PENSION REFORMS: ADDRESSING NEEDS IN A CHANGING WORLD

Presentations from the FIAP International Seminar, organised by FIAP and the Chilean Association of Pension Funds, on 15th and 16th May 2019 in Santiago, Chile.

2019 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 from 12 countries (Bolivia, Colombia, Costa Rica, Chile, El Salvador, Kazakhstan, Mexico, Peru, Spain, the Dominican Republic, Ukraine and Uruguay). The workers represented by FIAP member associations and institutes total more than 113 million as of June 2019, and have accumulated more than USD 637 thousand million in their respective individual accounts.

FIAP endeavors to contribute to the improvement and strengthening of private pension systems, in order to offer the best possible pensions to its members, via financially sustainable systems. 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, and by providing information and support for the improvement of systems. In order to further these objectives, FIAP has organized 16 international seminars.

The Federation also brings together 14 “collaborating members”, which are predominantly 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; BlackRock; Brown Brothers Harriman & Co; Compass Group Global Advisors; GAM (Luxembourg) S.A. Spanish branch; Inversiones Security; Jupiter Asset Management; M&G Investments; Pictet & Cie (Europe) S.A., Spanish branch; Principal Financial Group; S&P Dow Jones Indices; State Street Global Advisors; and SURA Asset Management.
PENSION REFORMS:
ADDRESSING NEEDS IN A CHANGING WORLD

Presentations from the FIAP International Seminar, organised by FIAP and AAFP of Chile, on 15th and 16th May 2019 in Santiago of Chile.
# INDEX

## OPENING SPEECHES.
- Guillermo Arthur, 9
- Andrés Santa Cruz, 17
- Nicolás Monckeberg, 21

## INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS (FIAP).
- 31

## CHAPTER I. SECOND-GENERATION REFORMS OF THE PENSION SYSTEMS.
- Pablo Antolín. Guiding principles for good pension reform in Latin America, 35
- Pablo Gottret. International pension reform trends, 51
- Paulo Valle. Pension Reform in Brazil and the Complementary Pension System: Scenarios, challenges and debates, 75
- Benne van Popta. The political economics of pension reform: failures, successes, 93
- Augusto Iglesias. Chile’s pension system reform bill, 105
- Rodrigo Valdés. Chile: Pension reform challenges, 121
- Conversation with Augusto Iglesias and Rodrigo Valdés, 139

## CHAPTER II. TECHNOLOGY AS AN ALLY FOR IMPROVING PENSIONS.
- Christian Onetto. Pension sector transformation: Opportunities and challenges of the information explosion, 155
- Rogerio Galveas. Digital transformation for the AFP sector, 171
- Bernardo González Rosas. Regulating the incorporation of FinTech into the retirement savings sector, 179

## CHAPTER III. STRUCTURAL CHANGES IN THE LABOR MARKET.
- Andrea Repetto. Employment, automation and new technologies, 193
- Roberto Méndez. Chilean pension-sector challenges vis-à-vis latest generation of workers, 205
- Mariano Bosch. The future of work in Latin America and the Caribbean: Challenges and opportunities, 223
### CHAPTER IV. INCENTIVES FOR THE DEVELOPMENT OF VOLUNTARY SAVINGS.

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renee Schaaf</td>
<td>Voluntary savings: Reinvented in the Digital Age. Observations and insights from the frontline.</td>
</tr>
<tr>
<td>Pablo Seprenger</td>
<td>Sustainable voluntary retirement savings growth: The secret (and politically incorrect) ingredient.</td>
</tr>
<tr>
<td>Francesco Briganti</td>
<td>The growing importance of voluntary pension systems in Europe.</td>
</tr>
</tbody>
</table>

### CHAPTER V. NEW INVESTMENT TRENDS

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tim Gifford</td>
<td>Capital markets: Alternative investments, commercial real estate, trends.</td>
</tr>
<tr>
<td>Takaya Sekine</td>
<td>View from the Quantitative analysis: the World has changed with ESG.</td>
</tr>
<tr>
<td>Thomas Metzler</td>
<td>Transforming insurance asset management for the institutional market.</td>
</tr>
<tr>
<td>Rupert Watts</td>
<td>A passive approach to risk parity.</td>
</tr>
</tbody>
</table>

### CLOSING LECTURE.

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ricardo Hausmann</td>
<td>International economic outlook vis-à-vis Latin America.</td>
</tr>
</tbody>
</table>

### CLOSING REMARKS.

<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osvaldo Macías</td>
<td></td>
</tr>
</tbody>
</table>

### PREVIOUS FIAP PUBLICATIONS.

<table>
<thead>
<tr>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>237</td>
</tr>
<tr>
<td>283</td>
</tr>
<tr>
<td>361</td>
</tr>
</tbody>
</table>
Before we inaugurate this session, I wish to take this opportunity to extend a warm welcome to all of the presenters, all of the delegations and all of the leadership of the member-organizations who comprise the International Federation of Pension Fund Administrators, FIAP. I would also like to thank our sponsors, as well as our event partners, whose collaboration has made this event a reality.

This seminar challenges us to attempt to identify the adjustments that the sector needs to execute vis-à-vis a changing world. This is to say, if we are to respond to the needs of individuals and generate decent pensions for our retiree population after so many years of hard work. Our task, on this occasion, is to identify the root causes of the sizable gap between worker expectations and the pension payouts currently being generated.

Without going into an exhaustive analysis, suffice it to say that we need to identify exactly what dynamics are responsible for generating said pension payout amounts. Clearly, one of the issues which deserves a great deal of attention during this session is the subject of population aging; an issue which has arisen, in part, due to increases in human life expectancy, as well as a concomitant decrease in national birthrates. For decades, society slowly underwent a long series of incremental increases in life expectancy. However,
in the last three decades the velocity of population aging began to increase rapidly. The life expectancy of men has increased by 4.15 years, while women are now living 3.65 years longer on average. This dynamic has major implications for the pension sector, whereas an individual’s retirement wealth now needs to cover a much longer period of time.

In terms of the birth rate, this indicator has slowly decreased since the 1950s. In fact, women during this period had an average of five children, whereas that ratio is currently two children to every mother. This comprises yet another huge challenge for every type of pension system. In the case of funded frameworks, everything points to this issue being relatively insurmountable.

Given advances in medicine, human beings have the ability to live longer lives. And due to better and more stable economic policy, larger segments of the population are able to do so. In 2015, there were 125 million individuals over the age of 80 on the planet. By 2050, this figure will have reached 420 million people; this is to say, the over 80 population is on track to comprise five percent of the Earth’s population.

In 2018, authors Antonio Ortega and Iñaki Ortega published a book on what they term the Silver Revolution. Their central thesis is that revolutions are no longer the express purview of political institutions; instead, they now materialize in innately economic or medical contexts. In the very near future, the over-55 population will comprise 40% of the Earth’s population. The authors point out that the latest wave of increased life expectancy has not corresponded to a simple lengthening of a fairly inactive period of life. The current generation of over-55 individuals is full of extremely healthy and active people living productive lives. As a result, the Silver Revolution is going to have an enormous impact on the social and economic frameworks of societies, as millions of older adults simply continue working and consuming. Additionally, this population is going to drive shifts in the occupational structure of every nation on Earth, even as it creates millions of jobs and new industries which are designed to address this unprecedented demand for older-adult goods and services throughout the world.

In his book entitled *Longevity Insurance for a Biological Age*, Professor Moshe Milevsky suggests that the disconnect between biological age and chronological

1  *La revolución de las canas, Ediciones Gestion 2000, 2018.*
age will necessitate more than simply increasing retirement ages. The author, who has presented at previous FIAP seminars, indicates that the financial sector will to create new types of portfolios designed to address this dynamic. Milevsky, who is a world-renowned expert on retirement wealth generation, challenges the sector to begin generating portfolios vis-à-vis biological age. Whereas we currently limit our efforts to addressing chronological-age parameters, our respective financial sectors need to begin to address the true lifecycle rather than the theoretical aspects of aging.

Another major issue which we will endeavor to explore on this occasion is the manner in which technology is impacting human longevity. MIT professor José Luis Cordeiro recently published a book which asserts that, by year 2045, advances in the field of artificial intelligence and medicine are going to make death veritably optional. Many within society share his viewpoint, and the most daring predictions point to a phenomenon known as the Singularity occurring by year 2045. This point in human history will ostensibly mark the point at which artificial intelligence (AI) begins to surpass human intelligence. Thus, the thesis of Cordeiro’s book – entitled The death of Death – may not prove as outlandish as it appears; especially if one takes into account recent quantum leaps in artificial intelligence, tissue regeneration via stem cells, organ printing and cryopreservation; i.e., factors which collectively possess the potential to overcome the challenges of biological aging.\(^2\)

Although many might dispute the veracity of such claims, everyone within the pension sector is fully aware of the potential ramifications of the human race actually overcoming biological death. Here again, my aim is not to expound upon the merits of such prophecies. They merely serve to highlight the enormous amount of progress made in the field of human aging in recent years. And clearly, these quantum leaps may continue to occur. Suffice it to say that the over-100 population is growing in a significant number of nations, and at some point the pension sector needs to address the issue.

Another phenomenon which has had a major impact on pension systems in recent years is automation technology. The evolution of this sector has completely restructured the occupational composition of the developed world. For example a recent McKinsey Global Institute study asserts that between 20%...

---

\(^2\) *La muerte de la muerte: La posibilidad científica de la inmortalidad física y su defensa moral,* Deusto, 2018.
and 30% of the economically-active population within the United States and Europe is self-employed. This increase in the number of independent workers, together with the typical impact of informal-sector growth on social security systems, will continue to play a major role in pension-system dynamics; especially where Latin America and the Caribbean are concerned. To the foregoing, one might also add the current trend within the latest generation of workers to put off entry into the workforce in order to remain at university or pursue vocational training.

The aforementioned scenario has generated a heated debate regarding the net impact of automation technology on job markets. Although many argue that the situation is completely under control, studies such as the 2017 McKinsey report indicate that, by year 2030, up to 800 million jobs are at risk of being eliminated by automation technology.

If these predictions become reality, societies need to begin to consider what type of structural reform needs to occur in order to avoid potential pension shortfalls. Clearly, advances in technology, shifts in occupational composition, and demographic shifts are also going to have a major impact on pension sufficiency and coverage; not to mention, on the broader issue of the overall financial sustainability of pension frameworks. All of these factors – to include, even the most audacious predictions in terms of technological evolution – need to inform the manner in which society approaches pension reform. If we do this, we will exponentially increase our probability of generating what many would characterize as an organic response to all of the shifts in demographics and occupational composition in society; shifts which, incidentally, are shaking the very foundations of many pension frameworks.

In terms of individual capitalization systems, societies need to begin to immediately evaluate contribution rates, as well as retirement age parameters, in order to reach what economists describe as an acceptable replacement rate. Additionally, pension products need to be perfected in such a way that the current generation of retirees also receives better benefits.

The pension sector then needs to acknowledge the urgent need for a complete review of existing investment regimes; that is, with an eye to increasing the diversification of said portfolios and parameters. This is one of the few tools that pension sectors have to generate the yields required to finance higher pension payouts in the future.
People must also begin to evaluate the manner in which their societies are responding to the generally-accepted view of what our main challenges are in terms of our pension sectors. Europe and the United States have apparently been able to understand the ramifications of what the current prognosis portends. Unfortunately, due to the magnitude of the fiscal exertion required, they were unable to generate the type of structural reforms which occurred throughout Latin America. This explains, at least in part, why so many European nations – and the US – opted for attempting to keep their funded systems afloat. However, 78 of these nations were forced to raise their contribution rate, 55 were forced to increase their legal retirement age, and 61 had to significantly decrease – or simply end – the flow of benefits. Even though the contribution rate rose to a level nearly double that of Latin America, the adjustments made in the US and Europe had little to no effect.

The impact on public finances has been enormous. In fact, this scenario is what led to crises such as that seen in Greece, where public debt reached 900% of GDP. Given the foregoing, even the most intransigent opponents of individual capitalization have begun to admit that exclusively funded frameworks are simply not a viable option. Fortunately, there is even a fair degree of consensus with regard to the fact that even extremely aggressive parametric changes are incapable of turning a solely funded system into a workable alternative.

As a result, the nations of the OECD have begun strengthening their individual capitalization regimes in order to fund, on average, 30 percent of the pensions they provide. However, enormous gaps remain in terms of the results achieved in each national context. For instance, in Holland the private sector system comprises approximately 70% of the national replacement rate, whereas the contribution of private sector instruments in Spain and Italy has been negligible at best.

In terms of automatic enrollment, it should be noted that the United Kingdom utilized this type of mechanism to increase their private pension plan sector by an additional 1.9 million employers, who operate workplace plans for more than 9 million workers; account holders who, in turn, contribute GBP 20 billion per year to UK savings levels. New Zealand has also introduced an outstanding program known as Kiwisaver3, and Iceland is currently set to

---

3 Kiwisaver: Voluntary retirement savings scheme launched in 2013. Workers aged 18 to 65 are automatically enrolled by employer, with the ability to opt out of scheme during a period of four weeks.
Japan uses an automatic enrollment strategy — formerly utilized in the United Kingdom and Portugal — wherein workers are exempted from public funded-system withholding if they contribute to individual capitalization accounts within the private sector. In the US, the State of Oregon launched an automatic enrollment program in 2017. Eleven other states have implemented similar mechanisms; with New York being the latest to introduce default enrollment. Sweden uses a strategy in which workers contribute 2.5% of wages to individual retirement accounts, while in Holland contributions to individual capitalization accounts are set via sector-wide agreements (or via guidelines laid out in employer-specific plans).

Recent reforms undertaken in Latin America have unfortunately failed to take into account the nearly universally-accepted diagnosis of the pension scenario. In fact, one need only analyze the case of Peru to begin to understand the dynamic to which I refer. Peruvians enacted a law which permits individuals reaching retirement age to withdraw up to 95.5% of the retirement wealth accrued in their individual accounts. These types of measures undermine the very reason why pension systems were introduced in our societies. Peruvians also have the ability to withdraw the aforementioned funds upon fulfilling other more peripheral criteria for retirement; i.e., retirement due to unemployment; or, via an early retirement option which involves an individual reaching 40% of the retirement age. In Peru, 220,000 workers have availed themselves the opportunity to withdraw over USD 5 billion from their retirement accounts. The foregoing begs the following question: How do these individuals intend to finance their pensions? Additionally, one questions whether or not the State is — by default — thereby obligated to bridge the pension gaps which occur when these individuals eventually run out of funds.

In Chile, although the current pension system reform bill includes incentives designed to encourage workers to postpone retirement, increase worker contribution amounts, and increase contribution rates among women, the debate has remain focused on the manner in which these additional worker contributions will be managed. Many groups advocate the creation of a public entity charged with managing these assets which are to be generated by a 4% increase in contribution rates. This is to say, they are fighting to ensure that AFPs are not permitted to be involved.

Were Chile to opt for the creation of a new retirement-assets management entity, account holders would effectively be forced to pay two sets of management
fees. This is to say, on the one hand, they would continue paying a commission to their respective AFP for managing the 10% of income they currently deposit in individual retirement accounts. Said fee would be accompanied by another commission paid to the public entity which would manage the additional 4% of income deposited into accounts run by the aforementioned State-run entity. Thus, one can rationally say that an argument in favor of introducing this particular set of incentives is completely flawed. In fact, a recent OECD study commented on the innate contradictions within the retirement reform bill which is currently before Congress.

Additionally, the current legislative package fails to take into account – and objectively evaluate – the track record of the AFP sector within Chile. The AFP industry has achieved solid results for nearly three decades, having nearly tripled the assets of workers who deposited a percentage of their wages into individual capitalization accounts. Apparently, this aspect of the pension question is not relevant enough to merit inclusion on the debate agenda. This is unfortunate, to say the least. Among others, it serves to impede the sector’s ability to remediate current payout levels.

Other nations have attempted to continue pursuing funded-framework strategies, in spite of the fact that available evidence characterizes them as inherently unviable alternatives. Nations attempting to operate partially-funded pension systems face the exact limitations; which is to say, these too comprise economically-sustainable scenarios. Unfortunately, pension systems seem to attract a great deal of attention from individuals engaged in demagoguery and populist rhetoric; principally because the deleterious effects of irresponsible public policy often do not materialize until decades later. The myopic nature of such approaches only leads to erroneous decision making; the results of which, as stated, will be primarily felt by future generations.

As typically occurs when debating advocates of populist agendas, one’s opponent focuses on the supposed defects and shortcomings of a given framework. They do everything within their power to silence any who would expound upon the benefits or achievements of existing structures. These types of politicians feed off of social chaos and frequently only seek to polarize public opinion; unfortunately this usually comes at the cost of conducting a rational debate. Mention is never made of the price to be paid for pursuing innately myopic policies. Populists have no qualms with sacrificing future generations on the altar of short-term gains. This is because these ill-gotten gains are exactly
what allows them to consolidate their power base. Eventually, demagogues make their exit and society is left, as it were, holding the pension bag. While they always seem to begin with a bang, populist policies always seem to leave a bitter taste in the mouths of workers. Societies have witnessed this dynamic throughout all of human history, and yet it seems that a significant proportion of mankind will always be vulnerable to this type of scheme. Many who hold public office fall into the trap of promising completely unreasonable benefits at little to no immediate cost to the recipient; the rationale being that – by the time society catches on a scheme’s deleterious effects – the politician will be out of office. Here again, it is always ensuing generations pay the price for the current generation’s inability to face facts. To paraphrase the words of Churchill, “a politician only thinks about the next election, whereas a statesman thinks about the next generation”.

In closing, I wish to merely provide an unapologetic diagnosis of the current litany of challenges and risks facing pension systems vis-à-vis an age in which humans have begun to live 100 years and automation technology is completely restructuring occupational compositions across the globe. As such, the FIAP invites policymakers to objectively evaluate these factors when contemplating reforms aimed at improving pensions via changes in their respective regulatory frameworks. I am convinced that this simple exercise will enable our societies to filter out the peripheral and superfluous topics which can derail constructive debates and well-drafted legislation.

Guillermo Arthur
Chairman, FIAP

Good morning, and welcome to all of those in attendance.

For the membership of the Chilean Association of Pension Fund Administrators (AAFP), as well as the International Federation of Pension Fund Administrators (FIAP), this forum comprises a truly unique opportunity to come together and discuss pension frameworks in a moment in human history when most of us are living longer – and fortunately, healthier – lives. As life expectancies increase, everything pension-related within a society becomes exponentially more significant. Our work agenda for this session, in consequence, is full of issues that are of paramount importance to society. Our aim is to engage in yet another vigorous debate on this, our latest set of sector challenges.

I wish to take this opportunity to provide a bit of political context regarding our national pension sector. As many of you are aware, a pension reform bill is currently before our Congress. Like many societies, Chile is currently evaluating its options in terms of pension system reform. Unfortunately, the debate has not remained focused on individuals’ well-being. It has also failed to address the issue of how our nation plans to improve pension payout levels. For better or worse, we have chosen to focus on issues which an objective
individual would characterize as peripheral in nature. As one would expect, this has all come at the cost of addressing issues of paramount importance.

The Chilean debate has also failed to address the more than 3 million workers who are not actively generating retirement wealth within our national pension framework. We have also failed to evaluate the issue of contribution rates with the degree of focus which it so clearly merits. Perhaps this is why the current bill before Congress contains a fairly timid response to our current contribution rate; which is to say, the proposed measure falls well below what I will term the OECD standard.

Many readers will be aware that an increase in the contribution rate is likely to generate a concomitant impact on our job market. The sector is fully aware of this dynamic, and the idea is to gradually introduce increases over time. However, an increase is nothing short of imperative if we intend to increase payout amounts; especially when it comes to our latest generations of workers. Furthermore, we always have the option to index contribution rate increases vis-à-vis labor market behavior. This is to say, we can utilize a gradual rate increase that is pegged to unemployment rates or other major labor market indicators. Under these circumstances, the rate would rise or fall based on periodic adjustments.

In the view of many, our national debate has also failed to address the challenges of longevity. In fact, it has not even found its way onto the debate agenda. Given the tremendous advances in medicine and scientific research, Chilean women and men are respectively living nine and six years longer than in 1981, the year in which our system was launched. Regrettably, we have failed to generate a significant response to such a substantial demographic shift for a very long time; in fact, nothing has been done for nearly four decades to remediate the longevity shortfall.

Rather than focusing on pragmatic issues such as longevity, we have spent most of our time debating the fund managers’ fee schedules. Despite having done nothing to cast doubt upon the integrity and suitability of the Chilean pension model, the majority of accusations during the debate have centered on fund administrator behavior. Given such a spotless track record in terms of delivering solid results over a 40-year period, it is astounding to consider that the debate has ended up so far off course.
In light of the foregoing, I believe it imperative that the sector take a more proactive stance vis-à-vis the pension reform debate. This will entail objectively evaluating the current state of sector affairs, and then generating an actionable debate agenda based upon said analysis. Furthermore, I believe that our primary sector objective should be to ensure that the pension debate focuses on issues of societal – and not political – relevance. Should we fail to achieve this course correction, we would be failing to meet sector-wide obligation to do everything in our power to ensure the integrity and quality of current and future pensions.

I know that our society is capable of executing the aforementioned course correction. Chileans have been first-hand witnesses to the success of the Chilean AFP model for decades, and I know that we are capable of getting our reform debate back on track and focused on what matters most: generating the pension payouts which our model was designed to deliver.

Furthermore, I am convinced that our nation would never allow the retirement wealth generated by workers in individual capitalization accounts to be used for political ends. I am equally convinced that our pension framework will never be nationalized. This would be nothing short of a total betrayal of the social contract upon which the individual retirement account system is based.

In order to achieve these ends, we simply need to remain focused on the issues of paramount importance and not get sidetracked on to issues of peripheral importance. As a recent OECD report indicates, the entities within the Chilean economy which are best qualified to administer worker retirement wealth are, in fact, the AFPs. For almost four decades, these funds have ensured our citizens’ assets have been managed efficiently. And, ideological rhetoric aside, their track record speaks for itself.

Chilean pension fund administrators have offered to manage the proposed 4% additional contribution at no cost to account holders, and yet certain sectors of society have refused to even acknowledge this potential benefit. Here again, we have allowed ourselves to get sidetracked on to less empirically-oriented issues. It is easy to understand why issues so vital such as pension payouts have not yet even been broached. It is time to de-escalate the rhetoric and spend our time and energy on making the necessary adjustments to an outstanding model.
It is in this spirit that I invite every member of our society to approach pension reform with an open mind and an open heart. Everyone agrees that an objective evaluation of current system parameters needs to occur, and that the industry and civil society have put off this review for far too long. I believe that a rational mind will walk away convinced that the Chilean model remains the only economically-viable alternative; especially if they take into account what is beginning to occur in funded systems throughout the world. Therefore, I invite everyone to begin this session in a spirit of nonjudgmental debate, and avail our society – and our pension sector – an opportunity to discuss options in an open forum; a forum in which the major players in pension reform can come away with practicable solutions to vital issues. At the end of the day, the current generation of retirees – as well as ensuing generations – is counting on us to deliver concrete results.

Andrés Santa Cruz
Chairman, Chilean Association of Pension Fund Administrators
I would like to begin by extending a special welcome to the delegations visiting from abroad and thank them for joining us during this two-day forum. I also want to welcome the entities which comprise the membership of the International Federation of Pension Fund Administrators (FIAP), as well as FIAP chairman and fellow Chilean, Guillermo Arthur.

I think we all owe a debt of gratitude to the event organizers for bringing us together and having generated such a relevant agenda. To clarify, I am convinced that if we intend to objectively evaluate pension sector challenges, we need to put aside myopic viewpoints that inhibit our ability to maintain a proactive posture vis-à-vis short-term as well as long-term opportunities. The velocity with which the pension sector is evolving demands every sector actor involved strives to remain ahead of the curve.

Lastly, I wish to extend special thanks to every sector professional, subject-matter expert and government official for having decided to attend this forum and actively contribute to the improvement of pension system frameworks. At the end of the day, a single administration or political party will never be capable of executing the necessary reforms. A task of this magnitude requires
the active participation of a wide variety of actors in society: employers, the State, workers and pension fund administrators. The only path to success is teamwork. And, in my view, we cannot allow ideological differences to impede out achieving such a noble end.

As nearly every nation on earth attempts to deal with the economic and societal impact of aging and pensions, a great deal of anxiety is being generated. Societies are also increasingly beginning to ask how the sector intends to deal with these challenges. As we generate strategies to respond, I think it best to break the task down into three major categories: societal challenges, economic constraints and labor market dynamics.

In terms of the societal factors involved, in most cases national birthrates have decreased as quickly as our life expectancies have increased. This has led to a demographic scenario in which, according to World Bank statistics, nations have 13.6 individuals in the over-64 age group for every 100 inhabitants in their economically-active populations (i.e., 15 to 64 years of age). In the case of Chile, we have already reached 16.8 older adults per worker.

In terms of the economic panorama, things have been extremely challenging for almost every society on earth. Global issues such as the current trade war between the United States and China, together with internal economic volatility, have exacerbated the budgetary challenges nations face as they attempt to finance their pension frameworks. For instance, in September 2019 Chile’s central bank lowered our overnight rate a full 100 bps to 2%; which is to say, from a rate of 3% in January 2019. Furthermore, a recent article published in our leading financial daily, Diario Financiero, indicated that the rate would likely fall 50 bps to 1.5% by December 2019. As such, Chile too has own set of challenges on this front.

In terms of our national labor markets, many Latin American countries are struggling to combat informality, even as they attempt to address the new employment paradigm generated by automation technology and the evolution of digital platforms. These factors have converged to redefine the very concept of employment.

1 Central Bank Council considered to be more drastic and leave the rate below 2% in its last meeting, Diario Financiero, 24 September 2019.
In light of the foregoing, adjusting and improving our pension frameworks in order to generate better payouts has become an international moral imperative. Most of our societies have very few issues which merit higher priority, in fact. As a result, sociopolitical agendas must not be allowed to interfere with national debates; and, for that matter, they must not be allowed to impair a nation’s ability to objectively evaluate pension frameworks that are operating in other countries. This is because, as always, it is important to see what other societies are doing in order to incorporate lessons learned. Thus, a decidedly inward-looking stance on pensions is simply not viable. Chile, for its part, has incorporated many lessons learned abroad into its recent reform bill which was presented to Congress on 29 October 2018 by President Sebastian Piñera.

How can one best quantify the current atmosphere? In short, there is a significant gap between the expectations of Chilean workers – and especially those who are about to retire – and the pension payouts currently being generated: pension amounts which, incidentally, are often failing to address even the basic necessities of the current generation of retirees. If we fail to take action to remediate the situation immediately, our children will experience this same level of disillusionment when they reach retirement age.

The challenges which the Republic of Chile is facing are not unlike those faced by every other nation on the planet. However, in our case, things are happening at a much higher velocity. In fact, current national life expectancy at birth – 79.9 years as of 2017 – positions Chile well above the current international average of 72.4 years. At the same time, the international birthrate – measured in live births per 1000 inhabitants – has fallen from 22.29 in 1990 to 12.7 in 2017. The convergence of these two factors has led to a World Bank projection of a 100% increase in the number of older adults seeking adequate pensions by year 2040.

This scenario demands that we generate a work agenda and public policy capable of generating short-term and long-term solutions, simultaneously. As such, pension reform initiatives which we put forth in 2019 must address the current demographic scenario, as well as those which may occur in the near future; this is to say, we need to come up with solutions which are as sustainable as they are effective. We also need to ensure that legislation includes mechanisms that ensure our societies constantly monitor a policy’s effectiveness, and allow legislatures to make any needed adjustments in an extremely timely fashion.
Fortunately, the current pension reform bill before Congress addresses the existing set of challenges, as well as those which we have identified on the long-term horizon.

One of the greatest achievements of the reform bill is that it addresses what we term our Solidarity Pillar. This pillar provides coverage to the 60% most vulnerable retirees within our population whose savings failed to finance even the most basic needs of retirement. Via an injection of USD 881 million in public resources (in 2030 USD), Chileans will provide better pensions to this older-adult population, which currently totals 1.5 million inhabitants. It will also provide them with a wider spectrum of pensioner benefits. The basic solidarity pension, which is known as the Pensión Básica Solidaria in our society, will generate an immediate 10% increase. This measure will be accompanied by an additional, gradual increase which will occur over a five-year period. Said increase equates to a 50% rise in current payout levels, and will be graduated vis-à-vis age cohorts.

While the current bill addresses the aforementioned 60% of our most vulnerable retirees, clearly a great deal remains to be done. With this in mind, the reform package includes a Middle-Class Pillar, which is unprecedented in Chilean history. The cost of this measure is USD 671 million (in 2030 USD) and is aimed at individuals who receive pensions of less than USD 1000 per year. The initiative is intended to help out people who, despite having made repeated efforts to generate retirement wealth, were unable to accumulate enough resources to meet their basic needs. As a result, the measure includes a mechanism whereby the State will provide higher percentages of matching funds to individuals who accumulate more years of active contributions.

The bill also includes measures designed to remediate the situation of Chilean women, which have consistently and unjustly been discriminated against in the national labor market. These impediments to higher female participation rates have generated a gender gap of 15.8 years in terms of time in system. As a result, our administration is fully committed to tearing down all barriers to women’s participation within the workforce. We have bills before Congress designed to address a number of vital issues such as universal childcare, home-office employment and a complete reworking of the employment regulatory framework in order to ensure Chileans are well-positioned to incorporate work life and family without a concomitant sacrifice in terms of career potential.
The current bill also addresses the issue of pension contribution gaps due to unemployment. We have included a pension-gap insurance plan – known as the Seguro de Cesantía Solidario – which ensures workers continue making their monthly individual retirement account contributions while they are searching for a new job. Individuals have enough to worry about when they are unemployed. However, now the issue of pension gaps has been effectively removed from the equation. We feel that the measure is especially well-timed, as job changes are increasingly becoming a fact of life for many workers.

Another insurance-related measure within the reform bill addresses our increases in life expectancy and lower rates of return. These two factors have had a negative impact on payout amounts, and the administration feels that a longevity insurance program may prove to be an extremely effective weapon against these types of impediments to pension adequacy. We also included a dependency insurance program which will help cover the eldercare services most retirees require at some point in their lives.

In addition to these immediate measures and insurance programs, a 4% increase in employer contributions has been included in the reform bill. This will ensure that our society is fulfilling simultaneously generate both short and long-term solutions. The idea is to gradually ramp up to said level of 4% over a period of eight years. The idea here is to minimize the impact of such a measure upon our labor market via a graduated escalation of said employer contributions.

The pension system reform package is not the only measure we have put forth designed to provide coverage to workers upon retirement. In 2019, Chile enacted legislation which significantly modified are regulatory framework with regard to the incorporation of self-employed workers into social protection programs. Before this change in our withholding policy, over 575,000 independent contractors lacked health care and social security coverage. These Chileans also lacked access to prenatal and postnatal leave, and many lacked the ability to save for retirement. It was not easy to push this measure through, and mandate that independent contractors adhere to the same withholding regulations that apply to the rest of the workforce. However, the administration accepted the challenge because a worker’s desire for short-term income gains in no way justifies an unwillingness to participate in the AFP model and, as a result, confront a situation of abject poverty during old age.

---

A significant proportion of Chile’s self-employed workforce is involved in digital platform work. These workers face the same challenges as the aforementioned segment of self-employed workers. According to recent Ministry of Labour figures, nearly 115,000 individuals work for digital platforms within our economy. These workers need to be categorized vis-à-vis our current regulatory framework and thus receive the same protection afforded to formal sector and self-employed workers; the latter of whom, as of 2019, are no longer able to simply avoid Chile’s social security withholding mechanisms. As a result, our administration is working hard to ensure that individuals employed on digital platforms are also required to pay taxes and contribute to their retirement plans. In the past, this has been extremely challenging because these individuals do not generate receipts for services rendered. Given this scenario, we have pushed for the inclusion of a digital platform employment clause within the _Ley de Trabajo a Distancia_ bill which is currently before the Senate. The measure comprises a part of a broader reform of Chilean labor law which seeks to ensure more individuals have the option to work at home or off-site.

Ensuring that self-employed as well as formal sector workers comply with social security withholding law constitutes a major challenge in Chile. Success will involve a complete modernization and reengineering of our tax evasion measures. Our society also needs to put in and to individuals simply opting to rely on the State for retirement wealth once they exit the workforce. Incentives need to be created, and we leverage latest-generation technology to ensure Chile is implies with international best practices in terms of taxation. I recently spoke with FIAP Chairman Guillermo Arthur regarding what other nations are doing to increase income tax and social security compliance levels, and feel that Chile will have a great deal more resources available to fund unemployment insurance and the pensions of independent contractors once it overcomes its compliance issues. Additionally, one of the major reasons that I chose to attend this forum was to hear about how other nations are addressing this issue.

