1998	Estonia	2002	Brunei	2010		
Costa Rica	2000	Kosovo	2002				
Panama (*)	2002	Russian Federation	2003				
Dominican Republic	2003	Lithuania	2004				
Brazil (*)	2013	Slovakia	2005				
Honduras	2016	Macedonia	2006				
Curaçao (***)		Romania	2008				
		United Kingdom	2012				
		Turkey	2017				
		Armenia (**)	2018 (3)				
		Czech Republic (**)					
		Ukraine (**)					

The year given corresponds in each case to the start of operations in the mandatory pension system based on individual funding.

(1) Information updated to December 2017.

(2) Poland: On February 1st, 2014, a new pension reform law took effect that, among other things: (i) makes second-pillar individual accounts voluntary for all new entrants to the workforce; and (ii) allows current participants to opt out of the second pillar and transfer their account balances to the public first-pillar notional defined contribution (NDC).

(3) Armenia: This program was approved in 2014, but due to a series of legal revisions, its implementation has been postponed. The scheme will enter into force on July 1, 2018.

(*) Reform for public employees.

(**) Reform approved, but not yet implemented.

(***) Reform proposed, but not yet approved or implemented.



INTERNATIONAL
FEDERATION OF
PENSION FUND
ADMINISTRATORS

www.fiapinternacional.org