What role should pension fund administrators look to play in this new social security scenario? While its primary mission should be to optimize the yields of assets under management, if the industry intends to generate higher pension payouts for fund participants, this cannot be its lone objective. At the end of the day, pension fund administrators are social security entities. As such, they have a vital role to play in terms of ensuring that the social security contract within society remains viable. Therefore, society expects the sector to take a proactive
stance in terms of forecasting short and long-term social security constraints. We also expect the industry to generate policies aimed at increasing the financial education IQ of Chileans, as well as ensuring that our population is better informed of how the sector operates. Lastly, society expects this sector to invest properly in tools and professionals that improve customer service, with the aim of providing said services at the lowest cost possible.

Given this significant level of societal responsibility, pension funds need to demonstrate tangible signs of concern for their participants. And, to be frank, many within Chilean society feel that the sector has fallen a bit short of the mark when it comes to generating these types of measures. For example, issues such as pension-contribution gaps need to be addressed in a very public way. This is to say, whereas no one is blaming fund managers for workers failing to make contributions to their retirement accounts, most societies do expect funds to sound the alarm when a significant proportion of the population is failing to generate enough retirement wealth to cover the basic needs of retirement. In my view, the sector essentially has a responsibility to let officials in our government know when the issue of pension adequacy is not being addressed properly. Otherwise, our government ends up getting blindsided by major pension shortfalls which, as we all know, cannot be remediated in a matter of months. The state is then obligated to step in and remediate the situation by whatever means necessary. Clearly, we need to avoid these types of scenarios at all costs because the issue of politicizing pensions becomes more likely. At the end of the day, however, the point here is that everyone involves needs to have as much advance notice as possible: workers, the State and society as a whole all need to have a clear understanding of pension adequacy. Each needs to know how Chile is faring in terms of per capita retirement wealth and the pension sector is the only entity that has real-time access to said data. As such, it must be the first to sound the alarm.

The challenges facing our individual capitalization model are completely manageable if the Chilean pension industry takes a proactive and socially-responsible stance vis-à-vis this responsibility. No one is better qualified to let the general public, as well as the Senate, know when a measure is failing to deliver acceptable results. The sector is also uniquely positioned, as well as uniquely qualified, to advise a given administration when pension payout levels are failing to comply with rational pension adequacy parameters. Should our pension industry and other actors fail to fulfill this obligation, Chile will be relegated to repairing an infinite number of leaks within a sinking vessel.
As we all know, these leaks begin to increase in frequency and intensity over time, and distract us from the real issues. Additionally, this type of chaotic atmosphere only serves to embolden those who would utilize the pension debate forum for their own political ends. Ideological extremism only clouds the issues and, at the end of the day, hurts one sector of the population more than any other: our current generation of retirees. The truly dangerous aspect of political opportunism is that a single generation of fiscal irresponsibility can create havoc for several generations of pensioners.

I think societies around the world also need to change their perspective a bit in terms of the broader aspects of the pension question. Warning society about pension adequacy shortfalls is not the sole purview of the State. Employers and fund administrators also have a major role to play. Firstly, both need to help our governments get the message out to the general public. Secondly, the entire sector needs to work to ensure that payouts improve. And thirdly, employers and funds need to ensure that national best practices permeate the pension industry. This type of intrasector cooperation will ensure fund participants receive better levels of services at lower costs. Additionally, it will help ensure that private-sector entities, as well as their public-sector counterparts, are one step ahead of all of the determinant factors which exist in such a rapidly changing world. Of course, seminars such as those hosted by FIAP also provide an opportunity to exchange international best practices, and are thus the logical extension of said cooperation – only on a much broader scale.

In these circumstances, no society can afford the luxury of an apathetic approach to labor market dynamics. Public policy must actively combat informal-sector growth, and increase pension participation rates among independent contractors. Chileans also need to ensure that nontraditional workplace scenarios are evaluated, with an eye to increasing inclusion among traditionally-excluded segments of our national workforce. And, clearly, this is not an expressly Chilean paradigm. Every nation on earth needs to evaluate how well it is addressing these issues. Governments also need to avoid the temptation of separating the pension question from the broader labor market issue. This is a completely irrational approach to two factors which are innately and irrevocably intertwined. Generating a false dichotomy will only serve to weaken the effectiveness of public policy aimed at each half of the issue.

In closing, I wish to again thank our local AFPs and foreign delegations for attending this forum. It is reassuring to see so many individuals from the public
and private sector who are so committed to generating solutions. Although national social security schemes may vary in terms of the parameters involved, the ends we seek are extremely similar.

Nicolás Mönckeberg Díaz
Minister of Labour and Social Well-Being
The International Federation of Pension Funds Administrators, FIAP, is an international agency incorporated in Uruguay, bringing together the trade associations of pension fund managers from 12 countries (Bolivia, Colombia, Costa Rica, Chile, El Salvador, Kazakhstan, Mexico, Peru, Spain, the Dominican Republic, Ukraine and Uruguay). The workers represented by FIAP member associations and institutes total more than 112 million as of March 2019, and have accumulated more than USD 611 thousand million in their respective individual accounts.

FIAP endeavors to contribute to the improvement and strengthening of private pension systems, in order to offer the best possible pensions to its members, via
financially sustainable systems. 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, and by providing information and support for the improvement of systems. In order to further these objectives, FIAP has organized 16 international seminars.

The Federation also brings together 14 “collaborating members”, which are predominantly 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; BlackRock; Brown Brothers Harriman & Co; Compass Group Global Advisors; GAM (Luxembourg) S.A. Spanish branch; Inversiones Security; Jupiter Asset Management; M&G Investments; Pictet & Cie (Europe) S.A., Spanish branch; Principal Financial Group; S&P Dow Jones Indices; State Street Global Advisors; and SURA Asset Management.

Recently, FIAP has also organized seminars on "Alternative Assets" and "Voluntary Pension Savings," which were attended by experts and regulators from all of the FIAP member countries. FIAP maintains open channels of communication with pension-sector regulators within FIAP member countries, as well as international agencies concerned with pension issues (OECD, ILO, IDB, IMF and the World Bank).

Lastly, FIAP carries out research on the issue of individually-funded systems, and compiles statistics which may be of use to member countries. Sent data is available online at: www.fiapinternacional.org. FIAP’s publications include Pension Notes, which are brief documents addressing different matters of interest in the area of pensions.
CHAPTER I
SECOND-GENERATION REFORMS OF THE PENSION SYSTEMS

PABLO ANTOLÍN. Guiding principles for good pension reform in Latin America.
PABLO GOTTRET. International pension reform trends.
PAULO VALLE. Pension Reform in Brazil and the Complementary Pension System: Scenarios, challenges and debates.
BENNE VAN POPTA. The political economics of pension reform: failures, successes.
AUGUSTO IGLESIAS. Chile’s pension system reform bill.
RODRIGO VALDÉS. Chile: Pension reform challenges.
Conversation with Augusto Iglesias and Rodrigo Valdés.
GUIDING PRINCIPLES FOR GOOD PENSION REFORM IN LATIN AMERICA

PABLO ANTOLÍN ¹

¹ Principal Economist, head of Private Pension Unit (OECD). Deputy Director, Financial Affairs Division (OECD).
It is a privilege to have an opportunity to share the OECD guidelines intended to facilitate the pension reform processes currently being undertaken in a variety of societies. The parameters outlined in this article should prove of use in any national context; which is to say, regardless of whether or not said nation is an OECD member. As such, I am convinced that they are of great relevance to Latin American societies confronting these very challenges. These guiding principles were developed in order to address an extremely wide spectrum of pension systems, and their primary aim is to help nations generate better pensions. Additionally, it is hoped they will ensure that said systems are operated, first and foremost, in the interest of the individuals who make up a given society.

In terms of pension reform, the primary recommendations of the OECD are as follows: (i) diversify retirement income sources; (ii) achieve complementarity (i.e., said income sources should be complementary in nature); (iii) separate pension financing sources; (iv) emphasize importance of a strong, universal old-age social protection network (i.e., solidarity pillar) that is financed via general revenues; (v) establish automatic actuarial adjustment mechanisms for pension system parameters; (vi) delineate adjustments to be made, and concomitant costs of, pension reforms; and, (vii) improve the design of defined-contribution, individual-capitalization systems.

Fortunately, the OECD has published a policy roadmap which should prove of use to policymakers as they address their respective, defined-contribution capitalization schemes. The document is available in English on the OECD website.

Diversify

The OECD recommends that societies provide the means by which individuals are able to diversify their respective retirement income sources. The organization is also convinced that an optimal approach involves capitalizing upon the relative advantages of all available pension system frameworks.
One such alternative is the funded, or PAYGO, system. Funded systems involve funding current pensions via current contributions; which is to say, today’s pensions are funded by today’s contributions. In the view of the OECD, the main point here is that funded frameworks involve systems based on contributions which are generated by the current generation of workers. The second alternative is individual capitalization, a framework in which pensions are financed by accumulated assets. It is important to note that capitalization systems may be defined contribution or defined-benefit. However, the main point here is that pensions are financed by accumulated assets and not via current contributions as is the case in funded scenarios.

It is crucial to unambiguously delineate how one defines the phrase funded system. Here again, in the judgment of the OECD a funded system is comprised of a basic pension within a solidarity pillar; this is to say, that said basic or minimum pension is provided to individuals via such a system. In terms of rights or contributions, contributory funded frameworks are not innately distributive. Although arguments exist to the contrary, contributory funded frameworks simply imply a need to save in order to accumulate retirement wealth. The distributive aspect of funded systems involves the intergenerational nature of contributions, as well as between members of society, which occurs via basic pensions (i.e. either via a solidarity pillar or a minimum pension, as the case may be). Thus, in the view of the OECD, every nation on earth currently operates a funded system, whereas even nations such as Chile and Australia utilize pension frameworks which involve a solidarity pillar within a broader individual capitalization scheme.

Ensure complementarity

The second OECD recommendation involves ensuring pension reforms seek to optimize complementarity between funded and individual capitalization frameworks. Public funded pension schemes need to coexist alongside their capitalization counterparts. As such, when designing capitalization and funded frameworks, strategies need take into account the coexistence of these parallel systems. This is to say, capitalization systems need to be designed vis-à-vis the exigencies, shortcomings and strengths of public pensions – and vice versa. Under ideal conditions, individuals receive pensions financed through the use of resources generated within both frameworks.

What cannot be allowed to arise is a scenario in which the two alternatives actually compete against one another. Instead of impeding the available inertia of its counterpart, each scheme should complement the other in order to generate a pension which is the aggregate sum of both funding sources (i.e., funded and capitalization).
CHAPTER I
CHAPTER I. SECOND-GENERATION
REFORMS OF THE PENSION SYSTEMS

Diversify funding sources

The third message involves the importance of generating separate funding sources with which to finance public pensions. This aspect of reform is extremely relevant to almost every national context on earth. In fact, it has been an issue of vital importance since the 1990s and has already been introduced within the vast majority of OECD nations. The nomenclature used to denominate noncontributory public pensions – which is to say, frameworks comprised of a solidarity pillar, social protection and basic minimum care – varies vis-à-vis national context. However, the central idea is one in the same: every individual within a given society has the right to receive a guaranteed basic pension payout that is designed to combat older-adult poverty, as well as fulfill either distributive or redistributive objectives.

It is also important to mention that the OECD has never indicated what the ideal basic pension payout amount should be. This type of decision is best made by a nation’s elected officials in charge of making adjustments to its regulatory framework. What the OECD has indicated is that social welfare floors are obligatory in nature, and not measures designed to generate such mechanisms should be financed through the use of general tax revenues; which is to say, as opposed to utilizing contributions to fund such measures.

Lastly, as mentioned previously contributory pensions are primarily designed to provide a means by which to save for retirement.

A strong – and universal – social protection network

The OECD always endeavors to emphasize the necessity on the part of societies to generate strong and universally accessible old-age, social protection networks which are funded through the use of general revenues. If everyone within a society is not addressed by a social protection network it is failing to meet one of its prime objectives.

Thus, all effective pension reform initiatives must include a means to provide a strong old age universal social protection network, which is funded via general revenues; i.e., a solidarity pillar, and a basic pension. And when one refers to universal access, in this instance the phrase does not imply that everyone within society will receive said basic pension payout. The notion to which the OECD refers to is universality in the sense that every member within society has a right to access said benefit vis-à-vis a given set of criteria. However, this in no way implies that everyone will actually receive said basic pension.

Furthermore, a minimum pension may be offered which operates vis-à-vis
contribution levels. In the majority of OECD nations, the basic pension (solidarity pillar) can lead to problems in terms of the issue of negative incentives to viable participation rates. Therefore, it is often advisable to offer a basic pension which is then complemented by a minimum pension which increases in correlation to the contributions an individual manages to make.

Graph 1 demonstrates what types of payouts are generated by individual accounts. Line 3 represents the pension payout amount generated over a series of points in time, whereas Line 1 indicates the growth shortfall in the solidarity pension payout. Here again, basic pensions are financed via the solidarity pillar and every individual in a given society has a right to receive said benefit. However, as stated, this in no way implies that everyone well in fact receive the payout in question. The logic employed under these circumstances is the following: as the amount of retirement wealth generated within an individual’s account increases, the necessity to earmark solidarity-pillar resources – in order to address said individual’s retirement needs – decreases proportionately. And clearly, the OECD is convinced that each nation must decide at which point the balance should tip. The point at which Line 1 intersects with the Line 3 is the point at which no incentives to contribute to individual accounts are generated. Line 2, for its part, represents the minimum pension.
Individuals tend to believe that their eventual payout amount will not increase, and simply resign themselves to receiving the pension generated within the solidarity pillar. An effective means to remediating this problematic incentive scenario involves generating a basic pension payout level which correlates strongly to an individual’s demonstrated ability and willingness to comply with contribution exigencies. The fact that the payout amount generated within such a minimum pension scheme begins to surpass the payout available via the pension floor ensures that individuals have an incentive to meet their obligation to contribute as best they can to their individual account. The interplay within the three alternatives is represented by the triangle comprised of the three lines included in Graph 1.

At the end of the day, the OECD merely seeks to ensure that nations understand that every member of society has a right to receive a pension which allows them to avoid falling below a given poverty line.

**Automatic, actuarial adjustment mechanisms**

The fifth OECD message is the necessity to utilize automatic, actuarial adjustment mechanisms. This basically involves utilizing a pension payout amount which is automatically adjusted vis-à-vis macroeconomic realities (i.e., growth, wages, interest types, return on investment and inflation), as well as demographic variables (life expectancy). The greatest challenges which funded as well as individual capitalization frameworks face correlate to the liability side of the ledger. This is to say, the issue of whether a system is funded or involves individual capitalization is less germane than the magnitude of its respective liabilities. Both schemes have one major problem: social security schemes promise to deliver of future payout vis-à-vis a given set of parameters which necessarily change over time. This is to say, the historical context in which said liabilities were generated is determinant unless adjustments are made. Societies, as well as economies, tend to evolve over time. Thus, the parameters within which social security schemes operate must also transform – and it is hoped, improve – over time.

The inability on the part of a society to take actions designed to adjust the expectations of individuals correlates directly to the scale of its concomitant liabilities. At some point in time, someone will have to pay to cover the costs of said liabilities. And herein lays the catalyst of every pension debate on earth: societies are grappling with the issue of what segment of society should pick up the bill for said liabilities.

Defined-benefit systems face this selfsame and rather immense challenge. Therefore, automatic actuarial adjustment mechanisms need to be introduced within funded as well as individual capitalization schemes. Holland is a world leader in terms of the number of reforms it has introduced into its defined-benefit capitalization framework and in terms of automatic actuarial adjustment measures.
In terms of funded systems, many societies have introduced reform measures. For instance, every nation within the European Union has discussed the need to adjust pension payouts vis-à-vis economic and/or wage growth. Additionally, these societies have also discussed the need to adjust retirement ages in relation to increases in life expectancy levels. All of the initiatives introduced have involved automatic mechanisms.

**Defined-benefit schemes: pros and cons**

**Defined benefit**

- Level of certainty: somewhat predetermined, whereas individuals know exactly what payout amount will be; formula used to define benefit (number of years in system + accrual = replacement rate).
- Liability: assumed by firm or the State (debt, sustainability, bankruptcy)
- Generosity: non-synchronous parameters, liability unmet by contributions due to life expectancy and/or macroeconomic realities such as low growth or low yields. Benefits even provided to individuals receiving a pension of between EUR 1650 and EUR 2000 per month.

To summarize, one of the defined-benefit parameters changes in correlation to the formula established to take into account macroeconomic realities and unforeseen demographic shifts. In this fashion, defined benefits become generous over time. Defined-benefit frameworks, in and of themselves, do not necessarily equate to generous benefits. Rather, when system parameters fail to adjust vis-à-vis macroeconomic and demographic realities, the implied promise becomes generous, whereas contribution rates within these new scenarios fail to cover generated liabilities.

**Defined contribution**

- By definition, imply the use of automatic adjustment mechanisms.
- Do not generate disproportionate generosity.
- Risk correlates to individuals rather than societies.

Defined-contribution systems clearly have an entirely different set of challenges. However, they too involve a balance between available advantages and disadvantages. The OECD simply requests that societies determine what components are useful and merits inclusion on pension reform agendas. Here again, it does not attempt to specify a specific poverty line. Each nation will need to make that determination as it endeavors to introduce its respective basic pension parameters. Nothing in economics is perfect, and this is definitely the case when it comes to the pension
sector. The OECD feels that both systems possess attributes which may prove of use as societies undertake pension reform. It only encourages States – and of course, regulators – to be aware of the potential positive and/or negative ramifications of the reform measures it intends to introduce. Furthermore, the organism does not back a specific framework or model. This would be misguided, whereas no perfect system exists. Thus, each society must execute an objective analysis of available benefits and detriments as it attempts to tailor its pension system to the full spectrum of economic and demographic realities.

The other major issue involved here is the implementation phase of reform. However, I will not be addressing said aspect in this text. I am, however, available to discuss the central issues with any industry or sector representatives to whom my remarks might be of use.

The principal challenge of defined-contribution systems are the risk levels generated when individuals make their own decisions. Our decisions to participate in a given pension scheme, contribute to a retirement account, choose a pension provider, and pursue a given investment strategy, all have the potential to impact the final pension payout amount which is generated. In fact, individuals have to make decisions regarding a wide variety of issues in terms of their retirement wealth:

- Whether or not to participate (accrue retirement wealth)
- Percentage of income to allocate or contribute
- Choosing a pension fund provider
- Choosing an investment strategy
- Deciding how to allocate accumulated retirement wealth assets

Additionally, we all have our own set of behavioral biases which need to be overcome, and which are also often exacerbated by a less than optimal understanding of financial sector issues. Individuals can often suffer from an inability to make a timely decision, or simply be too shortsighted or overconfident to make sound financial decisions. This is clearly one of the most variable factors involved in this entire scenario, and unfortunately many economic models fail to factor in this wildly varying determinant which is such an integral part of human nature (viz *homo economicus*). At the OECD, we have performed an analysis of how different societies have responded to this challenge. One of our major messages is that the economic mechanisms utilized in funded as well as individual capitalization frameworks are very useful in terms of addressing – or at least mitigating – the impact of the behavioral bias issues of human beings, as well as the aforementioned concomitant ramifications of same. Here again, I wish to emphasize that the OECD is available to comment on the determinant factors in play as societies endeavor to generate public policy designed to, inter alia, introduce pension reform.
Reforms, modifications and costs

As Guillermo Arthur asserted in his opening remarks, during the last 20 years the majority of OECD nations have introduced or increased the footprint of individual capitalization systems within their societies. Some have decided to do away with same, for a variety of reasons.

As societies have endeavored to adjust the footprint of capitalization frameworks, they have done so via the use of individual capitalization accounts. In light of our analysis of international experience in a variety of national contexts, especially in events as they have taken place in the nations of Eastern Central Europe, the OECD has come to the conclusion that it is vital to introduce such capitalization regimes via a very gradual process. This is especially the case in instances where contributions are designed to replace certain aspects of a funded system. When gradual measures are utilized, economies have an opportunity to adjust to this merely wholesale diversification of their respective social well-being sectors. Furthermore, this aspect of pension reform is even more relevant when capitalization is introduced through the diversion of funded system contributions into a capitalization framework.

The migration from a funded to a capitalization framework generates what is referred to as transition costs. They are particularly high when one takes into account the aforementioned transfer of contributions. A major liability is generated in terms of the societal obligation to meet its funded system payouts; i.e., its outstanding defined-benefit liabilities. Said obligation must still be met and, therefore, funded despite the fact that contributions designed to finance said promise have been diverted elsewhere. Societies end up addressing the shortfall through the use of public debt.

In light of the foregoing, public policy makers need to evaluate the entire transition issue with a great deal of caution, whereas transition costs have the potential to increase budgetary constraints within the short term and thus increase the risks individuals face. A failure to generate a contingency plan for this issue is ostensibly what has caused these societies to do away with their individual capitalization schemes and revert to funded frameworks. They simply failed to take into account the fiscal ramifications of the pension reforms which were introduced. Therefore, nations need to introduce pension reform over time, especially when all or some contributions are being diverted away from funded frameworks and into individual capitalization schemes. Policymakers must generate measures which take into account this dynamic in order to ensure that short-term budgetary constraints do not impede their ability to bring off successful reform measures and thus contribute to higher levels of social well-being risk within their older adult populations.
The most direct method for keeping transition costs under control is to increase contribution rates which, in turn, drive retirement-wealth generation rates within the population. However, the only problem with this type of strategy is that societies are often unwilling to increase contribution rates.

Therefore, many have opted for introducing a funded component within their capitalization regimes. This is to say, they have included a solidarity pension or a minimum pension within their pension reform bills. Furthermore, every nation on earth has felt the need to include a funded component within their respective individual capitalization systems. Chile and Australia are two clear examples of said tendency. Both of these societies eventually introduced a basic pension in order to ensure that they are older adult populations were protected against the vicissitudes of poverty.

**Improving the design of defined-contribution capitalization systems**

The last point that I would like to address is the need to improve the design of defined-contribution capitalization schemes. The roadmap published by the OECD is an effective tool in terms of informing the process by which societies endeavor to perfect their individual capitalization schemes. It is comprised of 10 primary recommendations.

Rather than address every point on the list, my aim is to focus my remarks on several which I consider to be the most relevant within the context of the present FIAP forum. I should also mention that each of the issues have served to delineate the pension debate in every nation within the OECD. Furthermore, the heated debate which Chileans are currently engaged in is also occurring in every other OECD society.

**Contributing more and for longer amounts of time**

Currently, population aging – together with low economic growth, low productivity growth, low wage growth, low interest rates, low yields and low inflation – has created a scenario in which the retirement wealth that individuals have managed to generate is failing to generate the types of payouts which we saw in the past. This dynamic is occurring within individual capitalization systems as well as funded systems, therefore it is an issue of relevance to every single member of society. Thus, we are now faced with an obligation to save more and for longer periods of time in order to generate enough resources to have what is characterized as a decent retirement. Whereas wages and economies used to grow at approximately 8% per year, the situation has changed drastically and individuals cannot rationally expect to achieve the same results in terms of their respective pension payout amounts.
This is exactly why the OECD has been so emphatic about one single message: people need to increase their contribution rates and understand that they will need to contribute for longer periods of time. However, and as someone who is on staff at the OECD, I fully realize that it is much easier to advocate for such a posture than it is to actually allocate a larger portion of one’s income to a retirement account. I also realize that generating a national strategy capable of generating incentives that foment a culture of retirement savings within a society is an enormous undertaking.

How?

Impacting the manner in which an entire society views retirement wealth generation is easier said than done. Every one of us within the sector realizes this is the case. To begin with, each member of society earns a different wage. However, viable alternatives do exist. For instance, one such strategy involves increasing employer contribution levels. Australia introduced just such a measure within its defined-benefit framework. FIAP members will also be aware that several Latin American nations have also introduced such measures, in which employers contribute 10% of the defined benefit. The logic behind introducing such a measure is that, within the previous funded scenario, employers covered the cost of employee contributions. Later, with the introduction of the individual capitalization system, employers stopped making the aforementioned contributions. At the end of the day, we are simply turning back the clock and asking employers to begin to fulfill their responsibilities again. For instance, in Australia employers cover the entire cost of the mandatory contribution, whereas employees have the option to allocate a proportion of their income to make an additional, voluntary contribution to their retirement account. Thus, in Australia employers cover 100% of the legally-mandated contribution. Currently, such a measure is being debated in the Republic of Chile. It will be fascinating to see what the outcome is, because the introduction of such a measure will have a major impact within the nation’s social well-being sector.

Increases in contribution rate linked to real-wage increases

Increases in worker contributions can be linked to increases in real wages through the use of an automatic mechanism. It is important to note that in cases where a society intends to increase the contributions of low-wage workers, individuals can ostensibly be left with no income to cover their daily needs. As such, it is necessary to pay automatic adjustment mechanisms to real-wage increases (i.e., as opposed to nominal-wage variations). Furthermore, societies always have the option of employing an automatic enrollment strategy. In fact, there is an entire spectrum of viable alternatives which have been evaluated by the OECD.
Automatic adjustments vis-à-vis life expectancy

Life-expectancy adjustments via automatic mechanisms are regressive measures that need to be introduced in order to address the fact that not every segment of the population lives for the same amount of years. Additionally, there are ways in which societies can mitigate the regressive nature of such measures. For instance, automatic adjustments can be paid to accrue contribution periods or to a differentiated mortality table. Whereas viable alternatives exist, it is just a matter of evaluating which life-expectancy mechanism is best suited to a nation’s specific parameters.

Informality

Informality often comprises a major roadblock to the stated goal of fomenting a culture of retirement wealth generation; i.e., to contributing more and longer. The issue is a significant challenge for Latin America, as the FIAP membership is well aware; but one should also remember that the issue is also a major problem in Asia. For instance, in Southeast Asia informality has become a major issue. The OECD asserts that, when participation in a given social well-being scheme is obligatory for the entire population, it must therefore be obligatory for self-employed workers. In fact, this is one of the best tools available for economies to combat informal-sector growth and high informality rates.

In terms of strategies designed to generate higher participation rates, self-employed workers often lack effective incentives to contribute to retirement plans; this is to say, it is often extremely easy to simply not contribute. Thus, it is necessary to generate a scenario in which individuals opt to participate for fear of losing the potential benefits of said income allocation; for instance measures such as State matching-contribution plans. Individuals are hesitant to forego an opportunity to receive three dollars for every dollar they put into a retirement income account. These types of measures, especially when focused on the initial period of an individual’s work history, can be a major incentive which drives the generation of an entire culture of retirement savings. Conversely, they can also serve as a significant deterrent when they involve tax penalties in cases where individuals opt to stop making said contributions.

Ensuring fund manager fees are in line with the cost of services rendered

The second OECD message is that the fees charged by pension fund managers need to reflect the costs of the services which they provide. Furthermore, it is important to note that the fee schedules involved vary widely across national contexts. Many markets contain extremely high fees, while others contain fairly low levels.
Therefore, it is almost impossible to about this important issue. Furthermore, other related factors such as services provided to fund participants, as well as freedom of choice on the part of system enrollees, only served to impair one’s ability to perform an objective comparison. As such, the OECD has not made any statements with regard to an acceptable for practicable fund manager fee schedule. Although the organization has evaluated fees at the international level, noting the aforementioned wide variety of fee-schedule parameters, it was logically unable to generate a fee which would be applicable to every single national context on earth.

Rather than focus on a set fee, the OECD has worked to determine what political economy measures help nations bring fee schedules in line with the cost of services rendered to pension fund participants. Funds do, in fact, provide services, and clearly they must charge for said costs. In the judgment of the OECD, the primary aim here is to ensure that the amount paid to fund managers accurately reflect the cost incurred by pension funds as they provide services to account holders. This is to say, situations in which individuals are paying more than what services cost must be avoided at all costs.

It is of vital importance to ensure fee schedules are an accurate reflection of what fund managers pay to provide same. Firstly, the issue is determinant in terms of industry transparency. The OECD, therefore, believes it is necessary to ensure pension industries across the planet generate data in such a way that an objective comparison can be made by potential fund participants. It is easy to ascertain why this would be of great importance to us all as we make a decision to enroll in a given pension fund. It is also necessary to employ price and structural mechanisms; this is to say, in addition to the foregoing measures. Societies should also consider the use ex ante and ex post caps. Such measures have proved of great utility in a variety of national contexts such as the United Kingdom, Hong Kong and Sweden. Nations such as Chile and New Zealand have simply opened up a public bidding process, based on fees and service quality, in order to optimize their citizens’ decision-making ability and ensure – or at least contribute to – increased transparency levels within their respective pension fund industries.

Another strategy which might prove useful is to generate a public pension fund which utilizes default caps and investment profiles. Societies, however, must ensure that these public entities are completely autonomous in nature; which is to say, they have the ability to pursue investment strategies and corporate governance policies as they deem fit, and never be subjected to a particular administration’s political agenda. Furthermore, and as one would expect, public funds must operate within the same regulatory parameters as their private-sector counterparts.

The United Kingdom and Hong Kong have introduced default investment strategies,
as well as fee caps, with a great deal of success. As such, in our view every society on earth should at least review the feasibility of introducing such measures. Here again, each economy will then need to tailor said measures vis-à-vis their particular national context.

Lastly, regulators can also introduce a set fee schedule and/or a fee which is pegged to the performance or yield of a given pension fund. This is an effective way to ensure fees reflect the value of services rendered by fund administrators. They use of reference portfolios, as well as long and short-term objectives, are important issues to take into account when generating public policy aimed at addressing fee schedules.

**Security: guarantees versus default investment strategies**

Clearly, one of the top priorities for all pension fund participants is to ensure assets allocated to their retirement accounts are safe. This is especially the case for workers participating in an individual capitalization framework, whereas they need to know that their resources will not be completely wiped out.

Societies can introduce guarantees or default investment strategies aimed at addressing the issue of investment safety and retirement wealth security. In the OECD roadmap, we opted for suggesting that economies utilize default investment strategies. However, we also analyzed the issue of guaranteeing retirement assets. While the aforementioned guarantees sound wonderful and the public is often extremely enthusiastic about them, they can be quite costly. Thus, it is important for leadership to delineate exactly how much said guarantees will cost. Guaranteeing capital, however, is much more feasible. It is a fairly simple task, in terms of explaining parameters to account holders, and has the added benefit of being quite attractive to most involved. Of course, one must ensure that three conditions are in place in order for such measures to be practicable: fund participants must not change fund or manager; account holders must not change investment strategy; and, individuals must accrue at least 40 years within system in order to receive said assurances.

The OECD Working Party on Private Pensions decided that default investment strategies are the best way to ensure account holders are not exposed to high levels of risk, especially in terms of the final phase of their work life.

Target date funds should also be evaluated by societies. For instance, Mexico recently enacted a TDF plan for its citizens; which is to say, as opposed to the traditional multi-fund schemes operating in so many economies throughout the world.
Risk hedging

Many events in life are unforeseeable; and yet we all sense our vulnerability to the same. Issues such as prolonged unemployment, as well as our individual ability to achieve real-wage increases, can seriously impede our ability to accrue retirement wealth. Furthermore, investment yields, inflation, interest types and life expectancy are factors which are essentially out of one’s control. However, these risk factors can have a major impact on our ability to generate retirement wealth, as well as our individual level of pension adequacy.

At the OECD, we consider the following mechanisms to be an effective means to achieve risk sharing within individual capitalization systems:

1. A combination of programmed withdrawals with a deferred lifetime annuity (e.g. starting payments – equal to 15% of accrued assets – at the age of 85) that is purchased upon retiring and also involves a program withdrawal component.
2. Risk-hedging instruments to address longevity risk, flexibility and liquidity.
3. Investment and longevity risk-pooling mechanisms: use different mortality tables, group participants into different socioeconomic groups, employ 5-year TDFs, and use collective defined contribution models.

Better communication abilities equate to higher financial education IQs

When States attempt to introduce a series of social well-being network reforms and fail to communicate what the aims of said legislation is, it is easy to see why an entire population can oppose even the most rational measures. Therefore, it is vital to ensure that the vast majority of citizens understand the parameters included within a given pension reform bill. Otherwise, it is irrational to expect that said legislation will ever see the light of day. Conversely, reforms which are accompanied by an effective public awareness campaign often face much lower levels of resistance. To be sure, only an extremely irresponsible individual would simply sign off on a blank check. Thus, when pension sectors failed to clearly delineate the parameters of paramount importance involved in a reform package, they are failing to comply with even the most rudimentary exigencies of sector, national and/or international leadership.

Population aging, together with the current levels of low economic growth, low productivity growth, limited wage growth, low interest rates, returns and inflation, all point to a scenario in which the only way to generate better pensions is to contribute more and for longer periods of time. In fact, this will need to occur even if our only aim is to maintain pension payouts at their current level.
Additionally, the contribution rates in many OECD nations hover around 18-22%. This is to say, nations such as Chile, Mexico, Peru and Colombia are currently far below said benchmark. Clearly, something needs to be done to increase contribution levels; and it is important to note that the particular pension framework involved is fairly irrelevant. Funded as well as individual capitalization systems both need to take action immediately. In the judgment of the OECD, this is a universally-applicable exigency of every system on earth which is currently operating below said range.

In order to generate a successful communication and financial educational plan, society should take into account the following:

1. National pension reform campaigns should be focused, involve clearly delineated costs and objectives (as well as suitable oversight and monitoring), and be objectively analyzed in terms of results and costs generated.
2. Educational literature provided to fund participants should be easily understood and clearly written; be fairly standardized and address the entire scope of the proposed reform; and be proactive in terms of delineating incentives (i.e., if one contributes more and for longer periods of time, they receive a higher pension payout).
3. Technology, websites and algorithms need to be cost efficient. Regulations need to exercise aforementioned oversight without strangling the pension sector.
INTERNATIONAL PENSION REFORM TRENDS

PABLO GOTTRET

1 Has served as Global Practice Manager for Social Protection and Employment in Latin America and the Caribbean at the World Bank since July 2017. Prior to this, served as global practice manager in said area for South Asia during the period January 2012 to June 2017. Before joining the practice management team, served as lead economist for human development in South Asia at the World Bank during 2008 and 2012, and was lead economist for health, nutrition and population practice during 2002 and 2008. Before joining the World Bank, worked extensively in the healthcare finance and social protection reform sectors in several Latin American nations, to include Bolivia, Argentina, Mexico and Colombia. Holds a PhD in economics from Texas A&M. Author of several books and papers published in peer-reviewed journals, and has presented at a number of international conferences.
Old-age pension objectives

I would like to begin with an issue which I consider to be fundamental. Frequently, when we speak about pension sector reform we forget to take into account the very aims which social security systems were designed to address. Instead of focusing on the ends which pensions were meant to address, we argue about and sometimes overanalyze the means. For example, we end up focusing on peripheral issues such as the PAYGO scheme versus individual capitalization system. Therefore, I believe that our societies need to begin to focus a great deal more on what they seek to achieve revenue by introducing a given reform package. Another issue of paramount importance is clearly delineating what we tend to accomplish through the operation of our respective social security systems.

To begin with, I believe that a fair degree of consensus exists in terms of why the systems were created and what societies sought to achieve. The first goal of any pension framework is to eradicate poverty within older adult populations. This is to say, as individuals grow older and retire, society seeks to ensure that said older adult does not fall below the poverty line. The second objective is to protect people from marked drops in these individuals’ standard of living levels. Social security systems seek to ensure that when older adults retire from the workforce, the reduction in income does not lead to a concomitant drop in consumption. Thirdly, frameworks seek to provide protection against longevity risks; this is to say, risks generated by situations in which retirement savings failed to cover the entire retirement time period.

Therefore, it is vital to clearly delineate system objectives:

- **Combat older adult poverty:** ensure that as individuals grow old and retire, they do not become impoverished;
- **Prevent sharp changes in standard of living levels:** ensure that when individuals leave the workforce that the resulting decrease in income does not lead to significant changes in standard of living;
• Remediate the longevity risks: ensure that older adults do not outlive their means and/or retirement savings.

When I studied the precepts of political economy, I was instructed that individuals possess a given degree of freedom. Society tends to forget this aspect of life when generating public policy for the pension sector.

If in fact only a single degree of freedom applies to every member of society, this would indicate that we need an instrument capable of addressing each of the associated objectives. Under this logic, if society intends to fulfill its stated aim of eradicating older adult poverty, it will need to: (i) implement safety nets which aggregate risk throughout the population, which are PAYGO via public outlays; (ii) individual retirement contributions, in order to prevent sharp changes in standard of living levels; and (iii) strive to foment conditions which favor the existence of a suitable annuities market.

The aim of this article is to present an argument which demonstrates that saving is the most efficacious manner of addressing this societal challenge. In terms of generating protections against longevity risks, the role of the state within the system needs to be clearly delineated. In my view, said role involves ensuring the proper functioning of the system; which is to say, correcting market shortcomings and avoiding the generation of irrational expectations. As many presenters have stated here at the FIAP forum, one must never discount the relevance of political economy factors when endeavoring to generate public policy for the pension sector. For instance, we often tend to get sidetracked on to replacement rates. When I worked on pension reform, I remember that I target rate of 60% was frequently cited. Unfortunately, no one ever got around to explaining by what means, vis-à-vis parameters and under what eligibility criteria society was supposed to achieve said replacement rate. And this dynamic is exactly what has led to the pension debate become so conceited during recent years. As item after item have worked their way on to the debate agenda, the scenario has become increasingly complex as the number and intensity of arguments has increased in direct correlation to increases in the number of actors involved. As expected, increasing the number of opinions, quantity of rhetoric and volume of peripheral issues has not served to generate a very productive debate.

Growing dissatisfaction with pension systems

There is currently a fairly high degree of dissatisfaction with pension systems. Additionally, many within the sector constantly refer to the issue of retirement adequacy. But how does one go about defining pension adequacy parameters? And what are the requisites associated with achieving said end? The International Labour Organization (ILO) has generated a series of international norms, which
are known as conventions in the ILO vernacular, which address these types of questions. Convention 102 on Social Security (Minimum Standards) of 1952, as well as Convention 128 on Invalidity, Old-Age and Survivors’ Benefits of 1967, both indicate that an adequate pension delivers a replacement rate of 40% after an individual accrues 30 years of contributions.

Figure 1 contains three graphs which illustrate the replacement rates generated after a period of 20, 30 and 40 years within systems operating in Latin America and the Caribbean. Said nations are currently tracking of ball 40%, but evidence points to a problem in terms of the distribution of said rate. As a result, it is time to evaluate what exactly is occurring in terms of the regional average which, in and of itself, fulfills the parameters put forth by the ILO.

**FIGURE 1**
PENSION ADEQUACY, IN TERMS OF REPLACEMENT RATES

What are the factors which have generated the current scenario in which the pension sector, as well as society itself, faces political and societal pressures generated, in part, by such significant levels of dissatisfaction? Firstly, a major disconnect has occurred in terms of providing sufficient levels of coverage. The percentage of the
population covered by pension systems is relatively low (see Figure 2), a scenario which is principally due to the completely unviable levels of informality throughout the region.

And while many Latin Americans do receive a basic pension, the aforementioned levels of informality serve as an impediment to these nations’ ability to expand the coverage of these types of old-age safety nets. The gold points in Figure 3 track the trajectory of percentage-point variances in coverage during the 1990s and the second decade of the 21st century; i.e., points located below the dotted line illustrate instances in which coverage dropped. It is rational to assume that a lack of progress in terms of formal-sector growth has translated into a fairly static situation in terms of progress on the coverage front. Clearly, when workers do not hold formal sector employment and failed to make contributions to a pension system, the situation simply stagnates.
And when individuals did manage to contribute to a pension plan, the rates involved were fairly low (see Figure 4). Latin America’s relatively low retirement ages (see Figure 5) have done nothing to remediate the coverage shortfall. When compared to other regions throughout the world, Latin American nations are obligated to provide coverage to older adult populations which are much larger. Thus, any progress made in terms of adjusting retirement ages will pay major dividends in terms of reducing the size of the population in need of coverage. Here again, the importance of having a world-class political economy strategy cannot be understated. Nations who attempt to undertake increases in the Latin American retirement ages are going to have an extremely uphill battle. Chile is a perfect example of this dynamic. It is currently engaged in a fairly heated debate on the very subject of increasing its retirement ages for men and women.
FIGURE 4
PERSONAL INCOME TAX AND SOCIAL SECURITY WITHHOLDING LEVELS, RETIREES AND WORKERS

![Diagram showing personal income tax and social security withholding levels for retirees and workers.](image)

SOURCE: OECD PENSION MODELS; OECD TAX AND BENEFIT MODELS.

FIGURE 5
LEGAL RETIREMENT AGE IS LOW

![Diagram showing legal retirement ages for various countries.](image)

NOTE: IN BRAZIL, THE RETIREMENT AGE OF 60/65 ONLY APPLIES TO INDIVIDUALS WITH 30/35 YEARS IN SYSTEM. INDIVIDUALS WITH LONGER WORK CAREERS ON AVERAGE RATE TO AT 53/55.

SOURCE: PENSIONS AT A GLANCE LATIN AMERICAN AND THE CARIBBEAN 2014, OCDE.
Fortunately, and as one can ascertain from Figure 6, there is some good news out there. As mentioned, basic pension measures do exist and the graph clearly demonstrates that the global trend has been overwhelmingly positive during the last two decades.

**FIGURE 6**
NUMBER OF NATIONS OPERATING NON-CONTRIBUTORY PENSIONS

<table>
<thead>
<tr>
<th>1898-2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>50</td>
</tr>
<tr>
<td>60</td>
</tr>
<tr>
<td>70</td>
</tr>
<tr>
<td>80</td>
</tr>
</tbody>
</table>

SOURCE: AUTHOR.

The problem is that low-income nations provide less basic pensions to their populations. Therefore, these societies experience a tremendous pension coverage shortfall. This dynamic is exactly the opposite in high-income nations, which provide more basic pensions to their citizens and, as a result, achieve more appropriate coverage levels (see Figure 7).
The volume of cash transfers, especially in low-income nations, is very low (see Figure 8). In the following graph, the variable $n$ is equal to the number of nations within a given income category. Thus, the low-income group located on the left-hand side of the spectrum is comprised of data generated by eight nations. Additionally, the data involved is from the primary national cash transfer program in each nation.
As one can ascertain from figure 9, the challenge of informality is fairly ubiquitous and reaches an average of 64.7% in middle and low-income nations. This scenario constitutes a major impediment to increasing wage-related pension contribution rates.

**FIGURE 9**
INFORMAL SECTOR EMPLOYMENT (%)

Unfortunately, no fiscal margin exists with which to fund better pension safety nets. These nations also lack the public resources to subsidize contributory systems, which are frequently financed through the use of indirect taxes which are clearly regressive. Figure 10 is a simple demographic progression of the dependency rates, which utilizes unaltered data. The graph demonstrates what the fiscal outlay as a percentage of national revenues would be as of 2050. As one can see, the public outlay involved would be completely unviable.
What changes are taking place in labor markets?

While a number of highly relevant factors such as economic integration and social change can play a major role, I prefer to limit my remarks to two determinant factors being discussed here at FIAP: digital evolution and demographic shifts (see Figure 11).
### FIGURE 11
LABOR MARKET DETERMINANTS WHICH IMPEDE CHANGE

<table>
<thead>
<tr>
<th>Technological change</th>
<th>Economic integration</th>
<th>Social change</th>
<th>Demographic shifts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increases productivity</td>
<td>• Larger and more actively disputed markets</td>
<td>• Participation of women within labor markets (demand for flexible forms of work)</td>
<td>• Young population</td>
</tr>
<tr>
<td>• Urbanization</td>
<td>• Migration within and across borders</td>
<td>• from planning stage to markets</td>
<td>• Drop in fertility rates</td>
</tr>
<tr>
<td>• Agglomeration</td>
<td>• Growth in trade of intermediary goods</td>
<td>• Eliza Nation of Conflicts</td>
<td>• Delayed entry into full-time workforce</td>
</tr>
<tr>
<td>• Decreases in market transaction costs</td>
<td>• multinational production chains</td>
<td>• Mobilization of conflicts</td>
<td>• Longer lives</td>
</tr>
<tr>
<td>• Increases in conductivity and access to markets</td>
<td>• Deindustrialization</td>
<td>• Population flux conflict</td>
<td>• Increase in healthy life years (HLY)</td>
</tr>
<tr>
<td>• Decrease of distance cost</td>
<td>• Dominance of service sector</td>
<td>• Affluence of population vis-a-vis conflicts</td>
<td>• Longer economically-active lives</td>
</tr>
<tr>
<td>• Artificial intelligence</td>
<td>• disappearance of line between negotiable and nonnegotiable</td>
<td>• From the majority of poorest, to majority of so-called middle-class</td>
<td>• Rise of active aging among individuals aged 60 to 80 years old</td>
</tr>
</tbody>
</table>

Source: Author.

### FIGURE 12

<table>
<thead>
<tr>
<th>Platforms and relative size of their offline competitors (platform size = 100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M-Pesa</td>
</tr>
</tbody>
</table>

- **Number of branches/agents** (Kenya):
  - KCB Group
- **Rooms (millions worldwide)**:
  - Marriott
- **Number of drivers (millions in China)**:
  - Licensed taxis
  - Platform firm
  - Offline competitor

Source: Author calculations, based on data generated by SAFARI.COM, KCB BANK GROUP, AIRBNB, MARriott INTERNATIONAL INC., and THE FINANCIAL TIMES.
Figure 12 is extremely interesting and illustrates the effect of technological progress on the evolution of labor market opportunities. The example located on the right-hand side of the graph, Didi Chuxing, involves a firm which is basically the Chinese version of Uber. It is an excellent example of short-term horizon dynamics; i.e., while one does not expect to observe a decrease in the quantity of labor market opportunities, it is rational to expect a change in the type of work available and in terms of who is capitalizing upon said opportunities within job markets. Thus, it is not surprising to see how the number of Didi drivers is much higher than the number of traditional taxis (calculated on the basis of taxi badges in circulation).

The second example is probably a bit more well-known: Airbnb, Inc. In fact, the vast majority of international travelers are familiar with the firm. Figure 12 provides us an opportunity to compare the number of rooms on offer via the Airbnb platform with the total availability at two major hotel chains: Marriott and Hilton. As one can ascertain from the graph, these huge multinationals that operate hotels across the globe do not even reach the 50% mark in terms of what their digital platform competitor has available in terms of lodging.

The third example is M-Pesa. M-Pesa is a cell phone initiative launched by Safari.com, which is a subsidiary of Vodafone. It involves an extremely wide spectrum of services being made available to users; i.e., offering services similar to PayPal and Western Union, in addition to allowing individuals to book hotel rooms and make ATM withdrawals. M-Pesa was launched in Kenya in 2007, but since then Vodafone has launched similar programs in India, South Africa, Uganda, Tanzania, Rwanda and Afghanistan. In terms of infrastructure, the only thing that M-Pesa users need to do is visit their nearest, participating neighborhood store. Clearly, the number of participating firms and agents quickly outpaced what the banking sector in Kenya could provide. As the graph shows, the traditional banking sector does not even comprise 10% of its digital platform counterpart.

While technological change correlates to major impacts within economies, it does not necessarily equate to a decrease in the number of available jobs within an economy. What will change, however, is the type of work available and the profile of workers filling said positions. For example, in Europe the non-routine cognitive labor sector – which is to say, work involving the capacity to learn new tasks, as well as the management and analysis of data – has grown significantly. As a result, individuals capable of fulfilling these criteria – i.e., individuals who are typically more educated and from a higher income bracket – will be more likely to get these jobs. Conversely, manual labor involving routine, non-cognitive tasks, has dropped off markedly. This trend is fairly self-evident in Figure 13.
As one would expect, this same dynamic is operating within Latin America. However, some exceptions such as the Dominican Republic exist, as one can ascertain from Figure 14.
Another factor which has undergone a great deal of evolution recently our labor contracts. Internationally, the terms of these instruments have also undergone significant changes. While traditional, long-term contracts comprise a smaller proportion of those available within the national labor markets throughout the world, short-term positions have experienced tremendous growth. Clearly, the latter dynamic correlates to the existence of digital platform employment. Short-term contracts, as well as in increase in the frequency with which workers enter and exit labor contracts, are the new norm, whereas the scenario in which individuals expected to remain in a single occupation until retirement has become almost completely antiquated. Another interesting aspect of this scenario is that the latest generation of economically-active individuals have a much higher probability of becoming entrepreneurs. The population of independent contractors currently totals 84 million, which comprises less than 3% of the global workforce. While this figure may seem fairly low, this percentage is growing steadily.

In Europe, workers aged 22 to 24 years old have a significant preference for engaging in freelance work, as one can clearly ascertain from Figure 15. Furthermore, the issue of benefits and retirement packages are much less relevant for the latest generation of workers. They referred to avoid being what they term as “tied down” by a long-term employment contract or lifelong employment at a single job. It seems they
value the ability to enter and exit a given sector within the economy more than their predecessors. In fact, available evidence points to their also valuing the ability to change sectors, too.

**FIGURE 15**

_EUROPE: NONTRADITIONAL EMPLOYMENT MORE POPULAR AMONG YOUNGER WORKERS_

In light of the foregoing, the central question would appear to be the following: If the current trend becomes a lasting reality, shouldn’t we at least be attempting to identify new alternatives to fulfilling the role that employers formerly played in terms of withholding pension contributions? I mention this because, at least in my viewpoint, it is irrational to view the increasingly outdated employer withholding model as a sustainable alternative. The social security sector needs to do something immediately in terms of developing a contingency plan.

The velocity with which the traditional withholding scenario has become antiquated is astounding. Every actor or within the sector needs to ask themselves what is being done to generate the retirement income individuals need to live on during old age. Should we continue to sidestep this issue of paramount importance, our societies
had better be ready to face the reality that the number of older adult retirees living in poverty is going to skyrocket. Figure 16 clearly tracks this dynamic. Additionally, the Latin American region is one of the fastest aging populations on earth. Here again, inertia and velocity are increasing, and our window of opportunity is becoming proportionately smaller with every passing quarter.

Another aspect which must be taken into account is the fact that Europe underwent its demographic evolution during a relatively stable period of economic history. It seems irrational to expect that Latin American nations will be able to accumulate the public resources necessary to have even a minor impact on the future growth of poverty within our older adult populations. As the vertical axis of Figure 16 demonstrates, the percentage of workers actively contributing to a pension plan is fairly low. This is especially the case in nations such as Nicaragua and Paraguay, where said proportion of the workforce is not even reach 20%. Clearly, Latin American administrations need to generate public policy which addresses this issue head on. For its part, the pension sector within the region will need to generate truly innovative strategies capable of making tangible progress in terms of the current retirement income shortfall.

FIGURE 16
LOOMING DISASTER: HIGH INFORMALITY AND RAPID POPULATION AGING

SOURCE: ILO, WORLD DEVELOPMENT INDICATORS, COURTESY OF V. MOREIRA.
Potential impact of labor market shifts upon social protection safety nets and pension systems

Firstly, it is important to remember that social protection systems were created during an age of more stable and homogeneous job markets. Furthermore, drastic changes in an individual’s work life parameters (i.e., loss of employment, changes in occupation) have become so ubiquitous that they now comprise what we can only categorize as the new norm.

In terms of determining the potential impact of labor market shifts upon social protection, it is important to keep in mind that the current social security paradigm involves several important constraints:

(i) Individuals need to obtain formal sector work in order to participate in social security systems. The poorest in society tend to fall outside coverage parameters vis-à-vis this type of scenario.

(ii) Systems are deficit-generating frameworks PAYGO via public outlays of tax revenues.

(iii) Societies have opted for indirect tax measures which are innately regressive.

In light of the foregoing, we can safely say that the current paradigm forces low-income wage earners to finance the pensions of their less impoverished counterparts within society. Furthermore, the entire system is predicated on the aforementioned outmoded strategy of employer-withholding mechanisms.

This is unfortunate, whereas social security frameworks were traditionally viewed as redistributive mechanisms capable of providing risk coverage to older adults. However, these parameters directly contradict the notion of a single degree of freedom. Thus, it is high time we began evaluating the tendency in many societies to perceive social security frameworks as a tool for remediating social equity shortfalls.

We need a new approach to managing societal risks and the type of social security which needs to be employed within our societies. For better or worse, Latin American nations tend to approach the social security question in a fairly complex manner, as one can clearly ascertain from Figure 17. Despite Chile having generated a fairly straightforward model which is easily replicated, the tendency among Latin American societies is to focus on generating a huge amount of social programs. For example, we never seem to be capable of moving beyond the PAYGO versus individual capitalization question. Rather than moving on to the innovative solutions which we need so badly, leaders tend to lose themselves within a labyrinth of less transcendent issues. Is it preferable to finance pensions via a contributory framework or a PAYGO framework? Should the public sector or the private sector...
manage pension funds? Our tendency to get sidetracked on to these types of issues is truly unfortunate because they only serve to prevent our leaders from generating innovative public policy. Additionally, our pension sectors have also become bogged down by these misguided debate agendas. Lastly, our fellow citizens never get a chance to evaluate the truly determinant pension-sector factors.

**FIGURE 17**

PENSION DEBATE AGENDAS BECAME INCREASINGLY NEBULOUS DURING 1980s AND 1990s

This entire scenario can be distilled down into a single economic notion, wherein the x-axis represents the probability of an event occurring (accident, risk, etc.) and the y-axis represents the potential scale of the economic impact of said event upon the lives of individuals. Figure 18 demonstrates the relationship between these two determinant factors.

Every economics student knows that if an event is extremely infrequent and generates an extremely small impact, no action is required in terms of contingencies. In other words, we do not need to allocate resources to remediate risk-coverage issues. However, if a highly improbable event involves a potentially huge economic impact, individuals need to get insurance coverage. This is to say, we definitely need
a contingency plan for these types of economic vicissitudes. When probabilities are high of an economically-damaging event occurring, individuals need to seek out a savings system capable of addressing these types of challenges. This is the only solution that humans have in terms of preparing for eventualities such as old age.

FIGURE 18
RISK-MITIGATING PRINCIPLES FOR CONSTRUCTING EFFECTIVE CONTINGENCY PLANS

<table>
<thead>
<tr>
<th>More insurance (risk-sharing mechanism)</th>
<th>Market shortfall: Long-term insurance market fails to address problem, public policy obliged to remediate issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>No action (contingencies cost more than potential loss)</td>
<td>More individual savings</td>
</tr>
</tbody>
</table>

SOURCE: AUTHOR.

Clearly, the insurance market issue mentioned in Figure 18 is only one in an entire litany of potential market shortfalls such as moral risks, poor decision-making and externalities (i.e., the public interest, societal ills). These factors often serve to complicate the processes through which societies formulate public policy aimed at providing simple solutions. These factors need to be taken into account when generating a pension reform package.

The solution which I intend to put forth on this occasion is very similar to that proposed by Pablo Antolin, in terms of identifying the issues of paramount importance that societies need to include on their pension reform debate agendas. At the end of the day, nations need to focus on protecting individuals and not necessarily jobs.

Firstly, societies need to generate a basic solidarity pillar capable of providing
a social safety net which is PAYGO through the use of public outlays. Secondly, nations need to mandate participation in social security schemes, and gradually introduce universal coverage which is financed through individual capitalization and is just in terms of actuarial parameters. The third component involves voluntary savings which needs to be incentivized through progress on the broader economic front, and financed privately. The fourth component involves the responsibility of the state in terms of ensuring financial market transparency through the use of an optimal and effective regulatory framework.

Conclusions

In closing, societies are unquestionably currently undergoing a great deal of change in terms of their respective technological, economic, demographic and societal determinants. Unfortunately, pension systems have failed to keep pace with the velocity in scale of evolution involved. When attempting to generate public policy to address their pension issues, societies must remain outcome-focused and ensure that they closely track relevant indicators to ensure they are moving in the right direction. At the end of the day, the end goal is to combat older adult poverty levels. In terms of political economy, administrations need to avoid engendering irrational expectations at all costs.

The most useful indicator at our disposal is fairly straightforward: pension adequacy. This is to say, we need to remain focused on generating a sustainable replacement rate within our economies. Unfortunately, our respective pension reform debate agendas have failed to reflect this reality. We have often focused on everything but pension adequacy. Even Chile, who has so often led the world in terms of pension innovation, has often become sidetracked on to issues of lesser importance. In fact, Chilean society has yet to focus on the primary issue of pension adequacy. Here again, everyone involved needs to keep their eye on this issue of overriding importance, or the debate can quickly become derailed. And given the time constraints involved, even getting sidetracked for a day or two will have major ramifications on our ability to have an eventual impact on retirement income levels.

We must do everything within our power to keep our societies focused on one central question: What will your replacement rate each if your contribution rate, fund yields and contribution density remain unchanged? Furthermore, individuals need to realize that in order to achieve higher replacement rates they will need to make lifestyle changes. In my experience, this issue has comprised a major blind spot in many Latin American societies.

The State has an important role to play. Among other issues, it has a responsibility to provide safety nets to its most vulnerable citizens. A basic pension often addresses
this need within society. The State also needs to ensure that social security systems function as intended in terms of achieving system objectives, eligibility and compliance with good governance parameters.

The State also needs to ensure that the population which it is attempting to protect is informed with regard to pension adequacy issues and general operating parameters which might impact retirement income levels within a nation. It is vital that governments avoid providing better benefits to individuals within higher income brackets. Tax revenues need to be focused on addressing the needs of the most vulnerable members of society who lack the means to meet their basic needs. At the end of the day public resources are scarce or than ever and leaders need to exercise good stewardship.

Here at FIAP, we have heard many comments about the necessity to implement automatic mechanisms. In my view, these are extremely useful tools. We need to ensure that our societies introducing the parametric changes needed to ensure our systems adapt to the needs of our older adult population. For instance, it said population changes and we fail to introduce the appropriate concomitant changes in the legal retirement age, we are acting irrationally vis-à-vis the new realities brought about by increases in life expectancy and longevity.

We must also never forget that our pension systems are not the best alternative for resolving our social equity issues. There is only a single degree of freedom in policies generated vis-à-vis the precepts of political economy. When societies attempt to address more than one societal ill with the same public policy, they only become bogged down in a morass of nebulosity. Additionally, and as cited previously, this type of behavior necessarily takes our focus off of pension adequacy and keeps us from making concrete progress on the issue of pension adequacy.

The world of work is changing and the evolution has occurred at an unprecedented velocity and on a scale which would have been unthinkable only a short time ago. Everything points to the current trends in informality continuing apace within the midterm horizon. Given this situation, is it rational to continue thinking that our current pension models are capable of addressing this new reality? Additionally, the evolution of the employer-employee relationship demands that we rethink how social security withholding mechanisms are generated and operate. The latest generation of workers is especially hesitant to engage in traditional employer-employee paradigms. Therefore, this dynamic is clearly on its way out in terms of exerting even limited impact upon the pension sector.

Given these changes in the labor markets, it is more urgent than ever to design mechanisms which truly inculcate a culture of individual retirement savings within
our societies. We need to get creative because more and more individuals are involved in freelance scenarios for which we do not currently have withholding contingencies in place.

Investment in human capital will need to be optimized if our societies are to avoid running out of retirement income during old age. Individuals within society who have increased access to education have a greater possibility of generating income levels necessary to make significant progress in terms of retirement income. Therefore, our nations need to begin to view the investment of time and resources into our national educational and vocational training systems as an investment in every demographic within society, and not simply our younger demographics. These investments will pay dividends in pensioner lives, too.
CHAPTER I

SECOND-GENERATION REFORMS OF THE PENSION SYSTEMS

PENSION REFORM IN BRAZIL AND THE COMPLEMENTARY PENSION SYSTEM: SCENARIOS, CHALLENGES AND DEBATES

PAULO VALLE

Paulo Valle holds an MBA in Finance from the Brazilian Capital Market Institute (IBMEC) in 1996 and a Specialization in Economics from George Washington University - Washington, in 1998. He is Undersecretary of Complementary Pensions of the Ministry of Economy since January 2019. He served as President of Brasilprev, leading company in the pension market in Brazil, from December 2015 to March 2018. Previously, he served as Undersecretary of Public Debt of the National Treasury, between 2006 and 2015, being responsible for the administration of the internal and external debts of the Union and for the relationship with national and foreign investors and rating agencies. He also held the position of General Operations Coordinator of the National Treasury Public Debt, from 1999 to 2006, having led the implementation of the Direct Treasury Program - sale of public securities directly to the public.
This article will be divided into three separate components. First, the text will provide an overview of the Brazilian pension system. The overview will be followed by an analysis of the main issues involved in the pension reform debate currently underway within the nation. Lastly, the text provides remarks on the introduction of individual capitalization and voluntary pension schemes in Brazil.

I. The Brazilian Pension System

The Brazilian pension regime is traditionally divided into four pillars (see Figure 1). The zero pillar is known as the assistencial (social welfare) pillar and provides coverage to 4.8 million people. Pillar 1 is comprised of the compulsory, social pension. It is a pay-as-you-go system and the ceiling is R$ 5,839. Two schemes operate within the first pillar: the Regime Geral (RGPS), which is the primary national social security pension; and the civil servant pension scheme, known as the Regime Próprio (RPPS). The RGPS system provides pensions to 30.3 million beneficiaries, while the RPPS scheme covers 8.1 million Civil Service retirees. Pillar 2 is, for all purposes, the mandatory individual capitalization pillar, and in Brazil it has not been introduced yet. Pillar 3 is the voluntary individual capitalization pillar. The Brazilian pension sector possesses open, as well as closed, pension funds. Approximately 16.6 million individuals currently participate in this fourth pillar, and assets are R$ 1.75 trillion, which comprise 25.7% of GDP.
Current Social Security Scenario

The primary weaknesses of the current social security model are as follows:

1. Rapid demographic change
2. Too benevolent
3. Socially unfair; and
4. High level of fiscal impact.

1. Rapid Demographic Change

As with nearly every other nation on earth, Brazil has undergone an extremely rapid demographic shift within the last few decades. In fact, it has undergone this evolution at a rate which surpasses the international average for population aging. To provide some context, while Europe has taken five decades (1950-2000) to move from 11% to 20% in terms of its over-60 population, Brazil will have made this quantum leap in only two decades (2015-2035). If it continues at the current rate, it will even surpass Latin America and the Caribbean, which is currently on track to undergo the evolution from 11% to 21% in a period of 25 years (2015-2040).

As can be seen in Figure 2, the fertility rate in Brazil has dropped fairly precipitously during the last four decades. It will remain fairly stable in the medium and long-term at 1.8 and 1.7, respectively.
When one compares life expectancy at retirement in 1980, when it was 12 years for an individual aged 65, to the current level of 18.4 years, it is easy to spot the upward trend. By 2060, this demographic is on track to reach 21.2 years (see Figure 3).
For its part, the Brazilian dependency ratio is expected to increase from its current level of 13.3% to an astounding level of 42.6% by 2060 (see Figure 4). To clarify, the following graph demonstrates the ratio between the over-65 population to the 15 to 64-year-old cohort. Clearly, this issue is going to comprise a major priority in terms of pension-sector policy. It should also be incorporated into the coming reform package, and merits inclusion on the debate agenda.

**Figure 4**

**Brazil: Dependency Ratio**

![Graph showing the dependency ratio in Brazil](source: Brazilian Institute of Geography and Statistics (IBGE).)

2. *Too Benevolent*

Another major issue is the fact that the pension system in Brazil is too benevolent in almost every way when compared to other national pension systems. To begin with, retirement ages are relatively low. Brazilian women can retire at 57.7 years, while their male counterparts are able to retire at 59.4 years. Whereas the OECD average is 63.2 and 64.2 respectively, this is simply not a practicable scenario. Something will need to be done to remediate this issue within the short to medium term.

Within the aforementioned RGPS pension scheme, once individuals accrue the necessary amount of contribution periods, they are eligible to recall retire regardless of whether or not they have met the retirement age. Women who have 30 years within the system, and men who accrue 35 years, are currently eligible for retirement. There is no earnings component included, which serves to exacerbate the problem. Only 13 other nations on the planet operate such a model.
Conversely, men and women need only accumulate 15 years within the system in order to retire at age 65 and 60, respectively.

Benefits have evolved into another problem, consistently outpacing inflation. While inflation – as represented by the consumer price index – grew at a multiple of 3.3 during the last 20 years, Brazilians’ old-age retirement benefits increased by a factor of six.

Several professional categories within the economy have their own pension systems which include even less time in system to become eligible for retirement; namely, school teachers and military personnel.

Death pension benefits in Brazil do not adhere to international good practices. For example, the benefit involves a complete payout for life after age 44. Payout is usually less than 100% in terms of replacement, and is pegged to the number of dependents involved. Here again, this measure is simply too benevolent to be sustainable, even in the short term.

Brazil also stands out for its high pension benefits vis-à-vis working-age incomes. As one can quickly ascertain using Figure 5, Brazil is only bested by India in this respect. The indexation mechanism for minimum pension benefits contributes substantially to the high level of pension benefits in Brazil. According to the constitution, the minimum pension cannot be lower than the minimum wage. This seems to comprise a major area of opportunity in terms of generating the coming pension reform agenda. This situation leads to extremely high net replacement rates, as is clearly illustrated in the Figure 5.
3. Socially unfair

The average age of pensions by contribution time is 54 years (richest), but more than 64% of pensions are by age (poorer). This occurs only at 65 for men and 60 for women.

While 66% of pensions paid by INSS (RGPS and BPC) are equivalent to one minimum wage, 83% are below two minimum wages.

4. High Fiscal Impact

RGPS expended 8.5% of GDP in 2018. Unless the situation is remediated, expenditures will reach 16.7% of GDP by 2060 (see Figure 6).
As Figure 7 illustrates, Brazil ranks among some of the most advanced economies in the world in terms of its percentage of GDP to dependency ratio.
II. Brazilian pension reform

Pension reform principles

One of the major issues which need to be addressed is the fact that higher-income workers achieve a more consistent contribution history than their lower-income counterparts. Under the current scheme, once individuals accrue a sufficient number of contribution periods, they have the option to retire. Employing a specific retirement age will go a long way towards generating a more just and egalitarian system in Brazil. Additionally, our lower-income workers should not be required to make the same level of contribution as other income brackets. The current reform package also contains measures designed to ensure the future sustainability of the pension system. Individuals will be guaranteed vested rights, and a concerted effort will be made in terms of separating broader social welfare programs from the social security infrastructure. If all goes as planned, the reform package will also include a voluntary retirement savings component (capitalization option).
Main rules:

1. **There will be a rule for retirement of men and women**. The proposed reform will move the retirement age of 60 and 65 years for women and men, respectively, to 62 and 65. Additionally, workers wishing to retire will now need to accrue a minimum of 20 years in system before becoming eligible to do so (currently, workers need to accrue a minimum of 15 years). (see Figure 8).

2. **53% of people retire by age. In the long term there will be no more retirements for contribution time.** (see Figure 8)

![Figure 8](source: the author)

3. **New rule for calculating pensions - General and Public Civil Servants Schemes.** The proposed legislative package endeavors to introduce a new policy for calculating the pensions of both the Regime Geral and the RPPS (Civil Servant) schemes. The plan is to calculate pensions as follows: individuals accruing 20 years in system would receive a 60% payout which would increase 2% per year of contribution up to 40 years in system, in which case a retiree would receive 100% of their average contribution wage. Is to say:

---

2. *On July 10th, 2019 the Congress approved a new passage of legislation in the first round. That passage requires minimum contribution period of 15 years and minimum age of 62 for women. For men, 20 years of contribution period and minimum age of 65.*
Pension = 60% + 2% per year of contribution * average of contributions salaries

The Figure 9 clearly illustrates the manner in which this would operate.

<table>
<thead>
<tr>
<th>Pension Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>60%</td>
</tr>
</tbody>
</table>

The value of the pension may not be less than a minimum wage or exceed the Regime Geral scheme cap.

4. **Standardization of Regime Geral and RPPS contribution rates.** Another aspect of the proposed reform is an effort to standardize the respective contribution rate levels of the Regime Geral and RPPS (Civil Servant) schemes. As can be ascertained from Table A, the RGPS general scheme currently involves a progressive contribution rate which ranges from 8% to 11%. Table B shows what is proposed in terms of a more graduated progression, broken up into four rather than three strata. The effective contribution rate remains fairly stable, but adjusts the lowest-wage earner rate from 8% to 7.5%. However, an overall cap of 14% is utilized in case of the highest-earning plan participants.

The broader adjustments will occur in terms of bringing the contribution-rate schedule included in Table C into alignment with the proposed RGPS schedule in Table B. As noted, the contribution rate schedule delineated in Table C would only apply to individuals entering Civil Service after 2003, the year in which a previous – and much-publicized – pension reform was enacted by presidential decree. The major change here is that the maximum cap would be lifted to 22% for civil servants in the highest-earning income bracket.
CHAPTER I
CHAPTER I. SECOND-GENERATION REFORMS OF THE PENSION SYSTEMS

### TABLE A

**RGPS - CURRENT SCENARIO**

<table>
<thead>
<tr>
<th>Salary range</th>
<th>Contribution rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to R$1,751.81</td>
<td>8.0%</td>
</tr>
<tr>
<td>From R$1,751.82 to R$2,919.72</td>
<td>9.0%</td>
</tr>
<tr>
<td>From R$2,919.73 to R$5,839.45</td>
<td>11.0%</td>
</tr>
</tbody>
</table>

*Source: Secretaria de Previdência/ME.*

### TABLE B

**RGPS - PROPOSAL**

<table>
<thead>
<tr>
<th>Salary</th>
<th>Contribution rate</th>
<th>Effective contribution rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>R$998.00</td>
<td>7.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>R$998.00 to R$2,000.00</td>
<td>9.0%</td>
<td>7.51% to 8.25%</td>
</tr>
<tr>
<td>R$2,000.01 to R$3,000.00</td>
<td>12.0%</td>
<td>8.26% to 9.50%</td>
</tr>
<tr>
<td>R$3,000.01 to R$5,839.45</td>
<td>14.0%</td>
<td>9.51% to 11.68%</td>
</tr>
</tbody>
</table>

*Source: Secretaria de Previdência/ME.*

### TABLE C

**PROPOSAL FOR INDIVIDUALS WHO ENTERED CIVIL SERVICE AFTER 2003**

<table>
<thead>
<tr>
<th>Salary</th>
<th>Contribution rate</th>
<th>Effective contribution rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>R$998.00</td>
<td>7.5%</td>
<td>7.5%</td>
</tr>
<tr>
<td>R$998.00 to R$2,000.00</td>
<td>9.0%</td>
<td>7.51% to 8.25%</td>
</tr>
<tr>
<td>R$2,000.01 to R$3,000.00</td>
<td>12.0%</td>
<td>8.26% to 9.50%</td>
</tr>
<tr>
<td>R$3,000.01 to R$5,839.45</td>
<td>14.0%</td>
<td>9.51% to 11.68%</td>
</tr>
<tr>
<td>R$5,839.46 to R$10,000.00</td>
<td>14.5%</td>
<td>11.69% to 12.86%</td>
</tr>
<tr>
<td>R$10,000.01 to R$20,000.00</td>
<td>16.5%</td>
<td>12.87% to 14.68%</td>
</tr>
<tr>
<td>R$20,000.01 to R$30,000.00</td>
<td>19.0%</td>
<td>14.69% to 16.12%</td>
</tr>
<tr>
<td>R$30,000.01 to R$40,000.00</td>
<td>22.0%</td>
<td>16.13% to 22.0%</td>
</tr>
</tbody>
</table>

*Source: Secretaria de Previdência/ME.*
5. **New formula for calculating pension death benefit.** In terms of the pension-system death benefit, the current payout involves 100% of the benefit and is aligned with the broader Regime Geral cap. The proposed reform package would reduce the base payout amount to 60% of the benefit, but then increase at a rate of 10% per surviving dependent until reaching the 100% cap for five or more dependents. This model would be employed in the Regime Geral pension scheme as well as the RPPS Civil Service scheme, in keeping with the broader aim of the pension reform package aimed at standardizing criteria with the two systems.

6. **New rule for death benefits accumulation.** In terms of benefit accumulation, the current policy allows an individual to accumulate a wide spectrum of benefit types from a variety of pension schemes. This is to say, individuals can simultaneously receive pension payouts the RPPS Civil Service as well as the RGPS scheme. Our proposal would involve delivering a 100% payout of the higher benefit, to which a percentage of the remaining benefits would be added to. Basically, the only limitation would be that retirees could only receive an amount totaling two minimum legal wages per each additional benefit. Here again, the measure is fully aligned with the aim of standardizing the somewhat parallel national pension schemes.

**Fiscal benefits of the proposed pension reform**

The total fiscal impact of the combined Regime Geral and RPPS reform would total R$1.236 billion within 10 years (see Figure 10).

<table>
<thead>
<tr>
<th>Fiscal savings within 10-year period (billions of 2019 R$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RGPS Reform</td>
</tr>
<tr>
<td>RPPS Reform</td>
</tr>
<tr>
<td>Continuous Payment Benefit (BPC-LOAS), salary bonuses</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
<tr>
<td>Inactivity and Armed Forces pensions</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
</tr>
</tbody>
</table>

SOURCE: SECRETARIA DE PREVIDÊNCIA/ME.
III. Capitalization and the Complementary Pension System

The strategy plan in terms of addressing the individual capitalization issue within the Republic of Brazil involves a solid consensus in terms of the broader pension reform agenda and passage of legislation. Therefore, once we get the reform package passed, the Ministry and the pension sector will begin to work together to tailor an individual capitalization scheme which meets our national needs.

Capitalization in the Pension Reform – Guidelines

It should be noted that the following guidelines are preliminary. Doubtless they will prove of interest and hopefully of value to other nations as they introduce or reform their own capitalization pillars. In the view of the Ministry of Economy, the most important component here is the proposed effort to provide a minimum wage guarantee within the solidarity pillar.

- Capitalization on a DC basis
- Minimum-wage guarantee incorporated into solidarity pillar;
- Individual accounts;
- Workers choose entity or modality of asset management, portability allowed;
- Transparency;
- Notional capitalization permitted;
- Capitalization scheme will provide non-programmed benefits (maternity, disability and death) and longevity risk.

Pension Structure – Pillars

Figure 11 provides an illustration of what many believe the future of the Brazilian pension sector will look like.

Pillar 0: Social welfare programs. Phasic approach: R$ 400.00 from the age of 60 and 1 minimum salary from the age of 70.

The zero pillar – which addresses the social welfare needs of our society – remains fully intact. What we are suggesting is that a phasic approach be utilized to address the social welfare payment structure. This would mean that instead of paying out a benefit equal to 100% of the national minimum wage at age 65, the benefit would be stepped out in two phases. During the first phase, individuals would receive R$ 400.00 beginning at age 60, with the benefit amount increasing to 100% of the minimum wage at age 70. In this manner, individuals stand to benefit from an earlier startup of benefit payments, even as the State benefits from a stepping out of what might be best described as the full retirement age by five years. As a result,
this strategy is presumably a win-win for all involved. It helps out our older adults, and will likely serve to ensure the long-term sustainability of the entire program.

**Pillar 1: Notional PAYGO**

There is also discussion regarding the introduction of a notional PAYG framework within Pillar 1. In this case, the strategy is to utilize individual accounts, and then adjust said accounts to the productivity gains, GDP or growth in the average wage-earner’s salary. The benefit would then be calculated based on the accumulated balance and projected life expectancy. Assets would not be invested within financial markets.

**Pillar 2: Capitalization compulsory for those who join**

Pillars 1 and 2 are under discussion in terms of establishing a ceiling, as well as the manner in which individuals’ contributions are to be divided into the two pillars (i.e., the percentage allocated to Pillar 1 versus the percentage allocated to Pillar 2).

**Pillar 3: Voluntary Complementary Pension**

The third pillar is comprised of voluntary complementary pensions. As stated above, Brazil currently possesses open as well as closed pension funds within this sector. The proposed strategy is to take a long hard look at a wide variety of formats, to include defined benefit versus defined contribution, employee-sponsored schemes, individual investment accounts and other instruments which have proven of value in other nations who have undertaken pension-sector reform.

Our hope is to put forth a strategy which will serve to foment a greater degree of interest in optional complementary pension plans. Many within the Brazilian pension sector firmly believe that this will serve to better address coverage issues and other risk benefits. However, we are very committed to conducting an open debate on the future of this pillar, as well as the broader pension sector. Markets have undergone a great deal of change, therefore a frank discussion needs to be held regarding what we can do to increase the number of individual retirement plan account holders.
Projected impacts of PEC on complementary pension funds

In Brazil, a legislative instrument known as a Proposed Amendment to the Constitution, or PEC, was drafted in order to provide guidelines for the launch of the voluntary pension fund sector for civil servants. The bill, *PEC 6/2019*, seeks to “modify the social welfare system, establish transition guidelines and transitory dispositions, (inter alia).” The proposal has met with a good deal of debate within the legislative branch, but everything points to an outcome which will be positive. As of June 2019, it is in committee.

Within two years of *PEC 6/2019* enactment, all of the civil servant pension schemes within the nation will need to adhere to its guidelines. Voluntary pension schemes have already been launched in 27 of the 2,135 states and 5,595 municipalities which fall under the purview of the bill. There will ostensibly be no need to open new funds, whereas most within the sector believe that the larger funds will be more than able to meet demand. Rather than creating new funds, the primary focus

---

3 On July 10th, 2019 the Congress approved a new passage of legislation in the first round. It maintained one minimum salary from the age of 70 for the assistance program and excluded the phasic approach and capitalization. The capitalization pillar was excluded too in this passage on July 10th, 2019.
has been on bringing the various pension schemes operating within the Brazilian economy into alignment with one another; e.g., ensuring that open pension funds operate in a similar manner to close pension funds, and vice versa.
THE POLITICAL ECONOMICS OF PENSION REFORM: FAILURES, SUCCESSES

BENNE VAN POPTA

1 Benne van Popta studied macro-economics, public finance and political economics (1970-1976). Worked at the Ministry of Finance for thirteen years (Treasury, (1976-1979); Budget (1986-1995) and was Senior Economist at the Social and Economic Council (a social dialogue institution and advisory council on economic policy). Author of various reports on the state of the Dutch economy (1980-1986). In 1995, joined the Small Business Association of The Netherlands, MKB-Nederland. There he was director of Economic and Social Affairs, European Affairs and CFO (until 2009). He is currently a member of the Board of the industry-wide pension fund for the retail sector since 1999 and is the chair of the Investment Committee since 2009. Since 2011, employers-chair of the industry-wide pension fund for small industry in the metals and technology sector, PMT, the third largest pension fund in The Netherlands. He is an active participant in the ongoing Dutch debate on pension reform. He is the delegation leader of a Dutch group of pension experts, which has visited many EU-Member States to study their pensions systems. He is an active participant of the International Centre for Pension Management (ICPM) discussion forum and has a broad knowledge of pension systems around the world, especially pension systems in Europe.
I have been involved in pension reform debates at a national, European, and international level for decades. As such, I have dealt with issues of solvency, governance and disclosure, as well as a wide variety of macroeconomic, regulatory, and individual-capitalization parameters. I have come to this, my second international FIAP forum, in order to share what has worked for the European pension sector as it has undertaken reform. Additionally, and perhaps more to the point, the plan is to clearly delineate those stances, approaches and strategies which only served to stall – rather than propel – reform initiatives. At the end of the day, societies who possess actors who are capable of coming to the table and focusing on issues upon which they can agree, have a much greater probability of generating a successful pension reform agenda; i.e., as opposed to those whose pension sectors are extremely polarized. Time and again, many of us within the European pension sector have seen how initiating the pension reform process with a clear delineation of agenda items on which a fair degree of consensus exists has led to an ability to overcome more contentious points. It seems that the aggregate weight of these consensus items always far outweighs more hotly debated topics.

Most of my knowledge in terms of the Latin American context is limited to the Chilean case, but the reason I am here is to provide context on European successes and failures. And, as Europe preceded Latin America into the current demographic shift, these lessons learned may very well prove of interest and utility to the men and women charged with reforming your national pension sectors; especially given our current macroeconomic scenario, which has been especially dynamic of late. Nations capable of remaining focused on the areas where ideas overlap are best positioned to implement effective and lasting reform. Consensus drives inertia, while ideological arguments often stop reform in its tracks before momentum has a chance to build. By the same token, once you are able to get all of the major actors to back your national reform agenda, it becomes exponentially more difficult to stop. The inertia becomes nearly overwhelming and people seem to be more willing to hammer out conciliatory measures. Using a strategy which prioritizes early-stage of the will help to ensure that a particular group never possesses veto power over processes aimed at providing more and better pensions to the highest number of individuals possible.
I would first like to give an overview of two subjects after which time, I will go into deeper detail as space allows. The first major issue which I will address is the manner in which a society can optimize its pension system. Secondly, and more to the point, I will provide some remarks on strategies which have proven to be of value when undertaking pension reform.

I have been involved in Dutch economic policy for more than four decades, and spent about 20 years attempting to formulate and optimize our national pension policy. In terms of European pension policy, I have a total of approximately 10 years. As a result, my knowledge of European pension policy is fairly deep. One of the primary characteristics which I have identified is that, as a nation, the Netherlands has to date been incapable of undertaking pension reform. Although we have debated the issue for more than 10 years, we have failed to achieve the progress seen in neighboring nations; and, to be frank, it has personally been a decidedly frustrating process. In fact, discovering what factors have led to other nations achieving effective and lasting pension sector reform has become one of my primary focuses.

As a result, this obsession with identifying what components have enabled certain societies to successfully reform is the basis of my presentation. Of course, one is also necessarily interested in what factors impede reform processes. In short, during recent years the majority of my professional life has been focused on identifying these factors, be they positive or negative.

My first message is that, on the whole, during the last decade pension reform has been a difficult task in every national context across the globe. Furthermore, it should be noted that pension reform failure has become what can only be described as the default outcome. Therefore, it would seem that one’s time is best spent not on attempting to determine why nations fail in their attempts to generate productive pension reform policy, but rather to determine why the relatively few success stories played out the way they did.

If one analyzes these reform standouts, a series of critical success factors begin to emerge. Would any of you like to venture a guess at what they might be? I assure you, they are very much achievable and the overall simplicity of their nature may surprise many within the sector. The idea in sharing these critical success factors is that policymakers will go down the list and check off all of the criteria which they currently fulfill, in the hope that this will allow societies to focus their attention on remediating any potential blind spots or weak points.

I would like to utilize the case studies of Finland and the Netherlands to present my argument. Finland is what one might categorize as the best case scenario in
terms of pension reform, while the Netherlands has demonstrated how to best fail at pension reform. Once we have evaluated these two case studies, I will leave it to my fellow forum participants to make a determination as to where Chile is located on the spectrum. Personally, I stopped just short of rendering a verdict on the Chilean case because things became a bit nebulous fairly early on. To summarize, the hope is to deliver the skill set required to help our respective national leadership teams to avoid the default outcome; namely, failing to deliver on pension sector reform. This is my primary aim here today.

Why has pension reform become so difficult?

There are three primary catalysts which have caused this to be the case. Pension schemes have become extremely expensive undertakings. In the 1960s, 1970s, and 1980s, our older-adult populations were relatively small in comparison to their respective national populations. They did not live very long after reaching retirement and economic growth was strong. Returns on assets were high. Therefore, societies enjoyed the twofold luxury of possessing rather small older-adult populations and a surplus of economic and financial resources to finance pensions for these individuals.

What did this scenario lead to? Pension payouts increased and almost directly correlated to gains on the economic front. Additionally, retirement ages dropped almost as quickly as financial markets strengthened.

We now live in a completely different world. Our societies are aging, life expectancy is on the rise, economic growth has slowed, and returns on assets have decreased. As a result, every nation on earth is beginning to debate the issue of increasing contribution rates and hiking retirement ages. We are essentially asking ourselves to contribute more income to receive a lower payout, and work four more years. Clearly, this is going to be a daunting task no matter what the national context involved is. This issue comprises the first factor which makes pension reform so difficult nowadays.

The second factor which impedes pension reform in a wide variety of national contexts is the fact that pensions are actually comprised of three underlying contracts: the social contract, the financial market contract and the labor market contract. At times, they have been referred to as the three pillars of the pension contract.

The social contract is an intergenerational agreement based on solidarity and possesses the ability to drive wealth redistribution within a given society. Clearly, social contracts tend to be played out within the political arena, and are extremely
public affairs. By their very nature, social contracts attract – or at least merit – the attention of nearly every single member of society.

For its part, the financial market contract views pensions as individual financial products which are purchased by consumers. The financial services sector within a nation is charged with delivering said products. Public debate on this aspect of the pension sector is fairly limited in nature, and usually addresses black and white issues such as fees paid to fund managers, asymmetric information and competition.

The third pillar is the labor market contract. It consists of the individuals within the labor market who possess a labor contract, and who are making pension contributions. Under typical conditions, it is a funded scheme. Normally, the only dichotomy exists in terms of whether an individual or collective financial product is utilized.

One must never lose sight of the fact that, at the end of the day, people seem to remain focused on one primary issue: the level of payout they will receive upon retiring. This is to say, we do not always take into account the other factors which play into generating retirement wealth. This is because society generally views a given pension scheme as an integrated system, even though most of us within the pension sector refer to the existence of a first, second and third pillar. This dynamic serves to complicate our task of generating an empirically-based debate agenda.

How did pension reform failure become the default outcome?

To begin with, this scenario arose due to the fact that pensions have become an increasingly costly undertaking. Furthermore, pensions are much more complex financial instruments than most individuals within society realize. As stated, they comprise a complex integration of three separate contracts.

As one begins to analyze the pension policy arena, circumstances have become extremely difficult and, in turn, have often served to highly politicize the third factor. Additionally, as the pension sector evolved during the last century, society witnessed a manifold increase in the number of actors voicing opinions. Clearly, an increase in the number of interested parties advocating for the inclusion of items on the debate agenda has served to further complicate matters. Generating public policy which has the capacity to address such a long list of needs is an almost impossible task.

Such a plethora of pension-reform actors, instruments, institutions and ideologies involved in the debate has led to a situation which is fairly generalized across every national context: either everyone is in charge or no one is in charge. Here
again, the situation has grown increasingly complex and of course all of the three factors involve their own historical context that also serves to exert influence on the pension reform debate. A given actor or ideology is necessarily the product of an entire series of events occurring over many, many decades. The relevance of these historical narratives should never be underestimated and must be addressed in a rational manner as we endeavor to lead our nations through the reform process. At the end of the day, a complete leadership vacuum and an over-democratized scenario both provide the same outcome: pension reform failure. When no one is in charge, or when everyone is in charge, the reform debate necessarily stalls.

**Why do some nations succeed in their efforts to reform their pensions sectors?**

Several of the factors which contribute to success are related to the very reasons why a given society undertakes to reform their pension sector. Other factors have to do with said society’s overall capability to undertake pension reform.

Over the years, I have identified three determinant factors in terms of why a nation undertakes reform; that is, factors which contributed to their eventual success: an economic crisis, a pension crisis or a very public battle over the issue of distribution occurs. Economic crises often arise in the wake of low growth and budget deficits. This, in turn, makes funding the first pillar within the pension sector unsustainable. This type of scenario obligates societies to undertake pension reform. When nations face large-scale economic crises, every actor is fully aware of their responsibility to participate within the reform process. Crisis, therefore, is a very capable driver of reform.

The second factor which drives pension reform, pension crises, is a more nebulous concept. At the end of the day, though, we can safely say that during a given pension crisis individuals are unsatisfied with payout levels. As stated previously, this is not just an issue; it is often the issue for much of society. Therefore, it is vital to ensure that every actor within the sector works to educate society in terms of determinant factors which make a financial instrument viable.

And, clearly, it is difficult to ascribe pension crises to problems within the first, second or third pillar. When all is said and done, one would do well to focus on what is occurring within society: individuals are unsatisfied with the results being generated by the pension sector. And in my judgment, those of us within the sector should never attempt to characterize this perception as complaining on the part of scheme participants. People’s ability to voice their opinion about sector underperformance can often be a good catalyst for change. When sector actors choose to avoid addressing widespread dissatisfaction, they are often unwittingly driving the proliferation of ideological rhetoric. Here again, I caution you to remain
focused on the fact that people are usually criticizing payout levels, and not schemes; which is to say, most of us within society do not possess enough knowledge to even perform a solid comparative analysis. Therefore, our best weapon against ideological rhetoric is a clearly delineated program designed to provide financial education to every member of society. Ideological rhetoric is definitely a factor which has contributed to reform failure, but I also believe it is manageable.

The third trigger for pension reform is a perception of an unjust distribution of retirement wealth. The contract between young and old begins to break down. If one analyzes the Dutch case, a debate has begun to materialize regarding the fact that lower-income, less-educated individuals live shorter lives than their higher-income, more-educated counterparts. The central issue here appears to be that if one utilizes a single retirement age for both of these groups within a public pension scheme, the lower-income, less-educated group are effectively subsidizing the retirement wealth of the higher-income group who tend to live longer lives. Therefore, a graduated retirement age should be evaluated.

If distributional controversy builds over time, it can often become a catalyst for pension reform. But, in my experience, economic crisis is the main driver of reform. This is to say, it is the most common precipitator of reform initiatives. Pension crisis seems to drive reform less frequently, and it is followed by the distributional justice issue, which I have only seen it impact the debate agenda significantly on one occasion: in the Netherlands.

Will your society be successful in its attempts to reform its pension sector?

Once you determine what the drivers of pension reform are, you need to execute pension reform. First and foremost, we need to perform an objective analysis of our national ability to undertake pension reform. The most determinant factor here is whether or not your nation possesses the ability to act. This is to say, is achieving pension reform a rational expectation vis-à-vis the current state of affairs of your national political arena? For example, in the European context one would need to determine whether dialogue was possible between trade unions and employers. At the end of the day, societies must determine whether they are capable of bringing together what might be best described as a Coalition of the Willing.

In some nations, one is dealing with a two-party system. Therefore, the current ruling party is often capable of generating an actionable reform agenda. The party in power possesses the ability to execute policy. In presidential systems, the executive branch possesses the power to enact change, while other nations endow their finance ministers with the power to perform wholesale revisions of financial sectors. Thus, we can say that these three scenarios include entities capable of carrying out reform to a successful conclusion.
Every nation which has achieved lasting pension reform possessed of political dynamic which allowed a given entity to lead the process and bring together the aforementioned Coalition of the Willing.

Do you seek compromise or an opportunity to further a particular agenda?

One must decide whether they are coming to the table in order to hammer out a workable, lasting set of goals with other actors, or simply in search of a venue in which to expound upon their personal, institutional or ideological agenda. Nations cannot afford to let their pension reform debates devolve into political knife fights. When actors are simply advocating their own separate agendas, societies are unable to build up any inertia within the reform process. This has been proven time and again in an extremely wide variety of national contexts. When there is absolutely no willingness to compromise, the chances of building a coalition of willing entities are almost nil. When no coalition exists, one cannot expect reform to be achieved.

Will you be able to implement a solution?

In this stage of reform, nations must objectively evaluate their ability to execute reform. Does a society possess the institutional capacity to execute items on the reform work agenda? In my experience, nations who simply begin to act on their reform agendas, in a step-by-step manner, eventually begin to build up the necessary inertia required to see things through to the end. One must simply act. If you are waiting around to develop a big bang solution, you had better get comfortable – because that day will never arrive. Pension reform is not going to move from 0 to 60 in 10 seconds. As stated, pension sectors are complex systems with many moving parts. Most attempts involving rapid acceleration are going to lead to component failures. Additionally, the probability of aligning all the actors and synchronizing their actions is very low. Big Bang solutions have one very large problem: if even one facet of the plan fails to perform as expected, the entire reform process is derailed.

The Netherlands: a case study in reform process failure

Let’s return to the Netherlands example and delineate why it is a case study in how not to go about reforming your national pension system. For starters, the Netherlands is not undergoing an economic crisis. In fact, it is one of the most stable economies in the world. The Dutch are not involved in a pension crisis either. According to the Melbourne Mercer Global Pension Index (MMGPI), the Netherlands has the best system in the world in terms of participant perceptions. When you have an extremely well operating pension sector, there is no pressure to begin a debate on pension reform. However, momentum is beginning to grow in
terms of distributional fairness. Some are beginning to state that the system favors older adults, even as it burdens younger workers. Clearly, not everyone in Dutch society agrees with this diagnosis, and many point to a possible ideological basis for making such claims. Some view the second pillar as an innately individual-oriented component, while others perceive it as a risk-sharing mechanism between participants.

In short, it is impossible to gather sufficient actors to build a coalition. One would have to bring together no less than five political parties in order to even begin to discuss generating a debate agenda. Additionally, trade unions are advocating for the inclusion of their specific aims on every party platform in the nation. For example, one can see how we might end up with five different trade-union arguments against increasing the retirement age. Trade unions are just a convenient example here. Every actor within the sector is capable of fighting for the inclusion of their talking points on party platforms. It is easy to see how quickly this issue can become exponentially more complex. For their part, employers simply abstain, due to the fact that they are unwilling to finance any new measures. It seems rational to expect that this is probably the dynamic at work within every employer sector on the planet.

Therefore, one might say that the Netherlands has no impetus or ability to act, combined with a complete lack of willingness to compromise. The only solutions under consideration are Big Bang solutions which, as stated do not work. This is what makes the Netherlands of best practice for pension-sector reform failure. There is no need for reform, and the perceived need for reform is completely overanalyzed.

**Why does Finland constitute a best practice in terms of pension reform?**

The answer to this question is fairly straightforward: Finland only possesses a large-scale Pillar 1 and a small-scale Pillar 2. The first pillar is 75% pay-as-you-go and 25% funded. It is what we characterized as a Bismarck first pillar, therefore pension rights are based on the years in system and the income one has earned. Consequently, if an individual has a long work career and has nominal earnings, their pension payout level will be equal to 65% to 70% of their average salary. Their contribution rate varies between 20% and 23%. And unemployment is simply not a significant issue in Finland. Men and women have the ability to have a full-time job position during a span of 40 years.

Therefore, Finland is best described as a pension paradise. The only stipulation is that individuals must work. Everyone has to work hard. It takes the entire nation to work – and work hard during long work careers – in order to generate the conditions necessary to build a pension paradise.
Of course, the scheme must also be sustainable. When this is the case, employers and trade unions will step up and take responsibility for the role that each must play in the system. In Finland, if consensus is reached in terms of adapting the pension system, and a fiscally viable solution is put forward (i.e., one that does not have a major impact on the budget), the finance minister simply signs off on what the parties have agreed to.

So we can say that the Finnish system works. The pension system it possesses is also compatible with the labor market. Employers and trade unions take responsibility for their roles, which ensures that Finland has the power to act. There is a high degree of willingness to compromise, and they approach their agenda with a step-by-step execution of the latest adaptation of the pension system.

What makes Finland such an exemplary case? To begin with, they never allow themselves to get drawn into unproductive arguments regarding theoretical bases of their pension system. Therefore, the only exigency involved is the need to formulate an adaptation measure each year; or, at times, every five years. As no pressing need to pursue reform exists, an argument could be made for stating that Finland is not the ideal model for Chile. This would ostensibly be due to the fact that there is a difference between the need to adapt and the need to reform.

If your society undertakes pension reform but finds it a difficult task, and you begin to suspect that it is on the same path as the Netherlands, what action needs to be taken in order to avoid generating the same type of outcomes? At the end of the day, this is the central question.

For starters, your society will need to change the way it behaves. Think big, but act small. Don’t chase after Big Bang solutions. Solve problems one at a time and don’t get drawn into ideological wars. Identify where actor interests overlap. Look for subjects on which parties agree and never place the emphasis on differences.

I have a great deal of experience negotiating with trade unions. In any political negotiation or context, when one chooses to focus on areas of consensus, you begin to accumulate a pool of issues upon which parties agree. This aggregate mass can then be compared to the single spots where a degree of disagreement still exists. When a side-by-side comparison is made, the larger consensus aggregate dwarfs minor controversial issues. Actors begin to realize that if they begin to obsess on said minor details, they have a great deal to lose. Time and again, I have seen how if you begin to rack up points upon which you can agree at the outset, it makes it much easier to hammer out disagreements further down the road. And conversely, if one becomes focused on the areas where parties disagree, it becomes almost irrational to expect that an eventual agreement will be reached.
When we analyze the case of the Netherlands and of Finland, one sees how these factors play into success and failure. Actors must be willing to take responsibility for fulfilling a participatory, if not proactive role, in the proceedings. This is because every actor at the table must contribute to the process of adapting the pension system. Pension systems involve actors from the political world as well as the labor market. Therefore, they possess what might be best characterized as a collective responsibility for generating a workable and lasting pension reform package. Clearly, in the Netherlands we have yet to reach a consensus. Every actor is currently limited to advocating items on their individual agenda. They are all eager to make their own views known and, in consequence, fail to fulfill their responsibility in terms of achieving system adaptation.

Hopefully, there are many lessons to be learned from Latin American innovators such as Chile. Conversely, I suspect that the European pension sector will continue to provide actionable data for fund administrators throughout the Americas.
CHILE’S PENSION SYSTEM REFORM BILL

AUGUSTO IGLESIAS

Augusto Iglesias holds a BSc in business engineering from the Catholic University of Chile, as well as an MSc in economics from UCLA. Currently serves as chairman of the Presidential Advisory Council on Pension Reform; has served on commission since 2006. Has served as Undersecretary for Social Well-Being (2010-2014), director of research at AFP Habitat, and researcher at leading think tanks such as the Center for Public Affairs (CEP) and the Economics Institute (Catholic University). Long history of providing advisory services to international bodies such as the World Bank, the IADB, the United Nations, CEPAL, in addition to private and other public-sector entities.
The primary objective of the present text is to explain the context in which the Chilean pension system reform bill drafted by the administration of President Sebastian Piñera was presented to Congress in late 2018, as well as delineate the principal characteristics of said bill.

I. Context

In November 2018, the administration of President Piñera brought a bill before Congress which proposed several reforms to the nation’s pension system. The bill is currently still in committee. The previous administration, towards the end of its term, also proposed a reform package. However, the bill never made it out of committee.

Both reform packages included an acknowledgment that something needs to be done to improve pensions both in terms of future payouts, as well as current payouts. Additionally, and with the aim of improving future pensions, both reforms involve attempts to significantly increase contribution rates. The previous administration proposed a 5% increase, whereas the current reform includes a 4.2% increase. The two bills also have several differences: in terms of the characteristics of the institutional model utilized to manage additional contributions; in terms of the mechanism utilized to improve current pension payouts and the definition of the segment of the population intended to receive proposed benefits; and in terms of the scope and characteristics of the proposed changes to the AFP market.

The fact that two successive administrations – which differ greatly in terms of political outlook – would draft such similar reform bills demonstrates that nearly the entire nation agrees that something must be done to reform the current pension framework. It is also interesting to note that both reform packages include measures designed to generate significant increases in the contribution rate (in order to improve future pension payouts), as well as increases in public outlays/cash
transfers (in order to improve current pension payouts). Clearly, tangible progress needs to be made on the issue of contribution rates. Furthermore, the similarities between the two bills demonstrate that many within Chilean society agree on what is causing the current pension adequacy shortfalls. The problem is so self-evident that a highly improbable event has occurred. The vast majority of the pension sector’s major actors all agree that significant increases need to occur in terms of the aforementioned contribution rate increases and additional public expenditures on pensions. Few could have predicted that the State, workers and retirees, the pension industry and employers would all end up backing a major reform initiative. In terms of explaining such ubiquitous backing for a reform bill, it is quite possible that consensus was built slowly over time through the publication of a significant amount of studies on the Chilean pension system which was published by a wide variety of think tanks, public and private entities, and subject-matter experts. Through the efforts of all concerned, a shared knowledge base began to develop within society and gradually eliminate resistance to the types of low scale parametric changes; i.e., perhaps this is what explains why Chile was able to avoid the violent resistance that such measures have so often encountered in other national contexts. One aspect of the scenario is fairly indisputable: this body of research has definitely played a decisive role in the way in which Chilean decision-makers have approached public policy initiatives within the pension sector.

At the end of the day, the bills have reached committee on the basis of a fairly unanimous diagnosis of what is occurring, and there is also a high degree of consensus in terms of the scale of adjustments which need to occur. Thankfully, everyone concerned also shares a similar sense of urgency. In light of the foregoing, it would be extremely unfortunate to see the Chilean society miss an opportunity to reach an accord and enact reform legislation which generates effective and sustainable solutions to our pension system’s current set of shortfalls.

II. Why is Chile attempting to reform its pension system?

The Chilean pension system has achieved significant milestones during its history. Firstly, the system has achieved a high degree of coverage throughout the population. For instance, the proportion of contributors to workers has reached 66.3%, while the rate of pensioners to adults over the age of 60 is 77%. Thus, almost every household in Chile with an adult over 60 receives a pension.

The pension system has also contributed to a significant decrease in poverty levels among older adults. This progress, which is measured in income, was achieved in large part due to the introduction of the Solidarity Pillar introduced in 2008. Older-
adult poverty in Chile has decreased from 23% in 2006, 24.5% in 2017. Older adults now comprise the segment of the population with the lowest levels of poverty in the nation.\footnote{As per results from the Encuesta CASEN survey performed by the Ministry for Social Development and Family Services, 2017. Available online at: CASEN 2017.}

Another major achievement of the Chilean framework has been the high yields generated by pension funds. Since the system’s launch in 1981, it has average 8.1% real annual growth; a figure which is twice what was originally projected. Furthermore, the system has a spotless track record in terms of financial integrity. During its over 35 year history, not a single case of misuse of resources has been recorded in terms of the nearly USD 200 billion in assets under management within Chilean pension funds. This is an especially relevant achievement when one considers that Latin America lacks appropriate levels of transparency, and which comprises a region with a history of financial crises.

Furthermore, the deficit generated by the previous PAYGO scheme has been almost completely remediated, which has significantly reduced the fiscal impact of the pension system on the Chilean economy. In fact, it has allowed the nation to utilize tax revenues to generate a noncontributory Solidarity Pillar which provides benefits to the nation’s poorest retirees.

Lastly, such a huge amount of retirement savings as comprised a significant driver in terms of economic development. A study published by Fuentes in 2013 – which, in practical terms, was preceded by a study by Schmidt-Hebbel and Corbo in 2001 – concluded that a significant percentage of the economic growth observed in Chile during the period 1981-2011 was due to the introduction of the Chilean AFP model. The growth, which varied between 8.6% and 14.4%, is even more significant when one considers that healthy economies are of paramount importance in terms of the pension adequacy issue. When economies failed to grow, job stability begins to erode, new employment fails to materialize and wage growth becomes completely stagnant. When employment opportunity and wages stop growing, financing what might be described as decent pensions becomes increasingly unfeasible.

The foregoing results generated by the Chilean pension system have led to its inclusion in the number of international rankings. For instance, in 2018 the Chilean framework was ranked eighth out of 34 nations on the Melbourne Mercer Global Pension Index (MMGPI) due to its sufficiency, sustainability and integrity.\footnote{Melbourne Mercer Global Pension Index, 2018: https://australiancentre.com.au/projects/melbourne-mercer-global-pension-index/.

The foregoing results generated by the Chilean pension system have led to its inclusion in the number of international rankings. For instance, in 2018 the Chilean framework was ranked eighth out of 34 nations on the Melbourne Mercer Global Pension Index (MMGPI) due to its sufficiency, sustainability and integrity.\footnote{Melbourne Mercer Global Pension Index, 2018: https://australiancentre.com.au/projects/melbourne-mercer-global-pension-index/.

In 2014, the Allianz Pension Sustainability Index placed Chile in ninth place among
54 other nations which were evaluated in terms of system sustainability. The index published by the Center for Strategic and International Studies which evaluates systems in 20 nations based on their ability to address population aging challenges, ranked Chile and third place in terms of fiscal sustainability, and eighth place in terms of retirement income adequacy.

Therefore, what would compel Chile to overhaul a system which has been so successful to date? Reform is necessary in order to meet the huge demand within society for improvements in pension adequacy. Additionally, the pension model needs to be adjusted in order to generate long-term stability within the system framework.

The demand for better pensions

Whilst a great deal of significant and sustained growth occurred within the Chilean economy during several decades, contributory (i.e., funded via retirement savings) pension payout amounts remained almost completely flat. As a result, many pensioners’ income levels have dropped vis-à-vis economically-active Chileans, and as one might expect they feel that they are not full participants in terms of enjoying the fruits of the nation’s economic success story.

Additionally, sustained wage growth over an individual’s work lifecycle – another positive consequence of sustained economic growth – as resulted in low replacement rates upon reaching retirement, whereas said rate depends on the level of retirement savings achieved during the economically-active phase of life and, most especially, the contribution rate achieved during the first years of work which normally involve wage levels which are far below those an individual earns right before retirement. Another issue involves Chileans’ perception that current payouts have failed to reach the pension amounts which were cited when the system was launched during the early 1980s.

Dissatisfaction levels can also be explained by three trends which have negatively impacted contributory pension payouts. Firstly, Chile experienced a rapid increase in its life expectancy-upon-retirement levels. This dynamic was further exacerbated by a sustained decrease in fund yields, both in the active phase as well as the passive. Lastly, the low contribution density levels achieved by Chileans have generated payouts which have done little to improve public opinion. Unfortunately, nothing


was done in terms of modifying system parameters in order to remediate these system constraints. As a result, the contribution rates and legal retirement ages which were in place in 1981 – when the AFP model was launched – have remained unchanged for during nearly four decades.

Another major criticism – this is to say, in addition to criticisms regarding low payouts or pensions which fail to meet societal and/or individual expectations – is related to the fact that even when workers do contribute regularly to retirement accounts, they continue to be exposed to the risk of uncertain payout amounts in future.

In terms of the noncontributory component within the AFP model (i.e., the Solidarity Pillar), the pension question has been exacerbated by a failure to set benefit levels high enough to ensure older adults do not in their lives in poverty. Additionally, the Solidarity Pillar includes no provision for the needs of middle-class Chileans who, due to the aforementioned factors, fail to generate enough retirement income in spite of making regular contributions to their accounts. Clearly, this dynamic has generated major standard of living shortfalls for Chilean retirees and further inflamed national dissatisfaction levels.

**Continued stability of AFP model**

An effective pension reform package was also needed to address the continued political stability of the current framework, as well as in order to ensure the viability of its regulatory framework in which pension entities operate. The gap between current pension payouts and the retirement-income expectations of workers has only exacerbated harsh criticism of the AFP model. Public opinion is demanding that the pension industry address the issue of pension inadequacy. The performance of fund managers has been severely criticized under the logic that “if pension payouts are unacceptable, then fund managers must be mismanaging resources”. Unfortunately, this has led to a concomitant questioning of the entire individual capitalization framework, whereas Chileans have mistakenly assumed that it is to blame for inadequate pension payout amounts. Here again, the logic – while not altogether irrational – is misguided and basically assumes the following: if the retirement wealth generated by a given framework fails to produce acceptable payout levels, then the funding mechanism must be to blame.

**III. Reform bill before Congress**

In light of the foregoing, the government drafted a pension reform bill comprised of five primary objectives.
The first aim was to introduce a gradual increase in the Solidarity Pillar. The aim is to improve the pensions of 1.6 million retirees – this is to say, 67% of the current retiree population – during the first 12 months following enactment of the legislation. By the beginning of the seventh year following enactment of the reform bill, the plan is to have improved the pensions of 2.4 million Chileans; a figure which will translate into 80% of retirees at this time.

The second objective is to improve pensions for middle-class Chileans, in addition to providing a special increase for women’s pensions. The proposed changes will improve current as well as future pension payout amounts, and will be introduced gradually during the second year of enactment of the law. The number of beneficiaries generated under the auspices of this measure will grow rapidly from 460,000 to 840,000 retirees by the time we reach the seventh year of system operations under the new law.

The third aim of the reform is to generate better economic protection for older adults faced with the challenge of severe dependency. This is to say, the segment of our population who requires help to execute even the most rudimentary daily tasks within the home. The project proposes utilizing a combination of subsidies and insurance instruments aimed at providing an additional retirement benefit to 135,000 citizens living in the circumstances.

The fourth aim is to improve old age pensions for future generations of retirees. In order to achieve these ends, a 4% increase in the contribution rate has been proposed. The measure would begin to have a significant impact on old-age pensions that begin to generate payouts as of year 2030.

The fifth objective is comprised of initiatives aimed at increasing AFP sector competition, retirement-income IQs and enforcement/oversight mechanisms.

**Strengthening the Solidarity Pillar**

In order to improve current and future pension payouts for the nation’s most vulnerable retirees – in addition to those within the middle class who are most vulnerable, the bill proposes an increase in the absolute level of the Basic Solidarity Pension (PBS), as well as the Pensión Máxima con Aporte Solidario, which involves a maximum pension that includes a solidarity input. In addition to these two measures, it is proposed that the parameters involved be differentiated on the basis of age. Currently, retirees in a situation of poverty who are over 65 years of age receive a fixed benefit amount which does not increase over time. Given the fact that pensioners face greater degrees of vulnerability as they age, the bill proposes that benefits increase as retirees reach 70, 75, 80 and 85 years of age.
The legislative package also seeks to introduce insurance coverage to protect the pensions of Solidarity Pillar recipients who choose the program withdrawal option, thereby ensuring that their payout does not decrease by more than 30% due to longevity. This reform is expected to split the Chilean pension market into two sectors: one which is comprised of the poorest retirees who receive Solidarity Pillar benefits, and to retire utilizing program withdrawal; and another, which is comprised of middle and high-income pensioners who largely prefer retiring through the use of an annuity.

Lastly, the reform bill proposes to increase accessibility to the Solidarity Pillar, even as it limits the circumstances in which an individual might become ineligible to receive said benefits.

The foregoing changes will be financed through a 40% increase in tax revenues earmarked for funding Solidarity Pillar benefits.

**Better pensions for the middle class and women**

in order to increase middle-class pensioners who lack coverage under the Solidarity Pillar, as well as to improve pensions for women, the reform includes a benefit funded through the use of public resources. The total cost of the public outlay is equivalent to 0.32% of GDP. Pension payout amounts are pegged to the quantity of contributions paid during an individual's work life. Under these parameters, women who accrue more than 16 years within the formal-sector workforce and men who accrue more than 22 years in system, receive an additional monthly pension benefit. As stated, the amount of said supplementary pension benefit will depend on the number of contributions that an individual accrues during their career: a higher volume of contributions will correlate to a higher payout amount. In order to remediate the gender gap in terms of pension payouts, the supplementary amount paid to women will be larger than the amount paid to men.

**Protection for severely dependent pensioners**

The reform includes a measure designed to address the needs of older adults who have developed severe physical limitations. A monthly cash benefit will be paid to an insurance plan. In cases where an individual is not covered by said plan and is considered to fall within the 60% poorest retirees, a subsidy will also be paid to cover caregiver costs, etc. The insurance is funded through a contribution of 0.2% and is made by employers. The subsidy, for its part, will be financed through the use of general tax revenues.
Improving future pensions

With an eye to addressing future pension payouts, the bill proposes gradually increasing the contribution rate by 4% over a period of eight years. This measure would be covered by employers. Furthermore, and with an eye to improving pensions of future retirees, an insurance product will be introduced in order to cover the cost of contributions during periods of unemployment. Another initiative is designed to redouble efforts to ensure an efficient collection of unpaid taxes. Lastly, incentives will be introduced to encourage people to put off retirement. These incentives will include a measure which allows individuals who delay retirement to withdraw 50% of their largest retirement account balance. Additionally, these individuals will receive a better pension payout than individuals opting to retire at the legal retirement age. AFP’s will also be authorized to charge lower management fees in cases involving individuals who choose to delay retirement; in fact, they may even opt to completely forgo said fees.

In addition to the changes outlined in the pension reform bill, other bills containing significant reforms are also in committee. Others have been recently enacted via other legislation. The following three reforms are examples of such initiatives:

- Mandatory retirement-account contributions for independent contractors (legislation enacted);
- Universal childcare, initiative at increasing female labor market participation rates;
- Remote work, initiative aimed at increasing employability levels.

Increasing sector competition, retirement-income IQs and oversight/enforcement

In order to improve the quality of services provided by the AFP sector, as well as to reduce management fees charged by said entities, the reform bill proposes the following measures:

- Fund participants may choose to have their 4% additional contribution manage by specialized management entities under an investment regime other than 10%;
- Employee credit unions, as well as Cajas de Compensación, will be permitted to operate AFP entities;
- Barriers to entry into AFP sector will be lowered by reducing initial capital reserve requirements; authorizing simultaneous sale of voluntary and legally-mandated retirement savings products; and allowing customer service teams capable of addressing obligatory as well as voluntary aspects of retirement savings to operate in tandem.
• AFP’s will be allowed to distribute portion of their profits among fund participants;
• regulations regarding new fund participant recruitment will be changed;
• AFP’s will be allowed to differentiate fees charged on the basis of time in system and size of group of participant enrolling.

Measures aimed at improving retirement-wealth IQs and public awareness campaigns mandate that Chilean pension funds finance retirement education activities and programs through the use of resources from management-fee cost centers. AFP’s will also be obligated to provide an annual report to fund participants. Lastly, fund participants will have an annual maximum of times that they can change from one pension fund to another.

Lastly, in order to improve enforcement and oversight within the Chilean pension sector, the following reforms are currently in committee:

• Expand the number of positions subject to conflict-of-interest reviews, in terms of potential conflicts between, inter alia, a fund and other AFPs;
• Generate a centralized retirement savings IT system;
• Strengthen oversight of SCOMP (Pension Payout Inquiry and Amount System) system and medical review boards.

IV. Controversial aspects of reform

Some individuals have stated that the current reform bill does not go far enough in terms of parametric changes. This critique is completely unfounded. The reality is that this reform, as well as the reform put before Congress in 2008, comprises the most significant change of the Chilean pension model since the launch of the individual capitalization framework in 1980. The scale of the effort involved must be evaluated in terms of several aspects. Firstly, the reform doubles the fiscal outlay on the national pension system. It introduces programs aimed at addressing the needs of women and middle-class individuals who comprise a population of over 800,000 pensioners who will direct benefit from these reforms. Contribution rates are being increased by 40%, which will mean that contributions to individual retirement savings accounts will increase from 10% to 14% during the coming years. The reform will provide coverage to retirees who lack any type of old age safety net protection. Many of the measures will allow Chilean society to significantly increase its contribution density rates. And, lastly, a great deal is being done to increase sector competition. Thus, it is difficult to understand how this reform bill might be described as anemic.

To be sure, no one involved is assuming that this will be the last reform bill that is
ever before Congress. In fact, future adjustments to the system are simply a part of life. As time moves on, Chilean society will face a different set of circumstances and constraints which do not yet even appear on the long-term horizon. Therefore, it would be impossible to engineer a reform strategy capable of addressing every future contingency.

The viewpoint that the current reform package fall short is, furthermore, somewhat naïve in the sense that it fails to take into account the political realities of pension reform. In a democratic society, consensus building is of paramount importance, especially when a given administration does not enjoy a majority in the House and Senate. Therefore, the scale of reform undertaken within the current legislation is rational and practicable. It does not attempt to achieve superficial progress at the price of tangible and lasting change. The pension sector simply opted for generating strategies which involved limited solutions in situations where they needed consensus was lacking. Additionally, we successfully sidestepped the most controversial issues in favor of making tangible progress on the pension adequacy front.

Others have become hyper-focused on the way in which many of the proposed changes are being rolled out over time. When evaluating the reforms before Congress, it is important to distinguish between the changes aimed at increasing current pension payouts from measures aimed at increasing future pension payouts; this is especially the case when Chileans are contemplating our contribution rate increases. Practically all of the changes aimed at increasing current payouts will begin to operate immediately after enactment of the law. In fact, 67% of all Chilean pensioners will profit from the reform bill during its first year. In terms of the proposed increase in the national contribution rate, we do in fact intend to adjust this rate over a period of eight years. This strategy is intended to achieve two ends: minimizing the eventual negative impact of the reform upon our labor market; and, ensuring that the entire reform package remains financially viable. Thus, opting for a reform which does not involve a gradual introduction of certain measures is simply not an alternative. No pension system on earth can efficiently achieve its goals if the economy is not generating quality employment and if wages are not increasing over time. Additionally, any reform needs to address financial realities. Otherwise a society is in danger of disturbing the broader fiscal equilibrium which it has worked so hard to achieve.

Some criticism has been directed at the proposed fund management model. It seems that some within our society feel that the proposed contribution increase is very complex and that workers will be unable to understand the parameters involved and make the right decisions. While it is the obligation of every successful pension system to simplify decision-making processes for those who are enrolled, there
is more than one way to approach this challenge. On the one hand, we can limit the number of alternatives available. Another strategy is to introduce a default enrollment option. In my judgment, an optimal design we manage to combine a sufficient number of alternatives to address individual preferences and profiles, with choice architecture is that guide individuals towards making decisions in their own best interests. As we know, everyone does not tend to act rationally in every circumstance, so we need to do everything possible to help them make the right call. I am convinced that the bill before Congress fulfills these aims. The reform ensures that individuals maintain their freedom of choice and also includes automatic mechanisms to help individuals who are incapable or unwilling to make a decision in terms of retirement income.

Another less frequent criticism has involved the ostensibly limited role of the State in managing the AFP system. However, the reform does in fact strengthen the oversight framework which is already in place. Furthermore, the bill includes an opportunity for the Government of Chile to operate its own AFP, which would be able to participate in the management of the 4% additional contribution.

Finally, some have pointed to a lack of solidarity in the current reform. Their rationale is that the bill does not include a contributory PAYGO component. This criticism requires a more extensive analysis, as it is repeated in the case of many other pension systems based on individual savings and has been used to justify radical changes in its structure, always with the aim of introducing or strengthening PAYGO systems.

Every pension system must include solidarity components to support the most vulnerable and needy citizens. To ensure solidarity, these components should preferably be financed with contributions from the less vulnerable and needy. Consequently, distributing contributions paid by more and less vulnerable workers among more and less vulnerable pensioners does not guarantee the solidarity of a system. In fact, a system of distribution of contributions (ie, a PAYGO system), unless it is very carefully designed, will not be solidary because those who contribute proportionately more (in proportion to their income) are workers with lower incomes. At the same time, among the pensioners who receive the transfers there may be some less vulnerable compared to some of the contributors who made the respective contributions. In addition, as life expectations are positively correlated with socioeconomic status, the pensioners who will receive the transfers for a longer time are mostly those with higher incomes. Thus, the concept of “solidarity” is not necessarily synonymous with “PAYGO system”. Furthermore, operating a PAYGO framework in no way ensures social equity.

We should also remember that distributing social security contributions has a major
impact on labor markets. When contributions do not remain within an individual account under the name of an individual worker, the whole scheme transforms into an income tax; an income tax which is a major impediment to formal sector growth. When we factor in population aging and the necessity to provide even more resources to fund more pensions, the magnitude of this income tax gets completely out of control in a fairly short amount of time. The negative effects upon job markets are fairly self-evident.

Therefore, social security frameworks which fund solidarity initiatives via transferors from the public budget, especially when the tax revenue framework is progressive or neutral, have major advantages over systems which attempt to fund social equity measures through social security withholding.

In light of the foregoing, the reform bill before Congress proposes funding the largest benefits for our poorest and most vulnerable citizens through the use of resources taken from general revenues, which are accompanied by the use of an insurance instrument which, in exchange for a contribution, provides protection circumstances which can severely impact a retiree’s standard of living.

V. What have Chileans learned from the national pension debate?

Our experiences in conducting a pension reform debate in Chile may prove of use to others in their respective national context.

1. We have learned that, although individual defined-contribution savings plans do not guarantee a specific payout amount, this in no way inhibits the materialization of irrational expectations in terms of retirement income. This is especially the case when political leaders, regulators or the pension industry contribute to this type of misguided thinking. In order for a pension system to fulfill its objectives, individuals need to have an accurate idea of what their retirement-wealth status is at a given moment. They then use this information to generate their individual pension expectation. When a significant group of retirees are unsatisfied due to valid or invalid reasons, the entire framework is going to be severely criticized; and this will occur regardless of the results achieved by fund managers. In these circumstances, increasing system efficiency or sustainability, and even the potential positive impact on a nation’s economy, will never turn the tide of negative public opinion. The only path to truly sustainable public policy is to generate rational expectations within the population being served by a given framework. Clearly, this is especially the case in terms of the long-term horizon.

2. We have learned how vital it is for fund managers to build and then maintain productive communication channels with fund participants. Once confidence
is lost, and doubt seeps in, the only solution will be to start from scratch and build up trust once again. Outstanding fund performance and low commission fees will never bridge the coverage gap. Thus, providing timely, well-written explanations of what is occurring within the sector is vital. A major part of this is responding quickly and intelligibly to worker questions. This type of strategy ensures that sector transparency is never doubted and contribute to the feeling among fund participants that their resources are in the right hands. Sectors often underestimate the relevance of inculcating positive public opinion; that is, until a financial or public opinion crisis arises.

3. We have learned that it is important to address issues as they arise. After all, this is the best way to ensure that system parameters are aligned optimally in terms of achieving system goals. In terms of the AFP model in Chile, the contribution rate and legal retirement ages have not been changed for 38 years. During said time period, rates of return have fallen off significantly, life expectancies have increased and we have discovered that the majority of workers accrue much fewer contribution periods than previously expected. Thus, no one should be surprised that there is a huge gap between retiree expectations and pension payouts.

4. A strength of individual savings and defined-contribution pension frameworks is their long-term financial sustainability. However, the majority of said systems attempt to achieve these ends via much higher risk levels. As a result, the control mechanisms within pension frameworks need to be adjusted in such a way that pension risk levels decrease and fund participants began to feel more confident, especially in terms of the oldest generation of workers, about the pension payout amount they will receive upon retirement.

5. In order to conduct a protective debate on pension reform, it is vital to achieve some degree of consensus in terms of what system shortfalls need to be remediated and what aspects of the system need to be left alone. Unanimity in terms of the diagnosis of the problem in no way ensures a society can agree on a single reform package, but it definitely makes things easier. The pension industry needs to step up in terms of fulfilling its role of providing solid research and actionable suggestions for sector improvement; to include improvements to the regulatory framework. A well-designed regulatory framework provides a space in which funds can operate with greater certainty. However when research only serves to sweet major issues under the around, sector stability begins to erode and the entire public opinion issue becomes determinant. In these circumstances, unwarranted or even misguided reform initiatives are enacted in response to issues other than pension adequacy.
VI. Closing remarks

Nations who have opted for introducing individual capitalization systems have benefited from these efforts. However, the pension reform debate which has been raging during recent years has taught us that, in order to be politically successful and sustainable over time a framework needs to move beyond optimal yields and achieve the following: a) generating rational retirement-income expectations; b) ensure that fund participants trust and value the work done by fund managers; c) make timely adjustments to framework parameters vis-à-vis changes in the outside world; d) limit pension risk levels; and, e) generate and update a diagnosis on opportunity areas, and never procrastinate when it comes to making necessary changes.
CHAPTER I
SECOND-GENERATION REFORMS OF THE PENSION SYSTEMS

CHILE: PENSION REFORM CHALLENGES
RODRIGO VALDÉS

1 Rodrigo Valdés holds a PhD in economics from the Massachusetts Institute of Technology (MIT), as well as a BSc in civil engineering from the Catholic University of Chile. Currently serves as professor at the Catholic University, as well as on the boards of several firms. Minister of the Treasury, Republic of Chile, 2015-2017. Long and distinguished career within the public and private sector, to include BTG Pactual (Santiago), Barclays Capital (NYC), the International Monetary Fund and the Central Bank of Chile.
My intent is to address the issue of Chilean pension reform vis-à-vis three fairly interrelated factors. Firstly, there is the issue of political constraints which currently limit the nation’s ability to reform its pension framework. Secondly, I intend to clearly delineate the challenge of generating better pension payouts; this is to say, by generating a schema comprised of problems which require specific solutions. Special attention will be paid to the potential effects of parametric changes and improvements to the Solidarity Pillar. Lastly, I will be analyzing the pros and cons of the two chief alternatives in terms of generating short-term solutions to low payout amounts; which is to say, utilizing general revenues or mandating an increase in contribution rates in order to generate acceptable contributory pension levels.

Having said that, I wish to point out that my central message is fairly straightforward. Firstly, all of the major players within the current pension debate have a generalized notion of what they consider to be an ideal solution to our current challenges. However, if our society is to generate an optimal solution, each factor must be willing to back off from what they deem to be the perfect solution. This is the only way Chilean society will have enough space to successfully navigate the public opinion and technical challenges; which are, incidentally, fairly complex in nature. At the end of the day, I propose we pursue solutions within the constraints of what is known in economics as the Theory of the Second Best. In short, we need to ensure that our pursuit of perfection does not interfere with our ability to generate practicable solutions. Sector actors must maintain their ability to objectively evaluate the proposals put forth by other participants within the reform process. At the end of the day, we all seek realistic solutions to real-world problems.

As Chile undertakes pension reform, it will face the many of the same challenges faced by other societies when attempting to address the political aspects of change. Additionally, we will also need to figure out how to navigate the fiscal constraints of pension reform. As a result, it is important to realize that our understanding of the potential effects of certain measures on the agenda is somewhat limited. This will allow us to approach things from an ostensibly more objective standpoint, especially when it comes to addressing the ethical aspects of the question. As with
any nation planning to objectively evaluate and then reform its respective social security scheme, Chile will have to deal with all of the ethical quandaries which arise as it attempts to make adjustments; in fact, they may prove the most difficult to solve.

In light of the foregoing, one must never lose sight of the fact that a successful reform bill is a politically-viable package that meets what everyone knows to be a minimum standard of practicability. This assertion in no way implies that society is obliged to sign off on any legislation which, while enjoying the support of the Senate, fails to meet the technical exigencies involved. I only wish to convey the idea that one needs to be aware of which elements of a reform proposal are of paramount importance and which are not. A successful reform debate will take into account different viewpoints and, above all else, help everyone involved delineate between issues of secondary importance and the chief objective.

In the spirit of simplifying matters, I propose we split the pension reform universe right down the middle. Our colleague from the Netherlands, Benne van Popta, provided us all with an extremely eloquent explanation of the three types of pension crises which can occur within a nation. His remarks informed the process by which I generated the aforementioned dichotomy.

The first pension reform group has a single, highly-focused objective: improving pensions. This is to say, these actors seek to remediate the issues of pension adequacy and – at some point – the broader, redistributive aspects of pension schemes. In practical terms, this type of reform seeks to generate acceptable pension payouts for older adults. The second group of reformers is focused on the issue of financial viability; or more to the point, the lack thereof. Due to its need to uncover new sources of pension funding, the measures generated by this half of the reform universe tend to be constrained to generating limits or even reductions in said payout levels.

The current bill before the Chilean Congress is of the first order (i.e., those seeking better pensions), whereas it seeks to generate better pensions. To achieve these ends, our society must begin to increase contribution rates.

As others have remarked in this FIAP forum, the issue of public resources has dominated the debate agenda in a number of European societies. Therefore, Chile will also eventually have to come to terms with the fiscal restraints nations face as they begin to begin to introduce initiatives. Adjustments to national social security frameworks nearly always trigger a concomitant series of economic distortions which need to be addressed in a timely fashion. The entire financial sustainability question also compels us to address said budgetary constraints. And, here again, every actor in the sector will need to take a proactive stance on this issue.
In light of the foregoing, it would seem that our first challenge – at least within the foreseeable future – is to generate a reform package which does comprise a direct path to the second alternative; which is to say, we must navigate the current pension scenario in such a way that we are not forced into reducing benefits in order to address our sustainability constraints.

**Above all else, be pragmatic**

The reform package which is currently before Congress addresses a wide spectrum of issues. Chile, on the one hand, intends to address the issue of pension fund management; which is to say, sector competition, the role of the private sector, the role of the State, as well as the process by which individuals opt to enroll in a given fund. Furthermore, the legislation intends to effectuate an increase in payout amounts via, inter alia, the following mechanisms: parametric changes (i.e., contribution rates, legal retirement age); unemployment insurance designed to eliminate pension-contribution gaps; and, incentives designed to drive higher contribution-density rates.

The reform legislation also contains measures that will alter our pension framework. For instance, it will modify – on a limited scale – the existing scheme which is based exclusively on the retirement wealth generated in AFP accounts and the Solidarity Pillar. This is, in effect, an acknowledgment of the fact that we cannot limit reform efforts to a series of parametric adjustments to the current framework. In my judgment, a reform which seeks to generate a framework based solely of the individual capitalization component and a stronger solidarity pillar would be incredibly shortsighted. There are two other issues of paramount importance which must be addressed almost immediate; namely, the entire intergenerational dynamic and the situation of women within our economy. Furthermore, a failure to address said issues will mean that the current level of heightened political tension will only intensify further.

The last issue which the proposed reform addresses is the utilization of general revenues to fund benefits for the middle class. Congress will need to determine to whom said resources will be paid, as well as the amounts to be generated. Clearly, our society will also need to evaluate the potential impact of said outlays on public coffers. Here again, this is an issue of paramount importance and every effort must be made to avoid politicizing the process by which we achieve an objective evaluation of the current state of affairs.

In recent years, our national reform debate has primarily focused on the technical aspects of Chile’s AFP model. In my view, it is time to begin to focus on the ethical, social and political viability of our current framework. The first step towards
performing an objective evaluation of the AFP model will be to acknowledge that, to date, little has been done to actively legislate change. Perhaps it would be best to begin to evaluate our available reform alternatives vis-à-vis two determinants: potential for generating political consensus; and, overall technical viability. The horizontal axis of Graph 1 represents the entire spectrum of political support. As one can see, it ranges from outright rejection to unconditional support. For its part, the vertical axis correlates to the technical suitability of a given measure. Clearly, the location of each of the boxes on said axes is somewhat subjective. Each person will choose a given alternative according to their personal wants and needs, and thus assign a given degree of suitability or prudence as they deem fit. However, the aim here was to utilize a graph which would drive our debate here at the forum; i.e., rather simply state what many – at least, within the sector – might characterize as the obvious.

If we analyze the matter of the legal retirement age on the graph, for instance, we can immediately ascertain that – while the measure is exceedingly logical, in strictly technical terms – a political leader who chooses to publicly advocate such a measure would essentially be committing political suicide. Recent polls show the vast majority of Chileans are steadfastly opposed to such initiatives; and I refer here to approximately 90% of the population. Thus, the take away here should be to realize that investing time and energy in moving this issue along the public opinion spectrum is, at the end of the day, a long shot; which is to say, we need to understand that said process is going to be an extremely long journey and we had better not expect to see immediate results capable of impacting the current pension scenario immediately.

Graph 1

Retirement age increase
Mandate individual accounts

Good strategy
Increasing contribution rate

Framework solely comprised of APPs
Politically unviable

Politically viable

Bad strategy
Exponentially increased number of APPs
Utilize general revenues to fund measures for middle class

Eliminate individual capitalization accounts

SOURCE: AUTHOR.
If we turn to the issue of utilizing general revenues – and, to clarify, this scenario supposes that no concomitant tax increases occur – to finance pensions for the middle class, our first impression would be that administrations would encounter fairly low levels of resistance; which is to say, public opinion would be fairly positive vis-à-vis such a move. Additionally, and at least in the near-term, such initiatives fall within the realm of possibility in strictly technocratic terms. In other words, the sector – and even the Senate – could facilitate the creation of such a measure. However, the budgetary realities of life in our Republic dictate that, at some point in time, Chile would have to pay the piper and come up with the revenues to finance such a costly enterprise. This is why, at least in my view, such a measure needs to be closer to the bad idea end of the advisability spectrum.

Another reform component which Graph 1 evaluates is adjusting the current policy within Chile of only allowing authorized AFP’s to operate pension funds. While I am confident that the vast majority of FIAP members are categorically opposed to completely deregulating the sector, it seems that most within Chilean society seen suspicious of this measure. Here again, I encourage us all to not attempt to win the battle – even if it means losing the war. Is this truly an issue of paramount importance? I have my doubts. And in strictly political terms, this issue could end up stalling the entire reform process. No one is attempting to assert that the issue is not relevant, nor would I ever attempt to characterize it as economically or technically advisable. However, at the end of the day, the political costs of entrenching ourselves into such a position are prohibitive. Here again, we need to remain focused on the principles of Second Best, and refused to allow Chile to become bogged down in issues of peripheral relevance. If we remain focused on the issues of paramount importance, we can begin to accumulate the societal inertia that successful pension reform initiatives require.

**Two ends, two means**

Having concluded my evaluation of the strictly political aspects of reform, allow me to now turn to the structural design constraints which I believe we currently face. Inter alia, my aim is to evaluate the rationality of each measure which we intend to pursue. As we attempt to introduce change within our pension framework, I believe that it is important to remember what Pablo Gottret had to say on the subject: “For every end, a specific means.” And I know that every economist in FIAP is fully aware of what the gentleman refers to here.

One of the primary objectives of pension systems is to respond to an ethical responsibility on the part of societies to introduce measures which combat poverty among their respective older adult populations. One might say that pensions comprise an ethical limit, below which society refuses to let individuals spend
their last years of life. As such, many characterize said limit as a universal right. In fact, I believe this is exactly what our colleague Pablo Antolín referred to during his remarks, when he stated that these types of measures can be utilized to address a very specific issue within society. In fiscal terms, they can often be extremely costly to carry out. And in terms of generating incentives, they have the potential to correlate to extremely significant distortions within an economy. At the end of the day, however, and despite all of the issues within the current Solidarity Pillar, no rational argument can be made against the ethical advisability of such a mechanism.

When it comes to determining the exact level of the aforementioned ethical minimum, one needs to remain focused on the amount of money involved or the purchasing power of a given payout amount. For instance, a nation might choose to define said parameters vis-à-vis the so-called basic market basket. The bottom line is that the pension – and for that matter, the reform – debate cannot afford to get derailed on to issues such as replacement rates, because this typically implies that issues such as empirically-delineated ethical minimums are not being properly addressed.

The second primary objective of pension frameworks is to combat reductions in consumption levels among older adults; this is to say, pensions are intended to provide a livable income to retirees who have lost the ability to generate same. Interestingly enough, this is actually a much more complex goal than the aforementioned ethical minimum, whereas many might question the advisability – or even the ethics – of intervening in individuals’ lives. Therefore, societies must discuss how they plan to address the fact that many within individuals simply refuse to take even the most rudimentary steps to prepare for old age; and, as a result, fail to generate even minimal levels of retirement wealth. Thus, the first objective dictates that we address the second in a responsible manner.

In my view, a rational evaluation of the question dictates that we refer here to an innately contributory benefit. As such, if an individual refuses to contribute they cannot rationally expect to receive a benefit. Furthermore, an argument cannot be made for viewing pensions as a universal right. In general, benefits are proportional in nature; this is to say, individuals who earn higher wages tend to generate and receive larger pension payouts. As a result, the tendency within societies to focus on the poorest segments of their populations seems a bit misguided. Benefits are also proportional, whereas a direct correlation exists between the eventual amount received and the amount deposited in an individual retirement account. This is why it is vital to remain cognizant of the fact that viable pension schemes require clearly delineated parameters. Then, and only then, one is free to utilize replacement rates as a viable indicator; i.e., once appropriate parameters are in place, replacements can provide us with a good indicator of how well a given framework is performing.
The most difficult changes generate the greatest impact

The foregoing assertions may prove useful in terms of informing the manner in which one evaluates other pension sector indicators, especially in terms of contributory pensions and replacement rates. In these two cases, it is vital to remain aware of the potential impact of a variety of parameters and other available measures. For instance, the relevance of contribution rates is fairly self-evident. An increase of 1% in contribution rates correlates to a 10% increase in the eventual payout amount generated. The only drawback of this type of measure is that individuals need to work their entire lives in order witness said impact materialize. As Table 1 indicates, if a worker begins to increase their contribution rate by one percentage point 15 years before retirement, said change only correlates to a 3% increase in the final payout amount.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Magnitude/method</th>
<th>Payout increase (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contribution rate, entire career</td>
<td>1 pp to individualized account</td>
<td>10</td>
</tr>
<tr>
<td>Contribution rate, 15 years before retiring</td>
<td>1 pp to individualized account</td>
<td>3</td>
</tr>
<tr>
<td>Yield rate</td>
<td>1 pp during entire career</td>
<td>25</td>
</tr>
<tr>
<td>Retirement age, 65-year-old men</td>
<td>1-year postponement</td>
<td>7-10</td>
</tr>
<tr>
<td>Retirement age, 60-year-old women</td>
<td>5-year postponement</td>
<td>35-51</td>
</tr>
<tr>
<td>Pension gaps</td>
<td>Eliminated</td>
<td>2</td>
</tr>
<tr>
<td>AFP profits</td>
<td>½ FV of PV (excluding cash reserve ratio)</td>
<td>3-4</td>
</tr>
<tr>
<td>Contribution density</td>
<td>5 pp, median (2 years)</td>
<td>9</td>
</tr>
</tbody>
</table>

When compared to other measures, eliminating pension gaps and decreasing the profits of AFP’s are of relatively limited importance. In absolute terms, they also fail to generate a significant impact. However, even a one percentage point increase in a fund’s yield rate during an individual’s work life translates into a 25% increase in the eventual pension payout amount generated. As such, this is a factor of paramount importance; especially in terms of the other factors included in the foregoing table. Legal retirement ages also comprise an extremely relevant factor, which can benefit women as well as men. Lastly, improvements in contribution density can contribute significantly to a worker’s ability to generate a decent pension which meets or exceeds expectations.

As one would expect, the measures which bring about lasting change are the
most difficult to introduce. However, this does not mean that we can afford to—
as an industry, as well as a society—simply relegate them to a level of secondary
importance. They are of paramount importance to the future sustainability of the
current AFP model operating in the Republic of Chile. As a result, they need to
be on the debate agenda, in addition to comprising a top priority in terms of our
national financial-education programs. The actor who can least afford to pay a great
deal of attention to these types of issues is the pension industry. Once our nation
decides how we plan to introduce such measures, we need to begin to ascertain the
aggregate impact of same upon our future payout amounts.

In order to better comprehend what needs to occur in terms of pension framework
changes, I propose the simple schema included in Table 2. The table divides are
challenges into four categories. Firstly, it is important to delineate exactly what
segment of the population will benefit from a proposed reform measure.

| TABLE 2 |
|---|---|
| **Horizon** | **Who benefits?** |
| Short-term | Workers who contribute/contributed | Entire older adult population |
| Long-term | Cash transfers and insurance for the middle class | Increase outlays on Solidarity Pillar |
| | Parametric changes, including some type of cross-hedge insurance | Universal Basic Pillar |

*Source: Author.*

In my judgment, there is a fair degree of consensus in terms of some of the
assertions made in Table 2. For instance, in terms of the long-term horizon and
the entire population of older adults, most would agree that the best solution is to
strengthen the Universal Basic Pillar. The aim here would be to make access to said
benefit universal and unconditional in order to remediate any distortions that are
generated.

In terms of the short term horizon and said population of retirees, the only available
alternative is to increase the level of public outlays on the Solidarity Pillar. At the
end of the day, it is our only option. The bill before Congress makes a concerted
effort to address this very issue.
Now I wish to turn to the issue of the long-term horizon constraints vis-à-vis individuals who are contributing, or who have contributed, to their respective individual retirement accounts. In general terms, the optimal solution would seem to be introducing a series of parametric changes. Furthermore, in my judgment we need to consider introducing a more robust cross-hedge insurance than that which is currently in place.

The last – and most problematic – scenario is located on the upper left-hand side of the table, where we find individuals who have failed to contribute and, as a result, are not generating an acceptable replacement rate. This scenario involves individuals who have either already retired or who will be retiring during the next 10 to 15 years. In this instance, our society probably needs to remain open to the possibility of introducing cash transfers and insurance instruments aimed at the middle class. Why do I specifically emphasize the middle-class nature of this measure? This is because the major challenge within this scenario is largely limited to the Chilean middle class.

Table 2 also comprises several complex physical challenges, which have the potential to trigger efforts to introduce a hybrid funded-capitalization framework. Here again, actors need to de-escalate the rhetoric and generate practicable solutions.

Where are the shortfalls?

In terms of problematic dynamics and system shortfalls, it is important to recall that our nation’s average replacement rate is approximately half that of rates observed among the population comprised of 40% of our poorest citizens. Due to the Solidarity Pillar, the poorest segment of our population has been provided with fairly solid coverage. Where women are concerned, the contrast is even more surprising. Women within the bottom quintile typically achieve a replacement rate of 140%. These individuals receive such low wages during their work lives that, upon retirement, they actually undergo an approximately 50% increase in income. Middle class women, for their part, only achieve replacement rates along the lines of 35%.

The second issue which we need to address within our society is the pension gender gap. The replacement rates observed among women are only about half of the rates achieved by their male counterparts. In addition to being unjust, this situation is simply unsustainable. Approximately 2/3 of the pension gender gap is due to a combination of a lower retirement age for women and higher female life expectancy levels.

Even a cursory analysis of this situation leaves one with the impression that Chile
can simply not afford to procrastinate on issues of the middle class and female retirees. As such, reform proposals which fail to at least partially address these two issues are completely missing the mark.

A third shortfall which merits analysis is the issue of efficiency. Although the Solidarity Pillar has been an extremely effective means to combat poverty, the measure has generated a fairly unresponsive replacement rate. This is to say, said rate does not respond efficiently to variations in an individual’s contribution rate. A degree of responsiveness does exist, which is why the replacement rate Chile is U-shaped; ostensibly due to the fact that it responds to low contribution density over time. All of the foregoing implies that Chile has failed to generate the necessary incentives to contribute to retirement accounts. One major contributing factor is the fact that the Solidarity Pillar delivers benefits to individuals who have failed to contribute to said accounts during the economically-active period of their lives. This scenario is generating an economic distortion which needs to be addressed as soon as possible. Additionally, it should be pointed out that this entire dynamic will simply intensify should we fail to generate well-designed increases in our Solidarity Pillar. Ill-advised increases will only increase the magnitude of the aforesaid distortion. Another aspect which should be taken into account is that the solidarity pillar correlates to an implicit – and fairly significant – tax on contributions. Here again, this only serves to exacerbate the scenario: as Chilean workers make efforts to increase their contribution level, the State actually decreases the total benefit provided to these individuals.

The fourth problematic dynamic is the fact that the current level of contribution density is practically proportional to income levels. It is not clear whether this phenomenon is best described as a distortion, or as an efficiency – and/or social equity – challenge. One thing is clear, however. If we fail to remediate this situation, our pension system will continue to generate highly unequal results. Thus, we may need to introduce incentives aimed at increasing contribution rates within the low-income brackets of our society. A collateral benefit would be generated, whereas said incentives would also serve to decrease contribution and tax evasion levels within this segment of the workforce. Here again, this is a solution which is a win-win for all involved (workers, State, AFPs), and political rhetoric should not be allowed to derail efforts to at least discuss the matter.

The last aspect which we must evaluate is the question of how poverty is distributed by age throughout our society, and the associated implications for public policy (i.e., the manner in which we determine how and where to allocate tax revenues). During his remarks, Augusto Iglesias demonstrated the marked decrease in the poverty rates observed within the adult population of Chile during the last 10 years. I would simply add that we also need to take into account the fact that poverty –
as well as extreme poverty – rates among Chilean children aged 0 to 3 years are currently tracking four times higher than said rates among older adults. As such, other segments of our population also require public resources. In fact, one might argue that these children have an even greater need to receive the revenues in question.

**Financing measures designed to address middle-class needs**

If one attends a seminar which contains an audience primarily comprised of university students and/or workers, it becomes immediately clear that they have a very clear-cut opinion on the solidarity aspects of funded systems. In their judgment, said frameworks are more just – in terms of social equity – than their individual capitalization counterparts. However, this is in direct contradiction to everything which our colleague Augusto Iglesias had to say in his presentation. Furthermore, the aforementioned segment of the population is currently advocating the use of a proposed increase in contribution rates to generate a decidedly funded measure.

Now, were I to inquire among those seated at a FIAP event regarding the efficacy of utilizing general revenues or a supplementary contribution to fund a measure for the middle class, the vast majority would respond that it would be preferable to use general revenues for such a measure. Although I agree with many aspects of the foregoing perception, allow me to remark on a few of the gray areas which exist here. In my view, the primary objective is to determine what types of solutions can be generated to address this issue, and whether or not any practicable hybrid solutions exist.

For starters, we need to determine how we intend to optimize the funding of this type of measure; i.e., financing a benefit aimed directly at the middle class. Table 3 provides an overview of many of the goal aspects which should be taken into account when generating public policy designed to bolster the middle class. It should also be noted that I am not asserting that such a measure is indispensable. In my view, Chile also has the option to simply forgo such a measure.

One must first attempt to ascertain the fiscal ramifications of these types of measures. Where our general revenues are concerned, the fiscal impact would be immediate in nature; whereas, in the case of the aforementioned additional contribution utilized to finance a funded component, the effect would be of a more eventual nature. Both would imply a certain level of risk, however if we opt to use general revenues said risk would occur within the short term.
Another issue of equal or even more relevance than the immediate fiscal ramifications is the manner in which such measures can actually define and/or change the universe of beneficiaries affected by such a measure. This is to say, the way in which a society chooses to finance such measures can have an immediate impact on the composition of the middle class. We must be aware that the feasibility of focusing benefits upon individuals within the middle class who comply with contribution norms is a determinant factor in calculating the total cost of such a measure. In my view, it will be difficult to use general revenues to fund such a measure, whereas strategies which utilize a portion of the additional contribution will vary between very feasible and somewhat feasible.

In practical terms, if a society attempts to utilize general revenues it is likely that for every peso earmarked for the middle classes and those who actively contribute to an AFP account, several more will end up financing the Solidarity Pillar. Though we lack evidence of this specific dynamic, we do however have a mountain of evidence which points to a general-revenue solution being fairly unworkable. Thus, I believe that it is rational to expect that the additional-contribution option will outperform the general-revenue option in terms of overall cost-effectiveness, as well as in terms of its ability to impact a specific segment of the population. At the end of the day, measures involving general revenues simply serve to protect a given replacement rate.

When developing funding strategies, we also need to remain aware of the potential for distortions being generated by taxes and contributions. For instance, should Chile opt for a general-revenue solution, we would have to determine exactly which tax would need to increase; or, alternatively, what tax decrease would need to be
eliminated. In theory, such a tax would be more efficient and less costly than the additional-contribution strategy. However, is this truly the case given our current scenario?

In my view, it is definitely not the case. What was the last tax increase introduced in Chile? The corporate tax was the last tax to either level off or increase within recent years. Graph 2 demonstrates that – at least in OECD terms – the tax increases introduced during the period 2009-2019 were fairly significant. As one would expect, so too were the concomitant distortions.

GRAPH 2
CORPORATE AND INCOME TAX
CHILE VS. OTHER OECD NATIONS

As one might expect, the potential distortions caused by financing middle class transfers through an increase in the Chile VAT would be less than the distortions generated by the additional-contribution strategy. However, when one takes into account the political viability of introducing such a measure, the entire argument in favor of a general-revenue solution collapses.

Furthermore, if we compare the current income tax rate for individuals earning 1.67 times the average wage, these individuals currently only have to pay 7% in order to cover their national healthcare contribution (i.e., FONASA). In practical terms, Chileans have a very low income tax rate. In fact, only 4% of wage earners are actually obligated to pay an additional income tax. Thus, approximately 96% of the nation does not pay income tax. In light of the foregoing, a slight increase in the contribution rate in order to finance cash transfers to the middle class definitely
does not constitute a significant distortion. The corporate tax, however, would ostensibly have a major impact upon our economy.

The third aspect that one must take into account is the overall sustainability of a particular strategy. In my mind, it is extremely difficult to make an accurate determination of the financial and fiscal sustainability of measures funded by general revenues. Furthermore, the complexity involved in ensuring that fiscal resources within an individual capitalization system actually end up impacting the lives of middle-class individuals is strikingly similar to the scenarios in which societies begin to realize that their funded systems are economically unviable. Conversely, the additional-contribution route is fairly transparent because it allows one to calculate and perform the demographic projections necessary to ensure that the benefits are economically feasible. This is because the parameters involved here are easy to define and extremely quantifiable.

The last aspect which we need to consider is the future political viability of a given measure. At the end of the day, we need to determine which of these two options is most likely to stand up against the vicissitudes of public opinion. In this sense, I find it hard to imagine that Chilean politicians will be willing to march out and demand that middle-class wage earners begin to increase their contribution rates. I find it much more plausible to imagine these leaders hammering out an increase in benefits during the annual budget debate. Few politicians around the world are willing to risk their political careers in order to defend the pension rights of young workers. And this rationale would necessarily apply to budget debates. Therefore even a general-revenue funded measure might not even be completely politically viable.

**Designing a benefit that targets the Chilean middle class**

Even if we did manage to finance an increase in payouts within our contributory pension framework, our society would then need to decide how sad benefits were to be distributed throughout the population.

Firstly, I believe that it would be important to ensure that benefits were delivered vis-à-vis an individual’s contribution history. If we simply began to use these new resources to find regular increases in the universal pension floor, it would be impossible to achieve the aforementioned goal of improving the lives of the Chilean middle class. We would effectively be limiting our efforts to distorting the economy, both in terms of our in higher tax framework. Such a strategy would also involve huge increases in operational costs. In fact, these increases would begin almost immediately because the roll-out phase would be extremely expensive.
Secondly, I agree with the idea put forth by Augusto Iglesias with regard to implementing a cap in order to keep costs down; in addition to ensuring that resources are successfully earmarked for middle-class pensions. Furthermore, certain eligibility criteria will need to be set up; of course, we will then need to regularly revisit the issue of what percentage of pensioners will be allowed to qualify for said benefit. Chile will also need to clearly delineate what percentage of the population should be covered by the measure. Lastly, the best alternative would be to introduce a transitory measure. At the end of the day, savings is what we want to foment within our economy, and not cash transfers. And therein lies the rub: while we need to introduce some type of cash transfer in order to ensure we are impacting middle-class lives, measures which are essentially transitory in nature are difficult to design and roll out.

Final thoughts

Chile needs to enact some form of pension reform legislation. And while no panacea capable of curing all of our pension system ills currently exists, tangible and quantifiable progress can be made if we remain focused on de-escalating political rhetoric. Once these peripheral issues are dealt with, our society can focus on the technical desirability and/or viability of a given pension reform measure. We cannot allow idealistic standards to hinder our collective ability to hammer out workable, real-world solutions. Once we determine what these practicable solutions are, we can then begin to focus on eliminating tax-related distortions, negative incentives, political impediments and issues which have the potential to reduce the overall sustainability of our framework.

Even if we do manage to pass a reform package, Chile will then need to begin to determine how it intends to address three major issues within the near-term: (i) self-employed individuals who do not actively contribute to a retirement account; (ii) the legal retirement age, which needs to be increased for men and especially for women; and, (iii) the investment regime utilized by AFPs.

Chile has begun to remediate the issue is workers who are not actively contributing, but this transition will occur over time; in fact, it may be slow in coming. Furthermore, many wage earners within the nation are still not obligated to contribute. A debate has begun regarding ways in which Chilean workers might be encouraged to put off retirement through the use of incentives. However, at least in my viewpoint, something will need to be done to increase the legal retirement age. In order to pull this off successfully, we will then need to adapt our national labor market in order to correctly address our older-adult workforce. Said adaptation will need to occur within our regulatory framework, as well as in terms of firm behavior. In terms of the strategies that AFP’s utilize to invest worker resources, I believe that
it is time to reevaluate our entire regulatory framework in this regard. The existing set of restrictions does not seem to adequately address the need for investing more resources into non-liquid assets. Given the current scenario of low yields, it is becoming increasingly needful to redouble one’s efforts to uncover new investment alternatives.
CONVERSATION WITH AUGUSTO IGLESIAS AND RODRIGO VALDÉS
Moderator: María Cecilia Cifuentes.

María Cecilia Cifuentes holds a Bsc in business engineering and a Masters in economics from the Catholic University of Chile. Throughout her career as an economist, has held positions at Julio Salas & Associates, Banco de Chile, Universidad de los Andes, Instituto Libertad y Desarrollo. Currently chairs the Center for Financial Research at the ESE Business School (UANDES).
Moderator:

We are going to begin with an issue raised by Rodrigo Valdés in a column which he published a short time ago. He put forth a fairly straightforward question to readers: To what degree can our solidarity pillar be improved here in Chile? Upon further reflection, this question ostensibly requires one evaluate an entire convergence of factors.

On the one hand, while a generous solidarity pillar will remediate our short-term issues, such a measure would be a ticking time bomb in terms of medium-term constraints. History has shown that outsized benefits correlate to contribution disincentives; i.e., such measures would simply exacerbate the very issue we are attempting to remediate. This entire dynamic is especially marked during the types of major shifts that our labor market has undergone in recent years.

In light of the foregoing, gentlemen, I think it would be especially interesting to hear your remarks with regard to what you would feel the potential ramifications of reforms aimed at bolstering the nation’s solidarity pillar would be.

Rodrigo Valdés:

There is a significant deal of tension between the concept of a solidarity pillar, on the one hand, and factors which drive contribution rates, on the other. I am unsure if everyone within the sector is aware of a measure known as Proposal B which was included in the bill drafted by the Bravo Commission. The commission proposed utilizing our minimum wage as the universal solidarity pillar benchmark. My initial reaction to said measure was not very positive, whereas I knew that it would result in the vast majority of Chileans failing to contribute to their retirement accounts. And as I mentioned during my earlier remarks, an innate tension exists between the individual obligation to contribute to said accounts and society’s obligation to provide social protection floors. The main challenge here is delineating exactly what amount of resources is required to meet a minimum ethical standard; which is to say, we need to put a dollar amount on the aforementioned well-being floor. For instance, the impoverished households cited by Augusto Iglesias may comprise a workable ethical minimum. This is to say, it would ensure that Chilean older adults do not reside in households which fall below the poverty line. There logic would operate as follows: a household containing several older adults would receive a larger benefit than a household in which only a single retiree lives. And while we might be a long way from passing legislation which would enact such a measure, it is an excellent benchmark with which to gauge our progress as a society. I also feel that we need to take immediate steps towards achieving it. At the end of the day, it is an excellent jump-off point.
Another aspect of this dynamic is even more troubling than the ethical-minimum issue. This is to say, in an ideal world I would prefer to see a flat ethical minimum enacted that is applicable to every member of our society. The worst scenario would be a situation in which Chile opts to finance benefits for individuals – who fail to generate a minimum amount of retirement wealth – via general-revenue outlays, and then proceeds to reduce benefits even as an individual increases their contribution level. These circumstances would ostensibly generate the largest distortion possible. This correlation between benefit decreases and contribution increases with completely exacerbate the pension question within Chile.

In light of the foregoing, I am extremely reticent with regard to a measure aimed at utilizing the solidarity pillar to address the needs of the middle class within our nation. This type of scenario will only exacerbate the natural tension which exists between our societies efforts to, on the one hand, provide a solid solidarity pillar to its citizens, and our collective need to effectively remediate our contribution rate issue, on the other. At the end of the day, Chile must achieve tangible progress with regards to its contribution-rate shortfall.

**Moderator:**

In my view, Chileans have not yet fully come to grips with the issue which Rodrigo is imploring them to address. For instance, as one evaluates our national poverty statistics, we clearly have issues which are very more pressing than those mentioned on this panel.

The results of a survey conducted by the Office of the Undersecretary for Social Well-Being (Republic of Chile) are especially interesting in terms of our older adults' quality-of-life levels. In my mind at least, the results were fairly surprising, whereas in relative terms our older adult population does not comprise a top priority in terms of income or quality-of-life. Everything I surmised from the survey points to a fairly positive scenario. However, everything we have touched upon thus far begs the following question: How realistic are pensioner expectations? And I would include those who are about to retire, as well. Might it be that our society is simply overreacting to a nonexistent set of parameters, and thereby derailing the entire reform debate process? And one must never lose sight of the fact that, when societies become sidetracked, they become prone to misspending the limited resources which they possess to remediate their most pressing societal ills.

**Augusto Iglesias:**

I couldn’t agree more. The statistics which I cited – regarding poverty measured by income – point to older adults being the least impoverished segment of the
population in Chile. However, when one evaluates the older adult population vis-à-vis multidimensional poverty indicators (i.e., factors other than or in addition to income), the results are quite different. As of 2019, multidimensional poverty among our 60 and over population of older adults was 22.1%. This equated to the second-most impoverished segment of our population. The only age group in worse conditions than older adults was children aged 0 to 17 years, which is currently tracking at 22.9% in terms of multidimensional poverty. Another poignant statistic is the current Basic Solidarity Pension benefit amount, which is approximately CLP 107,000 per month. This benefit amount, should it comprise the sole source of income for a household comprised of two individuals, would fall well below the relevant poverty line of CLP 135,000. As such, and at least in my judgment, a special effort needs to be made to remediate this situation.

With regard to the disincentives to contributions which would ostensibly be generated by increases in the Solidarity Pillar benefit, one would do well to remember that the monthly legal minimum wage in Chile is CLP 300,000. This is in stark contrast to the average wage of the 5.5 million active participants within the AFP model, which is CLP 700,000 per month. In terms of whether or not an individual chooses to pursue gainful employment within the informal or formal sector, the two aforementioned wage figures would seem to suggest that the potential distortion generated by increases in the Solidarity Pillar – to include a monthly cap of CLP 107,000 for individuals who fail to generate any retirement wealth, which decreases in direct correlation to an individual’s respective contribution rate – is fairly low. In fact, I know of two studies which have attempted to measure the impact of the Solidarity Pillar on the decision to seek formal-sector employment. Both studies concluded that the aggregate impact of the Solidarity Pillar upon labor market dynamics is negligible, except in the case of individuals who are closest to the legal retirement age. The result is not surprising, whereas most of us would agree that it is simply unfeasible to believe that a 25-year-old would reject an offer of formal-sector employment simply because they felt that it would jeopardize their right to receive a State-funded pension totaling CLP 107,000 per month; this scenario is even less plausible when one takes into account that they would need to exercise 40 years of foresight in order to reach said conclusion.

Lastly, I would like to explain why I am an advocate of introducing an age-differentiated Solidarity Pillar benefit scale. Firstly, all available evidence suggests that older-adult vulnerability to poverty increases with age, a correlation which justifies paying a higher pension to 80-year-old retirees than those aged 70. Furthermore, a graduated, age-pegged benefit schedule would necessarily correlate to a lower impact upon an individual’s decision to contribute to a given retirement plan.
Moderator:

It appears then that we have reached a consensus – at least on this dais – with regard to the overriding necessity to regularly monitor the impact of Solidarity Pillar benefits upon pension fund participants. Particularly emphasis should be paid to the potential concomitant short-term impacts of increases made to the initial benefit amount. In my view, it is rational to expect a measurable impact on formal-sector growth within the Chilean economy.

Now let’s turn to the impact of pension fund management fees on pension payout amounts. Does the reform bill include a measure which it addresses the issue of fee schedules? Additionally, and in light of the international trend towards lower yields, would it be advisable to include measures which are designed to incentivize the existence of passive investment strategies? This issue was touched upon during the first day of the seminar, and some experts indicated that passive investment frameworks often correlate to lower management fees. This is to say, perhaps fund participants should be afforded the opportunity to choose a lower-cost investment strategy that might potentially offset – to one degree or another – any yield shortfalls.

As the team charged with formulating pension reform public policy in Chile evaluated the advisability of introducing such a measure? And if so, is such a measure included in the current reform bill before Congress?

Augusto Iglesias:

Our current regulatory framework allows pension funds to invest in well-diversified portfolios that reasonably address the needs of a variety of participant profiles. In fact, we have failed to identify any dynamics which need to be remediated or which might provide funds within opportunity to significantly increase their profits. In this sense, the administration made the decision to forgo incorporating within the current reform bill measures which would modify the legal framework which regulates the investment strategies employed by pension funds. Had we opted to include such a measure into a legislative scenario which has thus far proved fairly complex, we may well have jeopardized the passage of the entire reform package; or at least have slowed it down considerably more.

For now, our principal focus is identifying areas which we can fine tune, such as the multi-fund issue. These are areas which we can improve upon without the need to introduce legislation, given they involve fairly practicable regulatory adjustments.
Moderator:

Rodrigo, you chose to remark upon this very issue during your presentation. Would you care to add anything to what Augusto has had to say?

Rodrigo Valdés:

In terms of passive versus active investment strategies, this issue has is being debated in nearly every society on earth. For instance, many governments are reviewing the feasibility of regulating hedge funds. Societies are also analyzing the advisability of applying certain measures to some types of funds and not others. In fact, nearly every type of fund is beginning to undergo an in-depth review. In light of this, I believe Chilean fund managers should begin introducing a passive investment strategy of some type. But I hasten to add that I would not deign to suggest what the optimal proportion thereof might be. But in my judgment, the AFP sector would do well to consider diversifying its strategies – to one degree or another – in terms of the active versus passive dichotomy. This is to say, I hope that the sector would be open to the possibility of at least objectively evaluating the potential utility and suitability of such a measure. For instance, the proposed 4% additional contribution included in the current bill could be managed much more passively. This type of scenario would provide us with a perfect opportunity to track progress and evaluate management fees with an eye to determining what an optimal passive investment strategy proportion might be; i.e., determine what an ideal active-passive split would be.

Now, in terms of the current situation in Chile, I am not convinced that we have the skill sets to determine what the best implementation strategy for this type of measure would be. Not unlike most every other economy on the planet, we need to study the situation a bit more before taking action.

Augusto Iglesias:

I would like to add one more comment. In terms of the proposed 4% additional contribution, the investment regulatory rationale included in the bill is designed to expand the investment horizon of pension funds. Currently, the spectrum of investment alternatives available to pension funds in Chile correlates to the average, expected time in system of a given fund participants. This leads to a situation which pension fund managers do not necessarily utilize an investment strategy vis-à-vis the long-term horizon. In large part, this is due to the fact that fund administrators are somewhat obliged to demonstrate better results than their competitors at almost any given moment in time. Clearly, fund managers who fail to act accordingly will begin to lose fund participants to competitor funds. As such, I think it is high time
our pension funds began to ensure that their investment strategies are more in line with the entire economically-active horizon of their respective participants.

Rodrigo Valdés:

I would also like to add a remark. Apart from reviewing the passive investment strategy issue, we also need to analyze the issue of optimal liquidity levels for portfolios; which is to say, not necessarily in terms of short-term goals, but also in terms of how attractive said strategies are to participants. Furthermore, it is important not to get sidetracked on to these types of issues, because they have the potential to make the debate dragged on forever. As we all know, when one adjusts one aspect of the pension model, there is a concomitant negative impact upon some segment of the population. Clearly, this aspect of pension reform needs to be addressed astutely and ensure our debates are finite in nature.

Having said that, I do not mean to imply that we have no issues which have yet to be resolved. Rather, I merely wish to state that perhaps said outstanding issues would be best addressed in pension reform bill put forth by another administration. This is especially the case when it comes to regulating investment strategies, but we should also be cautious about attempting to initiate debates regarding broader aspects of our pension model. For now, I believe the nation would best be served by a highly focused, objective analysis of the issues included in the current bill before Congress.

Moderator:

We have received a question from the public for Rodrigo Valdés with regard to his strategy to introduce a funded contributory component into the AFP model. In my view, this would not be the most appropriate solution to the problem, but it would be fascinating to hear what your rationale behind said structural reform was. One argument made by many, and by yourself during your remarks, purports that many wage earners in Chile pay extremely low-income taxes. However, it is important to remember that a personal income tax is entirely different than a capped tax on formal-sector income; especially in terms of the respective overall efficiency achieved by each. Furthermore, we need to keep in mind that, in this instance, we have a very clear tax cap in Chile. Thus, taxing a specific employment sector within the economy – which has, incidentally, already demonstrated significant signs of decline during the last 10 years – may not be the best way forward under the circumstances.

We must never lose sight of the fact that – as Augusto remarked during his presentation – this would essentially equate to a fairly regressive income tax measure. Therefore, isn’t it rational to expect that this is exactly what would occur within an economy which attempts to introduce such a funded, contributory component?
Rodrigo Valdés:

Firstly, I wish to clarify that I am not proposing a measure that meets the parameters which you have just described. In terms of a potential distortion, in my judgment the best alternative would be to forego any attempts to address our short-term horizon. Clearly, this stance begs the following question: Will our society be able to maintain said posture for 20 years?

Furthermore, the question is purely rhetorical because the reality is that Chile needs to take a much more proactive stance vis-à-vis this issue. And we are currently formulating the necessary public policy to introduce reforms. Under optimal conditions, a scenario is generated in which these two aspects compete with one another. On the one hand, we have a corporate tax which funds the funded component designed to meet the needs of the middle class through the use of general revenues. And I agree that our society has an obligation to evaluate the advisability of introducing a contributory funded component through an open – and hopefully very lively – debate. I am not attempting to characterize these measures as being more or less advisable, in this instance; rather, my hope is to force the major actors involved to view things from an entirely new viewpoint. In my mind, this type of newfound objectivity is what it is going to take for Chile to work out a truly lasting accord. For instance, in an ideal world interest groups would come to the table in order to identify areas of opportunity, rather than seeking to advocate a specific political, sector or even economic agenda. Instead of imposing strictly delineated preconceived parameters upon our dialogue, it would be fascinating to generate a foreign in which we could discuss the potential benefits and synergies of the current bill. And, clearly, it would also be a wonderful opportunity to take a long hard look at system shortfalls.

This is the spirit in which I put forth the idea of a contributory funded component. And also wish to add that I fully concur with your earlier remark regarding the tax cap. I would only include a minor caveat. The cap which is cited effects 6% of Chilean wage earners. The current bill before Congress would bring that number down to 4%. Are we really doing to be generating huge distortions when the tax cap only applies to the top 4% of wage earners?

However, if what we are truly attempting to address is the distribution of income within the nation, then we need to take a look at the issue of capital gains. And by this I mean that I am not convinced that the pension reform debate would be best served by expressly focusing on the issue of income tax. The income of Chile’s highest wage earners is the most closely regulated income within the entire tax code. As was mentioned previously, this segment of the population also essentially comprises the only segment of the population who pays income tax in Chile. As
such, I am completely open to adjusting the tax cap involved. However, referring to huge economic distortions being generated by a funded component is, at least in my mind, simply not germane to the central issue: 90% of Chilean workers do not even pay income tax.

Furthermore, I want to make it extremely clear that I am not advocating a completely cost-free measure here. This is obviously going to involve any income tax. But please allow me to suggest that the concomitant scale of impact involved will be much less than you assert.

Should we identify another tax capable of funding the Solidarity Pillar, I would be completely in favor of its passage because anything would be preferable to an income tax measure. However, here again, it would need to fulfill an entire series of exigencies. We would need to determine the hope would be receiving said benefit. We would also need to decide if workers who contribute to a retirement plan would be eligible for benefits, or whether we seek to provide universal coverage. The latter alternative would cost 3 to 4 times more, whereas the population covered would be 300 times larger.

And while I have not yet decided what the best way forward is yet, allow me to take this opportunity to share some of the potential difficulties of utilizing the Solidarity Pillar to address societal issues which it was not designed to remediate. To clarify, this pillar was to combat poverty. And yet many are advocating its use as a means to remediate replacement rate shortfalls within certain segments of the population. This is simply not feasible.

In terms of determining which strategies are politically viable, I believe that Chile would best be served by turning its attention to insurance products. And while I am not attempting to imply that I know exactly what types of insurance instruments can best address our specific national context, I can safely say that everything points to our needing to introduce more types of insurance into the Chilean market in order to remediate our pension adequacy issues. Furthermore, I believe that a wide spectrum of solutions exist which may prove of great use during our reform process. The only thing we need to keep in mind is that, at the end of the day, we need to comply with certain political and technical parameters if we intend to generate a truly lasting reform. The pension reform bill generated during the administration of President Bachelet attempted to achieve these ends; i.e., address the public opinion aspects of the issue via an economically viable strategy. At the end of the day, when administration’s generate reforms which fail to meet these two objectives, pension reform eventually becomes a ticking time bomb. While when Mayor that our reform bill included certain shortcomings and opportunity areas, we put up pension reform bill before Congress that got the ball rolling.
The previous reform package in no way attempted to put forth a funded component as an inherently positive measure, despite the fact that a third of the population – and a third of the Congress, for that matter – characterized it as such. The danger is that funded solutions have become increasingly viewed as a panacea in the minds of many. Therefore, Chilean society will always be tempted to turn to such measures when attempting to address the economic vicissitudes of the future. Something must be done to ensure that our pension model contains a bulwark against such reactionary thinking and that our society is not exposed to an analyst series of structural reforms. Any reform which ensures that it is easy to simply increase the amount of the funded component benefit will never be economically viable in the long term. To date, Chile has never had to face the danger of such a scenario materializing due to the current AFP structure. Of course, a nominal risk existed in terms of the Solidarity Pillar. Chile is currently planning to open itself up to such a scenario, therefore we must ensure that a control mechanism exists within our reform. And this must be done regardless of what type resources are utilized to fund such a funded measure; i.e., be they income tax or general revenues.

**Moderator:**

Augusto, would you like to add anything?

**Augusto Iglesias:**

I think I’ll plead the Fifth.

**Moderator:**

In order to conclude our panel session, I would like to propose another question. As one considers the ostensible aim of the Solidarity Pillar, as well as the level of solidarity achieved by the current Chilean pension framework, replacement rates would seem to be a primary objective. And, Rodrigo, I believe they are a major part of the problem. This is to say, we are currently attempting to achieve reasonable replacement rates within Chile. However, achieving said goal will generate a fairly complex situation. As one strives to achieve a fixed replacement rate, as has occurred in the past, the problems ostensibly begin to crop up like weeds.

Therefore, is it reasonable to generate public policy aimed at addressing erroneous constructs which the AFP sector – and for that matter, the State – have seemingly worked so hard to propagate? Would it not be better to focus our efforts on correcting misconceptions regarding issues such as replacement rates and pension adequacy? Wouldn’t our time and energy be best spent on turning the tide of highly-politicized public opinion trends; i.e., such as that seen in campaigns such as No más AFP?
In my view, neither the previous nor current reform bills managed to fully address this vital issue. I have never seen a full-fledged effort – either from the State or from major sector actors – aimed at remediating these misconceptions. In fact, a brilliant first step would be to see the political and sector leadership of this nation at least take responsibility for their part in fomenting such misguided perceptions.

**Augusto Iglesias:**

In terms of the Solidarity Pillar, the bill before Congress does nothing to address replacement rates. The main objective is to generate an effective tool in the fight against poverty. In fact, if the current legislative package is passed, many Solidarity Pillar beneficiaries may end up achieving replacement rates which surpass the 100% mark. And this result would be justified, as said rates are only intended to ensure individuals remain above the poverty line during old age. Furthermore, this is the very point at which the current reform bill differs with the previous bill, which attempted to focus efforts on other segments of the population; which is to say, it was not aimed at addressing the lowest-income bracket of the Solidarity Pillar, which is comprised of the individuals who receive the Basic Solidarity Pension. This scenario occurred because the entire strategy operated vis-à-vis replacement rates. Given the fact that many extremely impoverished individuals required a much higher replacement rate than their higher-income counterparts, are most impoverished retirees were penalized.

However, in terms of the contributory component of our pension model, I believe it would behoove us to orient objectives vis-à-vis replacement rates. Those of us who attend these FIAP seminars are fully aware that individual capitalization systems do not guarantee pension adequacy. However, this in no way implies that clearly-delineated pension adequacy goals are not a major plus. Clearly defined meaning pension payout goals would go a long way in our efforts to regularly evaluate our model’s efficiency in terms of achieving said goals. This is to say that we would be able to make the needed adjustments – in terms of contribution rates and legal retirement ages – that are deemed necessary to ensure our pension system parameters accurately reflect realities in terms of life expectancy and fund performance. Furthermore, explicitly delineating what the expected replacement rate is would help us to generate more realistic expectations in terms of the AFP model, and hopefully serve to generate more realistic expectations within the Chilean society as a whole. In either case, even if we fail to delineate specific pension adequacy outcomes, the State and the pension fund industry are still obligated to regularly informed fund participants regarding the projected payout amount a retiree will receive.
Moderator:

I would only add that, as you say, we need to ensure that everything operates vis-à-vis accrue contribution periods, in order to ensure we are not generating irrational expectations. This is to say, that we take steps to ensure that individuals do not misinterpret these pension adequacy outcomes as a guarantee of a given rate of return. Because, to be frank, this issue has not been handled well in the past and is probably what has generated much of the current problem in Chile.

Augusto Iglesias:

Precisely. And clearly delineating what the pension objectives are would help us to generate better-designed the financial education materials which are so badly needed in Chile. In the pre-1981 system, Chileans knew exactly what their eventual pension payout amount would be (or at least what it was promise to be), because everything was pegged to the number of years in system an individual accrued. However, our current pension framework is a bit more complex and has led to the vast majority of Chileans failing to accurately estimate what their future pension payout will be. Instead, they simply continue contributing until retirement and then get a cold dose of reality. In my judgment, something has to be done to remediate this situation.

Rodrigo Valdés:

I think there are two key factors at play here. On the one hand, subject-matter experts have a vital role to play in terms of educating the political leadership, as well as the general public, of Chile. Furthermore, all available evidence points to a weak correlation between financial education and the maturity of the pension system. And I do not mean to imply that no one has an obligation to clearly address the issue of pension payout amounts. We need to work to remove any gray areas that currently exist in the minds of our leaders and our fellow citizens. Along the same lines, I also believe that it is necessary to be categorical in terms of delineating the fundamental issues at debate in terms of pension reform, with an eye to ensuring that every Chilean understands what is occurring within their individual pension accounts.

Additionally, I am convinced much more could be done for Chileans in terms of clarifying the capacity of the current pension model.

Another key element is ensuring that we build a bit more consensus in terms of the technical parameters involved; and by this I mean academic as well as financial-sector consensus. As I stated during my remarks, we need to take political realities into account when generating pension public policy.
Lastly, another aspect which merits review is the correlation between contribution density and income levels. What are the determinant factors operating behind this dynamic? My instinct is that increased uncertainty, increased unemployment or an entire series of contributing factors may be generating this scenario. However, assuming that the entire contribution density issue is due to a concomitant level of incentives is a bit myopic in my judgment. The internal dynamics of our AFP model also play a role, therefore we need to ensure that they are operating from a more proactive standpoint. Here again, I do not claim to have any solutions, nor to be completely convinced of a given solution’s suitability. I am only attempting to assert that placing the blame on the ignorance of the average Chilean is simply not a productive stance. The inverse of this perception is just as irrational: better-informed workers do not necessarily equate to higher contribution rates. Other factors are involved.

In light of the foregoing, the first thing we need to do is begin to build consensus in terms of the technical aspects of the problem; especially if we aim to generate extremely daring solutions. With so many unique pension systems operating across the globe, surely an equally wide variety of solutions are available which we can apply to the current Chilean AFP model.

**Augusto Iglesias:**

The late Hernán Cortés Douglas, a highly-venerated Chilean economist and professor, once told me that the role of an economist is to bark and wag their tale. Thus, when they see of that public policy being generated, they need to bark. And, conversely, we should wag our tails when we see a productive policy being drafted. I believe that my dear professor was right and would only add that economists – as well as any other professional involved in the formulation of public policy – also need to know how to collar a dog and take it out for a walk from time to time. It is difficult to implement technically-optimal public policies. Individuals involved in the generation of public policy exist within the realm of the second best, and necessarily need to make decisions which inevitably imply sacrifices in certain segments of society in order to lift up others. Clearly, the pension sector is no exception. However, the only thing worse than slow progress is no progress.

**Moderator:**

Thank you for participating in this dialogue, and for emphasizing the paramount importance of political in the pension reform process.
CHAPTER II

TECHNOLOGY AS AN ALLY FOR IMPROVING PENSIONS

CHRISTIAN ONETTO. Pension sector transformation: Opportunities and challenges of the information explosion.
ROGERIO GALVEAS. Digital transformation for the AFP sector.
BERNARDO GONZÁLEZ ROSAS. Regulating the incorporation of FinTech into the retirement savings sector.
PENSION SECTOR TRANSFORMATION: OPPORTUNITIES AND CHALLENGES OF THE INFORMATION EXPLOSION

CHRISTIAN ONETTO¹

¹ Author holds a licentiate in industrial engineering from the University of Chile, as well as an MBA from ESIC-MADRID. Vice President for Transformation at SONDA, SA, directing activities aimed at changing company cultures within 10 Latin American nations. Led Amazon Web Services operations in Argentina, Brazil, Chile and Uruguay in 2017. Joined Cisco in 2010, providing more than 10 years of marketing and sales experience in Latin American markets, particularly in terms of strategic planning.
A few years ago, I presented at a conference on the topic of digitalization within the context of Amazon. The e-commerce giant was an especially useful device, given that it has been a pioneer in terms of almost every single segment of the digital sector. As of 2019, however, I feel that the issue of the process by which firms within more traditional sectors of the economy strived to achieve digital transformation is a much more fecund area of analysis. Fortunately, I happen to work at a firm which meets these criteria. Sonda, SA is a traditional firm which is currently undergoing a great deal of transformation, after having been a leader within the Latin American IT sector for more than four decades. Additionally, I suspect that Sonda may prove to be an especially useful case study due to the fact that we have large-scale operations in 10 nations, 3000 cities and a network of over 16,000 collaborators.

The aim of this text is to touch on a variety of topics. Before I begin, however, I wish to clarify that nothing will be said about technology in and of itself. The subject of IT is a factor which has been fully resolved. While there will always be a demand for firms which possess a proven capacity to integrate technology solutions and achieve lasting digital transformation, the processes – and especially the organizational culture – which allow such firms to deliver results are of paramount importance. The relevance of these two determinant factors is greater when one takes into account the exigencies of the digital economy. As a result, part of my message includes a description of how Sonda is transforming its own company culture in order to optimize its ability to meet the aforementioned demand on the part of firms seeking to transform their own organizational paradigms.

Firstly, it should be noted that a variety of changes are occurring within organizations. Collaborative workgroups, the increased velocity of transformation, globalization and international isolation, global competition, tighter budgets, and constantly evolving regulatory frameworks, all comprise factors which tend to be determinant in terms of the evolution of modern markets. Every firm within a given economy needs to generate an actionable transformation agenda. Otherwise, they are faced with two clear alternatives: properly react to market dynamics, or cease to exist.
One such change is the globalization of markets. Everything points to globalization eventually having a huge impact on the pension sector; which is to say, whereas it is currently comprised of a fairly limited number of participants, everything points to it becoming a sector comprised of many actors within the near to medium term. Global competition is changing the way sectors such as FinTech and other segments of the economy operate. It is also clearly driving the appearance of new pension products within a number of economies around the world.

Another major shift has occurred in terms of national regulatory frameworks. Nations are demanding companies act more responsibly in terms of the way personal data is handled. These types of regulatory adjustments are often directed at entire sectors of the economy, as legislatures strive to address the level of risks involved; risk which, incidentally, has exponentially increased – both in terms of volume and intensity – in recent years.

Lastly, we are all aware that federal budgets have become increasingly tight. In my view, this correlates directly to the evolution of the consumption model within our national markets; an issue which, in turn, demands that firms deliver services vis-à-vis a completely new set of parameters.

**Historical context**

In 1980, what we now term as connectivity was limited to a telephone landline. This is to say, firms were basically limited to dialing a client’s number and conversing verbally. Clearly, firms were also limited in terms of their ability to collaborate; especially in terms of the written word and, for the effects of this text, software development and programming projects.

In terms of the evolution of IT during the last four decades, perhaps one only need consider how young people view the digital-evolution timeline. For instance, just the other day my son had a rotary telephone in his hands. I was fascinated by the fact that he wasn’t completely sure how the device operated, especially in terms of how the dial managed to effectuate a phone call. In my view, this anecdote is an especially eloquent illustration of the tremendous amount of progress society has made in only 40 years. Many of the everyday realities which individuals over 35 lived during childhood have become what one can only categorize as irrelevant. For example, things like dialing a number from a phone booth require a monumental effort. I would need to travel hundreds of kilometers if I wish to introduce my son to such an experience, because these types of things are almost completely gone. By the same token, our youngest members of society possess an almost innate ability to operate a wide variety of digital devices and possess a completely different viewpoint when it comes to everything digital.
As one begins to analyze the way in which society interacts via digital means, said dynamic can be of great use when evaluating the manner in which IT professionals interact with one another. Even as many trends that began within the IT sector later began to spread throughout society and have an exponentially higher level of impact, everything points to the collaboration methods currently used within the IT sector becoming commonplace in other sectors of the economy. One would expect that these sectors will begin to adapt and improve said collaboration strategies once they begin to utilize them. Additionally, a firm’s ability to transform the way in which it conducts collaboration activities – both internally, as well as externally (i.e., with clients) – will be a decisive factor in said firm’s capacity to operate successfully within the digital economy. In fact, the entire issue of identifying new collaborative methods is a talent in and of itself which was basically nonexistent when firms were limited to land lines. Thus, one can reasonably assert that it was technology that imposed a very clear set of limitations for approximately 150 years.

However, in a span of only 26 years the world managed to introduce a smart phone capable of executing an enormous amount of tasks; and, along the way, erase almost every trace of the rotary phone from the minds of an entire generation. It did this by doing what the old phone did, in addition to thousands of other tasks; only much more efficiency. The smart phone was also a real game changer in terms of exponentially increasing the ways in which societies and sectors interact, in addition to having a revolutionary impact upon our consumer behavior models.

In 2012 – a mere 32 years beyond our reference point of 1980 – the WhatsApp cell phone app made its appearance and went on to become extremely widespread throughout all of Latin America. It has truly changed the way in which Latin Americans collaborate at their firms, within the marketplace, and with clients. In fact, it is difficult to list all the ways this simple cellphone app has changed the way we approach everyday tasks. Furthermore, the digital capacity of society has increased by a factor of more than 524,000 during the last 38 years. Here again, it is difficult to delineate all of the attendant ramifications for markets in terms of our collective capacity for interaction, collaboration and transformation. Evidence of humans’ inability to process the entire magnitude of the dynamic involved is best illustrated by the fact that nearly no one accurately predicted the degree to which our economies have evolved. The speed with which digital tools have made their way into nearly every corner of everyday life, and a simultaneous high degree of ubiquity, has surpassed predictions made during the 1980s by nearly a hundredfold. Clearly, the significance of the foregoing dynamic has not been lost on firms; not least of which because the whole scenario has been almost impossible to ignore, especially in terms of its impact upon their business models. Correctly reacting to this dynamic has become an existential test for the vast majority of firms in nearly every sector of the economy. Firms are constantly attempting to predict how digital
tools will continue to influence their sectors and, in consequence, are constantly trying to generate contingency plans for reacting to market shifts within the digital economy. This is because the quantum leap in digital capacity has changed the way in which human beings consume, live and interact. At the end of the day, an ability to accurately predict the impact and trajectory (i.e., trends and scientific development) of digital technology has increasingly correlated to success within a given sector during the last four decades. For instance, our firm – Sonda, SA – perceives this task as something which merits constant review. As such, we are constantly pushing to keep pace with, and hopefully stay one step ahead of, the digital evolution of society. This type of business approach entails a company culture of almost perpetual transformation. We believe that our ability to quickly identify trends allows us to spend the majority of our time determining the eventual magnitude of impact a given trend will have upon markets.

Disruptive technology is playing an increasingly relevant role in society. It is easy to trace its incredibly decisive role throughout the last 40 years of human history. During the first stage, we saw the appearance of the Internet, email and social networks such as Facebook. The current, or second, stage has involved digital platforms such as Uber and cell phone apps such as WhatsApp; factors that have completely redefined the marketplace. Thus, one can safely say that the digital evolution which has occurred during the last four decades has involved a great deal of velocity and inertia.

The latest impact of this scenario has been a complete dismantling of the consumer behavior model. However, one should not give into the temptation to correlate this paradigm shift to the effects of technology. It is mainly due to the fact that the digital revolution has been generating new determinant factors which are then propelled forward by the inertia of digital evolution. Thus, the revolutionary capacity of digital tools – which one might characterize as the disruptive capacity of technology – is somehow driving the arrival and attendant inertia of new consumption factors; these new parameters are, in turn, driving innovation. It is all very cyclical, and the scale of the synergies involved is almost incomprehensible; which is, incidentally, exactly why firms such as Sonda are so hyper-focused on factor dynamics.

The velocity involved demands that firms develop what one might term their digital peripheral vision. For example, when iTunes completely revolutionized the old LP and CD market, no one saw the Spotify bullet train coming; that is, until iTunes was lying face down on the tracks. Clearly, Apple was able to shake itself off and get back into the fray fairly quickly. However, the fact remains that it suffered a TKO which was due to a single, overriding factor: a shift in the consumption model.

Spotify utilized a monthly fee to make the entire musical universe available to
consumers on a single web portal. While no one denies that a digital platform played a part in this evolution of the marketplace, and that said platform was made possible due to advances in the IT sector, the bottom line is that a change in consumer behavior is what triggered the paradigm shift. It has been fascinating to see how the consumer has become increasingly influential in nearly every aspect of markets, to include the manner in which markets approach the entire issue of IT development. This is to say, the consumer has changed the way IT firms approach system development; to include, analysis, design, development and testing, implementation, documentation and evaluation.

In light of the foregoing, there is no business model or organizational model on earth which can afford to ignore the risks generated by digital evolution. Firms who fail to accurately predict – or at least generate a relatively swift response to – trends will eventually be eliminated from their respective sector. And, as I have asserted, the velocity with which said evolution is occurring within markets is increasing. Therefore, firms necessarily have less time to react to ICT-related risks.

If a firm attempts to resist digital trends, or simply lacks the organizational wherewithal to respond to same, the only variable within the equation is how long it will take for that organization to close its doors. It is interesting to note that the phrase “close its doors” is beginning to sound a bit antiquated. Yet another example of the way technology is changing how we view almost everything? The phrase may soon go the way of the rotary phone and simply disappear from the everyday lexicon. Here again, the consumer changed where we work and the way we work. Therefore, it is within the realm of possibility that the digital economy may eventually eliminate the need for office space altogether.

In my view, firms such as our own are especially well-positioned to guide a company through the transformation process. For its part, Sonda possesses skill sets we acquired in the trenches during our own efforts to transform our company culture. There is no doubt in my mind that we were successful. Our sector leadership within Latin America, for its part, is compelling evidence that we are definitely on the right path.

As a firm who professes to be a sector standout when it comes to guiding other Latin American firms through the transformation process, we are constantly evaluating our own internal capacity for transformation. Additionally, I think we have some truly accurate mechanisms in place to ensure we objectively evaluate Sonda’s ability to respond to digitally-driven factors; issues which are, in turn, constantly evolving. Here again, this is why I feel that our ability to maintain a flexible and fluid stance vis-à-vis the digital economy is what has set us apart within the IT and cybersecurity sectors.
Sonda faces a perpetual challenge: ensuring it is capable of adjusting its business model, company culture and internal policies to meet the needs of its clients. To this end, our preference is to position ourselves as a leader within Latin America that is capable of effectuating internal organizational transformations within 6 to 18 months. This company culture is the direct result of the aforementioned evolutionary velocity of the modern digital economy; which is to say, we don’t really have a choice when it comes to this issue of transformational capacity. If we fail to maintain our organizational capacity for evolution, we would almost immediately lose our leadership position within the sector, and eventually cease to be a relevant actor within the entire region. The same train that smashed into iTunes also has the ability to eliminate our presence from Latin American markets in a matter of months.

It is important to note that every effort a firm makes to achieve transformation is worth the effort. This is because overcoming organizational inflexibility – or outright lethargy – at least gets you moving in the right direction. This is to say, if one is moving in the right direction, it helps soften the blow when the digital tsunami does strike. However, standing on the shoreline contemplating whether or not to take action is simply no longer a viable alternative. In fact, many firms go as far as to completely ignore or consciously reject trends which everyone else in society has identified as being clear and present dangers to antiquated company cultures. These individuals are basically turning their backs to the incoming tide; as we all know, this is a bit insane. Firms who are incapable of undertaking successful transformation will eventually be eliminated from the marketplace; or at least relegated to a much smaller market share than what they previously experienced. Here again, an organization might get lucky and dodge a bullet. However, dodging a bullet train – which is as wide as the sector itself – is an altogether different feat. Firms simply need to decide the transformation is relevant, and then start thinking about how they plan to reengineer their company culture.

Firms such as Sonda are experts in showing client firms how to increase their organizational flexibility. We also pride ourselves on our ability to identify where things have become ossified. We can help a firm ensure it is well-positioned to take advantage of the entire universe of opportunities being generated within the digital economy. We also help firms within the IT and cybersecurity sector to guide their clients on how to respond efficiently and appropriately to the new digital paradigm.

At the end of the day, an organization needs to develop its ability to manage disruption; and I refer here to the potential disruption of its business model, as well as its broader company culture. This is to say, firms need to become comfortable with these types of disruptions. This is because the marketplace is now comprised of, and driven by, in neatly disruptive factors. Therefore, every strategy generated by your firm had better take into account the disruptive nature of the digital economy.
Otherwise, you may end up actually fomenting an ossified business model and/or company culture.

In my judgment, the quintessential example of this dynamic is Blockbuster LLC. As many readers will be aware, during the 1980s and 1990s customers used to go to Blockbuster Video in order to rent VHS tapes. The only thing that changed during these two decades of sector dominance was that the company introduced drop boxes so that people could return their tapes after hours; and, of course, DVDs eventually made their way on to Blockbuster shelves. No one could have predicted that such a major operator could get hammered so hard that it would disappear from the market in a matter of months. When the inevitable finally occurred, in or around 2010, the monolith was nearly USD 1 billion in debt and forced to declare bankruptcy. The rapidity with which Blockbuster lost market share is almost unprecedented in modern economic history.

Netflix was the wrecking ball which tore down the brick and mortar monolith known as – ironically enough – Blockbuster. It completely eroded the foundations of the consumption model upon which the whole video sector was built upon. And the fact that Blockbuster was so far in the hole when it finally closed its doors points to the erosion having occurred over a fairly significant amount of time.

The foregoing scenario is the main reason why Sonda always advocates for a proactive stance on transformation. Firms should never view a digital-revolution contingency plan as optional. This is because the latest generation of digital-paradigm shifts are capable of wiping out entire sectors of the economy in one fell swoop. They also have an equally significant capacity to generate millions of marketplace opportunities. Here again, one must never lose sight of the fact that the time intervals involved are relatively brief and apathy is simply no longer an option. These platforms also have a tremendous capacity to modify consumer behavior patterns. This is an especially fascinating aspect of the digital platform scenario and, as one would expect, comprises a top priority at Sonda. We are constantly evaluating our ability to teach client firms how to optimize their interactions with clients via digital platforms.

Given this dynamic, the ability on the part of firms to adopt and internalize disruptive technologies is crucial to their continued success within a particular sector of the economy. A major component in any truly successful contingency plan is ensuring a firm is capable of approaching markets through expressly digital means. Opening up to the digital economy means that firms gain access to an enormous amount of online data, which can then be utilized to optimize efficiencies, better understand clients, and optimize short-term and long-term forecasting. Another major advantage of a digitally-proactive stance is that it helps firms reduce
expenditures on initiatives generated vis-à-vis outdated and/or irrelevant business models. Clearly, becoming fully committed to operating within the digital economy involves a wide spectrum of concomitant data security risks.

In my view, many firms within a variety of national contexts have failed to adequately address these vulnerabilities. This is not surprising, whereas the digital revolution has generated an enormous amount of security risks which have, in turn, taken on a wide variety of forms in recent decades. Fortunately, these firms still have time to remediate their security shortfalls. They had better address these issues immediately, however. The rapidity with which this problem has grown in recent years has surprised even those within the IT security sector. Here again, consumer behavior has been identified as the main factor; in this instance, driving the exponential growth of cybersecurity issues.

For example, in 1998 people were warned against the dangers of meeting strangers online. Everyone was told they should never exchange personal financial information online, and never get into a stranger’s car. Things have clearly changed. Digital platforms such as Uber allow – or more to the point, actually encourage – individuals to hop into a stranger’s vehicle and pay for the ride online via credit card.

Even as they have transformed the rest of the economy, these digital tools have the capacity to completely restructure the current business model used by the pension sector. They can help us approach the entire pension question from a completely new perspective. This is because digital tools are innately disruptive. If we can successfully revolutionize the way we approach pension industry challenges, the industry will have a better probability of generating innovations and identifying new business opportunities. It is important to remember that the sector will also need to generate a cybersecurity agenda designed to address the full spectrum of risks inherent to such efforts. Pension funds manage the personal data of millions of fund participants on a daily basis. Therefore, the industry must open itself to the digital economy in such a way that online privacy is never compromised.

In terms of relevance and magnitude, only one aspect of the economy has increased at the same rate as digital technology: cybersecurity risks. The following graph demonstrates the growth of cybersecurity risks during the period 2004-2006.
During the period 2006-2008, the problem underwent an exponential increase in terms of both the quantity and magnitude of the online attacks involved. As the following graph demonstrates, by 2008 online attacks had become a major issue for every single entity with an online presence on the planet. The amount of money lost, as well as the size of the databases involved, began to grow exponentially.
During the period comprising 2010-2012, the variety of sectors involved began to also increase, as one can easily see in the following graph.

As the following graph demonstrates, the problem has exhibited no signs of decreasing as of 2016-2018. Additionally, the magnitude of resources involved has remained fairly stable and is expected to remain so into the foreseeable future. For example, Latin American websites experience nine malware attacks per second. Clearly, companies need to take a proactive stance and ensure they are working with a world-class firm to remediate any security gaps.
According to available statistics, Chile currently ranks fifth in terms of frequency of malware attacks within the region. And the figures might not completely reflect the scale of the problem, especially at a regional level. One thing is certain, the magnitude of the problem is significant and merits inclusion on the strategic planning agendas of every firm within the pension fund sector. During the period comprising May 2018 – May 2019, for example, the frequency of attacks increased by 60% in Chile.

New company cultures

In addition to adjusting their strategic outlooks, processes, consumption models and skill sets, the firms and sectors which comprise our economies will need to generate new leadership models in order to adopt the requisite collaboration dynamics firms need for achieving success in the digital economy. This aspect of doing business is crucial if a firm is to fully capitalize upon the latest generation of available synergies. This is to say, if collaboration projects do not develop efficiently and organically, firms will be unable to acquire the skill sets and know-how they need to execute a wholesale transformation of their company culture. In light of the foregoing, the pension fund sector needs to have an aggressively proactive stance on everything digital; i.e., a digitally-orientated mentality which informs every decision and process within the industry. Clearly, each pension fund within the sector will also need to integrate this digital mentality into its everyday operations.

Firms also need to change the way they approach experimenting with new tools. This is to say, firms need to get comfortable with rolling out imperfect tools and focus on perfecting during the ramp-up and implementation phase. A digital outlook dictates that firms determine why a failure occurs, perform the necessary changes, and then move on to a successful implementation of the tool. This is an increasingly feasible approach, whereas the costs of experimentation have decreased significantly during the last two decades. As a result, firms now a great deal more leeway in terms of experimenting with potential solutions. Teams need to generate company cultures which drive innovation; should they fail to do so, they will be left to deal with the ramifications (i.e., loss of organizational flexibility and creativity). As stated, experimentation can be conducted at a much lower cost than in the past; i.e., firms have fewer excuses for failing to innovate. For example, companies no longer need to factor in the cost of installing a rack of servers. This is simply no longer necessary, and in my mind eloquently illustrates how consumption-pattern changes are driving market evolution in the Digital Age. In this instance, changes in consumption have increased the capacity of entire sectors of the economy to undertake transformation. Additionally, as one begins to contemplate the convergence of synergies in this type of example, the aggregate inertia is impressive. Here again, in my experience the only thing holding the vast majority of firms back – in terms of transformation – is a
lack of visionary leadership. And, as stated, company cultures tend to generate the type of leadership that a company is after.

Currently, our firm is working 66,000 hours for 40 clients throughout the Latin American pension fund sector. Sonda’s aim is to optimize the ability of our clients to become organizations known for their ability to respond to the demands of the digital economy, as well as their ability to organically evolve vis-à-vis said exigencies. Whereas we are the largest IT firm within the region, we possess the capacity to generate solutions for any pension fund within Latin America. Currently, our solutions have improved the lives of nearly 4 million fund participants in the Chilean economy. Together with professionals working on behalf of pension funds, Sonda endeavors to understand – and ostensibly predict – the needs of our client firms. As a result, the recent increase in the availability and accessibility of digital tools represents an opportunity for Sonda to partner with pension funds to improve the services which the industry provides to its account holders.

One such digital solution even has a name. Designed to leverage the synergy available in the cloud, voice recognition and artificial intelligence, our firm created an AI interface known as Sonia. It is a fairly straightforward process to incorporate Sonia into an organization, given that the entire process involves installing a simple black box at a site. Sonia operates similarly to Alexa, Siri or Microsoft Cortana; which is to say, the potential savings in terms of reduced overhead are almost limitless.

Cybersecurity

Sonda’s cybersecurity is best characterized as a cradle-to-grave approach. Our primary objective is to generate strategies which address the entire dataflow spectrum; i.e., from the cellular phone or computer used by the client, all the way into the Cloud. Additionally, we are totally committed to remaining one step ahead of the sector in terms of security challenges.

In general, the digital security issue has a great deal in common with digital transformation. One might even go so far as to say that the exigencies involved are essentially analogous. For example, I recently visited a number of clients who were seeking to ascertain what their level of cybersecurity readiness was. In these instances, it is possible to make a fairly quick determination of where they are at on the cybersecurity spectrum. I simply inquire as to whether or not they have a cybersecurity policy in place. While the approach might strike many as a bit simplistic, I assure you that many firms have not yet even delineated what they seek to achieve in terms of data security; this is to say, they have failed to take even the first tangible step towards inculcating a company culture of cybersecurity.
Here again, the challenge is not about how a firm goes about implementing a given IT solution. Effective, lasting and sustainable cybersecurity strategies are the result of a broader culture of data security which penetrates every corner of an organization. It is a philosophical stance – i.e., an extremely well-defined outlook – which informs every decision which directly or indirectly impacts the responsible handling of personal data. Our firm always endeavors to transform a company’s culture before we begin to contemplate how to employ IT tools designed to remediate specific security gaps. In fact, this aspect of Sonda’s interaction with client firms basically sums up our entire approach: transform perspectives, then implement solutions.

Additionally, it is also possible to evaluate the vulnerability level of firms through the use of a fairly basic variety of indicators. In my experience, there are a great deal of private and public sector entities who cannot even provide you with an up-to-date list of their IT equipment; to include, a detailed list of every machine and digital file on and off the premises.

Time and again, I have found that these extremely straightforward indicators tell me more about an organization’s level of cybersecurity than an in-depth analysis; to include, even those million-dollar evaluations which often take months and months to execute. Our team always strives to get to the heart of the matter, and only then begin to treat the visible symptoms. Once we determine that the situation is stabilized, we begin to evaluate what types of training measures need to be introduced in order to ensure that a client firm operates within acceptable cybersecurity limits once we leave.

Here again, our team constantly strives to maintain a proactive stance. It is in the best interests of our own firm, as well as those run by our clients. And, clearly, being proactive in the Digital Age translates into constant transformation. At Sonda, the primary mission is to replicate our own company culture of transformation within the organizations of the firms which we interact with; be they client firms or partner firms. We believe that a culture of cybersecurity and digital transformation can be introduced into an organization and, under the right circumstances, it will begin to replicate itself not unlike a computer virus. This dynamic allows the culture change to “infect” the entire infrastructure of the company. Similar to a well-designed virus, our emphasis is on introducing a self-propelled mechanism into a firm’s internal dynamic. When things are done correctly, it is then simply a matter of triggering the first few stages and then standing back and monitoring how the transformation mechanism works its way through the chain of command. It is important to hit every level of a company in order to assure that a cybersecurity solution has the ability to outlive our presence at the firm. As a result, our firm has consistently opted for solutions of a somewhat disruptive nature during recent years. Experience
has shown that they are the only options which deliver lasting results in terms of company culture transformation.

**Transforming the way we work with partner firms**

It is important to note that firms such as Sonda operate within – and thanks to – a broader ecosystem of firms which enhance our ability to provide services. These firms are sector leaders who, above all else, help our firm to optimize its own capacity for transformation. Additionally, in recent years Sonda has begun to work increasingly with startup firms created here in Latin America. In fact, the region is full of innovative companies that, while they may lack a long track record, often have teams full of innovative and highly qualified professionals. Startups tend to be extremely flexible and much less resistant to the concepts of transformation and cybersecurity which are so determinant to success in the digital economy. Transformation depends on people and not new technology. This is why it is so preferable – and, in our judgment, almost obligatory – to team up with the startups which are proliferating so rapidly within Latin America and the Caribbean lately. At the end of the day, we need partner firms willing to embrace change, rather than simply acknowledge it exists. We also love to team up with firms who can help improve our organization’s ability to comprehend and then internalize the transformations we need to achieve; and to clarify, this always involves a short-term as well as a long-term horizon. Transformation is a tremendous opportunity. However, if organizations choose to put off addressing this issue, it quickly morphs into a looming risk.
DIGITAL TRANSFORMATION
FOR THE AFP SECTOR
ROGERIO GALVEAS

Rogerio Galveas holds a BSc in IT engineering from UNESA (Brazil), and an MBA in IT management and e-Business from Universidade NOVA de Lisboa. Currently serves as head of insurance and AFP affairs for a leading Chilean consultancy, where he is also a member of the executive Council for Latin America. Has 25 years of experience in the fields of insurance products and transformation processes within the pension fund sector. In recent years, has advised a number of client firms in the Americas and Europe in projects involving strategic planning, reengineering of commercial processes, business intelligence, as packets implementation, development and maintenance of IT systems. Previously held consultant positions at IBM and Capgemini.
I wish to share some of my firm’s experiences with digital transformation in a variety of sectors, and then focus on said process in terms of clients operating within the Latin American pension sector. I believe that these remarks will prove of great value to sector professionals, whereas our firm’s experiences in other sectors have informed the manner in which we approach client firms within the pension sector, particularly in terms of AFOREs operating in Mexico.

Markets tend to focus a great deal on the future. As one might expect, they spend a great deal of effort attempting to forecast a number of factors. However, in my view said horizon is shorter than ever; which is to say, it is often difficult to delineate between future constraints and current constraints.

In terms of evaluating the current array of digital transformation challenges, our firm believes that 2019 constitutes a unique set of opportunity areas in terms of the constraints which AFPs and AFOREs currently face; constraints which are driven by the evolution of fund-participant profiles.

**Living Lab**

The Living Lab is a unique space designed to facilitate of vast variety of activities related to technological innovation. Under the auspices of what is often termed open innovation, the laboratory’s goal is to create, design, innovate, share and learn together with our client firms and collaborator, through the use of a model which integrates every agent within the innovation ecosystem. The laboratory utilizes exponential technologies such as artificial intelligence, voice and facial recognition, robotics, block chains, Big Data, cloud computing, virtual reality and enhanced reality in order to identify new applications for said technologies which served to transform and improve societies as well as economies.

At the Living Lab we provide services which add value to the process of innovation, driving a unique manner of understanding and approaching said phenomena, through a proprietary methodology which employs a collaborative model with
third parties, experimentation, knowledge generation and the development of solutions, and serves as the basis of all our efforts. These services cover the entire innovation lifecycle in order to help firms and organizations successfully navigate digital transformation.

Relevance of digital transformation within the pension sector

To the central issue at hand, in my experience many sector actors are still asking themselves why benefits digital transformation is capable of generating within the pension sector. This is to say, many still lack clarity in terms of knowing what the impact will be of such a large-scale transformation.

In strategic terms, digital transformation tends to focus on the client behavior model which, in this case, clearly involves the participants of a given pension fund. These behavior patterns are evaluated within the context of the wider pension ecosystem, which is comprised of the financial technology sector, the tech Giants sector, as well as the AFP and insurance sector. In recent years, fund participants have begun to seek a deeper connection with the financial products on offer. This is due in large part to the broader trend of increased connectivity which is so ubiquitous in modern day society. Whereas they seek to understand the inner workings of their respective funds, the sector will need to redouble its efforts to improve its customer service component. The relevance of customer service improvements are fairly self-evident given individuals’ heightened interest in how their contributions are being utilized. Issues such as end-to-end design, therefore, will become increasingly relevant given the increased importance of these new consumer behavior models.

Firms within the financial technology sector have an important role to play in this scenario. The evolution of the consumption model demands that said firms assist the pension fund sector in personalizing the data provided to fund participants. In the modern age, it is important to contextualize the way in which financial instruments are marketed to potential clients, whereas the market now expects this level of personalization. Firms who fail to acknowledge the importance of this issue run the risk of appearing antiquated and somewhat monolithic. In terms of digital security, it is also important to offer safe financial products. Clearly, the FinTech sector has a major role to play in this sense. At the end of the day, they have the capacity to add a great deal of value at an extremely attractive price. A great deal of evidence supports the view that the pension sector has failed to completely address the new consumption model in terms of the value-added benefits which can provided by financial technology.

Lastly, there is another sector that has an extremely significant role to play in the pension sector’s digital ecosystem. Firms such as Google, Amazon, Facebook,
Microsoft, Apple and other IT multinationals manage the largest databanks in human history.

Failure to properly evaluate the dynamics operating within the pension ecosystem can be fatal in terms of ensuring future market share. Therefore, a workable and sustainable digital transformation strategy is of paramount importance in terms of a fund’s ability to correctly address the constraints generated by said dynamics. Entities can simply not afford to take note of the digital evolution of society and do nothing to respond to same. Firms in a variety of sectors are undertaking digital transformation every day. This, in turn, has ensured that technology firms often offer practicable transformation models available for clients use. In this scenario, the aforementioned tech giants have grown increasingly relevant within the IT ecosystem and, as a result, within the pension sector universe as well.

**Fund participants: evolution of consumption model**

At the end of the day, pension fund participants can be perceived as products of digital revolution in the sense that the manner in which they perceive markets was generated nearly expressly in digital terms. They are accustomed to receiving timely and personalized customer care, and aspects of customer service which has not always comprised a priority for Latin American firms; this is to say, firms together with their concomitant sectors have not always involved as rapidly as regional consumption models. The latest generation of clients has much less patience for bureaucracy and, above all else, visits to branch offices and endless wait times. Whereas 10 years ago the vast majority of clients visited their bank once a week, this is literally unthinkable for the current generation of workers. Even ATM machines are less relevant for Millennial account holders.

As these friends begin to penetrate other demographic groups, the effect is going to be exponential. This is to say, once the current generation’s grandparents and parents begin to reject traditional models, firms who have failed to come up to speed will be eliminated from their respective sector of the economy. Clearly, the pension industry has a tremendous amount of similarities with the banking sector. In fact, one might say that they are first cousins. Because, in my judgment, it is difficult to come up with to sectors who have more in common than the banking sector and the pension sector. Should they fail to generate lasting digital transformations, digitally-antiquated pension funds will eventually be eliminated from the market.

An important first step is to ensure that a given fund is open, accepting and proactive about digital transformation. In fact, this type of posture can inform future efforts in terms of generating an institutional policy aimed at responding to the exigencies of said transformation. Thus, it is high time funds began to take tangible steps towards
preparing themselves. When the pension sector finally begins to evaluate the issue seriously, it will be generating benefits for its clients as well as itself. And at the end of the day, the issue is definitely not optional. In fact, it is not difficult to imagine a day when not a single consumer will be able to purchase a firm’s goods or services if said company fails to properly respond to current digital trends. The economy is undergoing a major evolution, therefore firms to choose to take no steps towards initiating the transformation process will find themselves unable to even introduce next-generation digital tools. Here again, they must act now or end up on the trash heap. For instance, if in 10 years’ time clients from the rest of the sector are utilizing virtual reality to visit a fund’s offices, how is a digitally-antiquated firm going to make the quantum leap necessary to respond to said demand? It will be impossible, whereas the gap will have become insurmountable.

In light of the foregoing, our firm suggests that pension funds view transformation as a gradual process which requires time to comprehend and then respond to the exigencies of the digital economy.

**AFP sector: objectives of transformation**

when generating a transformation strategy, it is important to consider what the impact of said policy will be. To begin with, it is fundamental to address the fact that many economies now demand increased transparency from firms. Whereas the magnitude of the challenges will correlate directly to the scale of future regulatory reforms necessary to achieve said transparency, no company on earth will be able to sidestep the effects of this exigency. This is to say, in many economies the issue of transparency has never been an issue of great importance. Firms operating in these societies will have a great deal of ground to make up. In nations such as Chile, pension funds may require less adjustments, but one should never forget that Chilean consumers may begin to demand even higher standards of transparency in the near future. Here again, changes in consumer behavior are transforming the manner in which pensions sectors operate. And clearly, transparency is an issue which is likely going to come up time and time again.

Another aspect of the regulatory transformation we are seeing throughout the world is the demand to remove barriers. Markets are demanding sectors remove barriers to competition, and that they eliminate impediments to low-income consumers having complete access to goods and services. Here again, the transformation of the digital ecosystem is generating the need for transformation at the sector level. The pension sector is going to be inundated by a tidal wave of new regulatory and consumer parameters, in light of the pension reform debates which are occurring in nearly every economy on earth. Societal parameters are also changing, and pensions will have to change with them. While it is important to be aware of what is on the
horizon, we should never forget that the entire scenario implies huge amount of opportunities to offer financial instruments to segments of the population which have never had access to such as voluntary savings accounts. In fact, the growing relevance of instruments such as annuities and longevity insurance clearly places these two in the same category of new products made available to new segments of the population. This aspect of the current scenario is truly promising and firms would do well to respond accordingly.

The synergies generated by big data will provide pension fund managers with the ability to create higher league new marketing schemes. For instance, nowadays of funds can design an ad campaign to address an account holder’s entire family; i.e., address each member of the family, on an individual basis. However, this type of strategy requires a great deal of finesse in terms of ensuring consumer trust is maintained. Overstepping boundaries which are increasingly difficult to ascertain is a major concern for many within the financial sector, and pension funds will need to evolve along with this aspect of the Digital Age consumer model.

What will set industry leaders apart from industry survivors, will be of funds ability to simultaneously respond to changes in the market and regulatory frameworks. In addition to increasing consumer confidence in their services, firms will increasingly face regulatory norms which demand minimum levels of acceptable customer service. This will entail optimizing of fund’s ability to offer products which need the economic needs of each of their clients.

Once funds have convinced a given consumer of the value of a given financial product, they will then need to assure that an account holder can enroll in a fund efficiently and intuitively. Given the velocity with which young Latin American professionals live life, it will be final to ensure that enrollment occurs in a minimal amount of time and with a minimal amount of effort. Clearly, many firms’ tendency to roll out poorly executed digital tools will become increasingly less feasible. Here again, consumer models are becoming more demanding and word travels fast when a given digital initiative fails to meet even minimal standards. Pension funds, therefore, need to develop their ability to interact with the FinTech sector. If they put this off until the last minute, many will fall into the less capable hands of second-tier firms and never achieve the synergies available from digital innovation and transformation. Firms to successfully navigate the financial technology sector will find themselves much better position to bring management fees down and eventually eliminate less efficient competitors. Here again, the regulatory issue is constantly looming. What will happen to funds who are unable to bring their fee schedules into line with regulatory standards? The answer is they will quickly become financially unviable enterprises. Correctly responding to digital transformation realities is increasingly becoming an issue of major importance for boards, as well as fund managers.
How should funds approach transformation?

I believe that the most important aspect to take into account when generating an institutional transformation strategy is to ensure that everything a firm does moves it one more step towards being a client-centered organization bent on ensuring it is capable of responding to shifts within the digital marketplace. As firms begin to increase their ability to offer self-service tools which deliver immediate results for consumers, they will also need to keep an eye on an entire spectrum of related issues: ensuring that they are a hybrid organization which remains open to innovation; ensuring that they are a data-driven entity; and, ensuring that they are capable of capitalizing upon exponential technologies and open architectures. At the end of the day, transformation demands that firms find the point at which the physical, digital and human demands of the new consumer model meet. Clearly, this convergence point may shift as one of these factors becomes more important than another. Thus, a firm’s ability to remain competitive correlates strongly to its ability to achieve transformation efficiently.

Another aspect which can help us understand the relative position of the pension sector on the transformation spectrum is by comparing it to the success which the banking sector has had in terms of transforming itself during the last decade. Clearly, the banking sector has been one step ahead of the pension sector for years. In fact, it has probably been two steps ahead because the pension sector has often lags so far behind that other sectors of the economy managed to replicate what bankers were doing before pension fund managers got up to speed. This is no longer an option. And the best evidence of this is that pension funds have been making a concerted effort to mimic what banks are doing for their account holders. The digital economy, as stated, is a coming tidal wave which is going to eliminate intransigence from the pension sector. Therefore, everything points to the pension sector gaining velocity within the coming months and positioning itself alongside the banking sector in terms of transformational velocity.

Fortunately, we have a simple indicator for measuring of firm’s progress in terms of transformational capacity. It involves asking one simple question about each initiative we are attempting to implement: Does this measure make us a more client-centered pension fund or not? Everything needs to be filtered through this control point because if the client is not the focus of what we are trying to achieve, then we are probably not increasing our capacity for transformation by pursuing the objective in question. As we endeavor to implement workable transformation strategies, we need to be objective – and, it should be said, realistic – in terms of our ability to meet the needs of the new consumer model. Here again, this is why partnering with a transformation veteran is normally so vital to success. However, this entire dynamic has a huge potential payoff for funds who successfully evolve.
They will be the first within the sector to lower their operating costs and provide digitally-optimized services to the latest generation of workers who expect – and whose political leaders may soon demand – of pension fund be able to deliver a certificate or execute an account transaction online. Therefore, rather than feeling anxious about the transformation horizon, I think that pension funds should be excited about all of the available synergies and opportunities to become more competitive.

**What to look for in a transformation partner**

When deciding upon a partner firm, pension funds should seek out a transformational team which has a great deal of experience integrating digital technology. In addition to this technical expertise, partners also need to be capable of integrating said tools into a given organizational culture. At the end of the day, if staff operating a pension fund remained unconvinced of the efficacy of certain digital initiatives, then the eventual impact of said measures will necessarily be limited. Transformation partnerships also need to involve inability to tailor solutions to the exigencies of a specific national context. While digital solutions are especially well-suited to meeting this flexibility criteria, one should ensure that the transformation partner firm involved is capable of introducing solutions within every nation in Latin America. This way, pension fund managers can rest assured that their partner is capable of tailoring a solution to meet their particular clients’ and regulators’ needs.

The second priority transformation leaders always deliver on is optimizing collateral efficiencies generated within an organization. This can be measured by ascertaining a firm’s ability to redesign its own digital processes, architecture and infrastructure, as well as those of a potential pension fund client. As one would expect, principal challenge involves knowing exactly what components need to be replaced and what components need to be bolstered within a given organization. This type of approach has significant benefits in terms of limiting the costs associated with undertaking entity-wide transformation, as well as in terms of ensuring impacts are lasting and thereby eliminate the need to constantly finance another revamping of the entire transformational infrastructure. Furthermore, a true transformation leader always seeks to optimize of fund’s operational dynamic, and this clearly has major implications for the bottom line.

As consumers begin to demand more from economies in terms of customer service and transparency, regulatory frameworks will begin to demand more from pension funds. This is a fairly inevitable reality. Therefore, pension fund managers need to ensure that they begin to educate themselves about what it will take to bring their organizations successfully into the Digital Age.
REGULATING THE INCORPORATION OF FINTECH INTO THE RETIREMENT SAVINGS SECTOR

BERNARDO GONZÁLEZ ROSAS

1 Bernardo González Rosas holds a BSc in Finance from the Instituto Tecnológico Autónomo de México, and a Masters in Public Policy from Georgetown University. He is an expert in the Mexican financial system, having worked in the sector for two decades. Currently serves as chairman of the Mexican Pension Fund Administrator Association, AMAFORE. Advisor to the World Bank and the Financial Integrity Network. Has worked for other multilateral organizations such as the Inter-American Development Bank and the UN Development Programme. More than six years of experience as financial sector regulator, having helped draft then launch the Financial Sector Reform of 2014 in Mexico. Coordinated the drafting and passage of Fin Tech Law through Congress. Author of the National Financial Inclusion Policy, as well as the National Financial Education Strategy. A leading voice within the Mexican and international financial sector in terms of FinTech, the digital transformation of organizations, cyber security, stock market competition and financial inclusion.
What are financial technologies?

During the panel sessions held at this FIAP event, we have heard a great deal about artificial intelligence, the gig economy, blockchains and other components which comprise the financial technology (FinTech) sector. While the majority of professionals within the pension sector possess some level of knowledge regarding these tools, it is important to delineate the parameters involved if we are to truly comprehend the concomitant magnitude of available synergies.

For example, what does blockchain mean? In short, blockchains are databases comprised of decentralized, secure and public transactions which are utilized to generate crypto currencies, as well as to perform secure transactions in a wide variety of markets. This is to say, a blockchain is a database which records transactions performed by individuals within a given set – or block – of users. Given the context of the present FIAP seminar, it is also important to understand that blockchains comprise ledgers that are often shared among millions of users, and which track transactions between two parties in an anonymous, verifiable and permanent fashion. All this is achieved with no involvement from intermediaries.

Another conspicuous FinTech tool is machine learning. Computers use algorithms to build statistical models which allow them to perform tasks without the need for human intervention. Instead, they rely on patterns and inference to slowly improve their ability to make decisions or predictions. Machine learning clearly processes a great deal of potential within the financial sector as well as the pension sector. For example, it is already being utilized to generate credit rating models. In this manner, there is no longer a need to constantly update every individual’s credit rating file within a given database.

Another component which has proved to be of great value is artificial intelligence. This tool involves technology capable of performing tasks which normally require the presence of human intelligence. These types of tools are especially well-suited to performing tasks related to fraud detection, whereas their forte is spotting anomalies.
Artificial intelligence utilizes algorithms to identify behavior which deviates from established patterns, and then notify clients when a purchase is made involving a transaction whose amount exceeds normal purchase parameters. Additionally, most of us are aware of the ability of AI software to track the general geographical area in which we use our credit cards. Users often receive a call from the bank when they use their credit card on a business trip 2000 miles from home.

Another aspect of financial technology is the gig economy. In part, this new sector of the economy was generated in parallel with the appearance of social networks which – as we have heard repeatedly here at the seminar – have correlated to major changes in consumption models. Additionally, the gig economy is another instance of intermediaries being eliminated from the equation. In terms of the financial sector, the gig economy has led to the appearance of platforms which connect parties directly in venues such as crowdfunding sites. The users of these networks have the ability to exchange information which, in turn, informs the decision processes which an investor utilizes to decide whether they should invest in a new firm.

Robo-advisors are yet another aspect of automated financial management. This sector of financial technology is comprised of applications which provide automated financial advisory services, and are even capable of providing personalized portfolio management to clients.

The last aspect I will cover is SupTech. While more detail on this sector of financial technology is provided below, suffice it to say that in practical terms SupTech involves digital applications designed to monitor regulatory compliance within a given economy. Additionally, a related category known as RegTech facilitates the processes by which firms ensure they comply with a given set of regulatory parameters.

**FinTech sector: Benefits and risks**

All of the foregoing innovations are revolutionizing financial sectors across the globe through the generation of new models and channels for the use of, and access to, financial services. However, these new technologies also imply a new set of risks which need to be acknowledged and then appropriately regulated.

In terms of the potential benefits generated by FinTech tools, one of the primary impacts of this evolution in IT has been these tools’ ability to inculcate a culture of financial inclusion within economies. These applications are so user-friendly and intuitive that they comprise an outstanding way begin to incorporate consumers with non-traditional financial profiles into the financial sector. And while FinTech has already made great strides within the banking sector, it will also play an
increasingly relevant role within the pension fund sector and insurance sector. Therefore, the potential involved here is quite significant. In my view, everything points to FinTech being an issue which merits the attention of every single entity operating within the pension sector.

Another major contribution of FinTech has been its ability to generate higher levels of competition, particularly in terms of traditional sectors. As a result, financial technology is changing the way firms operate and is also having a major impact on the determinant factors which inform the manner in which new firms appear in markets (i.e., funding, etc.).

As noted here at FIAP seminar, financial technology is primarily designed to simplify processes. This simplification has led to many heretofore underrepresented sectors of the investor community beginning to take an active role in the funding of new firms. This is an especially interesting dynamic because it is allowing new firms to access capital from individuals which have never been involved in direct investment. Therefore, we can safely say that FinTech is having an effect on the entire economic spectrum, and in every sense of the word. This is to say, it is impacting the entire lifecycle of companies; to include their potential for growth and organizational evolution.

By providing more efficient processes at a lower cost, the spectrum of benefits generated by financial technology is formidable. These technologies are also extremely scalable and often correlate to a major drop in systemic risk levels; i.e., risks involving firms which are so large that their collapse would potentially trigger a related collapse of entire sectors within an economy. Additionally, all of the evidence points to FinTech’s ability to increase the security and quality of services which the financial sector provides to the marketplace.

Of course, these new financial technology options also comprise a significant amount of risk; risks such as the money laundering which can occur via digital platforms such as PayPal and crowdfunding sites. Not unlike other aspects of the financial sector, FinTech involves financial as well as systemic risks. Financial technologies have generated a fair degree of legal nebulosity because they tend to involve new business models which do not fall within the purview of existing regulatory frameworks. As a result, governments are still working to decide whether certain transactions are to be considered legal or illegal. Another worrying aspect of the FinTech revolution has been the issue of consumer and site-user protection in the midst of such disruptive and unprecedented scenarios. Lastly, the now well-known issues of identity theft, personal-data security and the integrity of databases and operational platforms are all major concerns when it comes to the latest generation of FinTech tools.
Having evaluated the pros and cons of financial technology, Mexico opted for driving the FinTech sector in order to generate a suitable response to the evolution of the digital economy which has occurred at such breakneck speed of late. While much has been said regarding the suitability of financial technology vis-à-vis the pension sector, nations have thus far failed to formulate public policies capable of properly delineating legal parameters and regulatory frameworks. Informed public policy is the only way economies will ever truly capitalize upon all the benefits of FinTech. Conversely, failure to address the concomitant legal and regulatory framework issues will only lead to lost opportunities. An unwillingness to provide these parameters will also mean that governments have failed to properly protect consumers; be they crowdfunding-site users or pension-fund participants.

**FinTech legislation in Mexico**

Mexico recently enacted a FinTech law which comprises an excellent effort to address the aforementioned benefits and risks of financial technology. The law involves six guiding principles. Firstly, legislation was enacted vis-à-vis the principle that the State has a responsibility to exercise oversight financial inclusion and innovation issues. Secondly, the State has a responsibility to protect consumer rights. The third aim of the law is to generate competition within the FinTech sector; that is, in the hopes that said competition will extend throughout the entire economy. The fourth guiding principle is to ensure financial stability; an issue which is extremely analogous to the next principal aim: combating money laundering. The last objective of the law is to ensure technological neutrality; which is to say, the Mexican government does everything within its power to ensure that regulations do not favor a specific type of FinTech over another.

Given the inherent risks that the FinTech sector represents in terms of financial stability and consumer protection, and given the quantum leaps in innovation that the financial technology sector regularly experiences, the law enacted in Mexico is designed to endow the sector with an appropriate level of flexibility. Additionally, the law also seeks to provide secondary regulations which are updated constantly via processes which are informed by regular contact with industry experts. As such, when regulators are preparing to generate new public policy for the FinTech sector, they must take into account the six principles outlined in the foregoing paragraph.

In terms of the entities which fall under the purview of the FinTech law in Mexico, the legislation is designed to regulate firms which have undergone a great deal of growth in recent years; i.e., organizations such as crowdfunding sites. Table 1 provides an overview of the legal parameters involved, while the most innovative aspects of the FinTech legislation in Mexico are included in Table 2.
### TABLE 1

<table>
<thead>
<tr>
<th>Electronic-payment entities</th>
<th>Crowdfunding entities</th>
<th>Virtual assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>May issue, administer and redeem electronically-tracked balances of funds, in order to execute payments or transfers.</td>
<td>May conduct funding operations (debt, capital or joint ownership).</td>
<td>Electronic-payment and crowdfunding entities may operate via the virtual assets authorized by Central Bank.</td>
</tr>
<tr>
<td>May perform transactions in national and virtual currency.</td>
<td>Debt-related entities must use at least one credit bureau.</td>
<td>Central Bank shall define what virtual assets are acceptable, as well as operational conditions and restrictions.</td>
</tr>
<tr>
<td>May act as transferors of funds.</td>
<td>Must adhere to risk-divulging regime.</td>
<td>Any entity operating via virtual assets shall be subject to applicable PLD regulations.</td>
</tr>
<tr>
<td>May commercialize, issue or administer means of disposition.</td>
<td>Projects may not be funded by more than one crowdfunding source.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>May not guarantee returns.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Must adhere to incentive-aligment regime.</td>
<td></td>
</tr>
</tbody>
</table>

**Source**: Author.
The inclusion of the sandbox mechanism in the FinTech legislation allows sectors such as the pension fund industry in Mexico to temporarily experiment with business models without having to comply with the regulatory exigencies which apply to measures of a more permanent nature. In my judgment, the initiative has
generated extremely positive results, as we have observed increases in the amount of innovation occurring in a wide variety of sectors. The sandbox also provides an ideal setting for pension fund administrators to ascertain how effective a given tool is – for example, a robo-advisor – before filing to have it incorporated into the regulatory framework.

Clearly, financial technology should play a central role in any strategy aimed at addressing the challenges of digital transformation within an organization.

At this time, I wish to share some examples of tools which proved of great utility at a Mexican firm in terms of digital transformation. The examples are primarily intended to expound on the technological innovation and FinTech aspects of said process.

In Mexico, a new pension fund tool is available. It is a cellular phone app entitled AforeMóvil, which allows fund participants to consult their pension fund balance. Additionally, app users can also allocate funds to their voluntary savings account. In the near future, the app will also offer users the ability to change from one pension to another. It is also an excellent tool which can be used to inform the public about other retirement-wealth products which are available within the Mexican market.

Additionally, the app has utilized some truly cutting edge technology. For example, users can utilize facial recognition or fingerprint scanning to access their account. These types of mechanisms help to ensure that account holders are not subjected to the risks which were mentioned above (identity theft, etc.). Mexicans can use the app to calculate their eventual pension payout amounts, open an account for a minor, or update their personal data. And, as stated, the degree of security involved is very high.

**Behavioral economics as a means to inculcate a culture of savings**

Society has many means by which it can stimulate voluntary retirement savings among its citizens. In my judgment, behavioral economics constitutes a relatively untapped source of potential. It can inform the entire process by which we approach the challenge of changing mindsets about pension saving. As a result, our current challenge involves harnessing the synergies between the technological potential of FinTech tools and the principles of behavioral economics. Additionally, the FinTech sector’s immense capacity for innovation must be employed vis-à-vis lessons learned from this fecund field of economics. Under ideal conditions, these synergies will help the pension industry within nations such as Chile and Mexico convince individuals to save for retirement; which is to say, it will improve the efficiency with which they perform this task. Additionally, FinTech tools are a proven method
to improve the efficiency with which a pension fund interacts with potential participants in a number of other scenarios as well.

Mexico has a federal entity charged with pension industry oversight. This agency, known as the CONSAR, decided to work with Ideas 42, a US firm which specializes in the use of FinTech tools to capitalize upon knowledge gained within the field of behavioral economics. The partnership decided to incorporate an age-progression software device into the aforementioned AforeMóvil app (see Image 1). The app now shows individuals how their face changes over time. The tool had a major impact on individuals signing up for retirement accounts; especially in terms of the behavior observed among individuals aged 25 to 30 years. After having seen what they will look like in old age, they are guided to what their eventual pension payout will be. The entire dynamic has generated some extremely promising outcomes and has served to convince a great deal of individuals to make the right decision in terms of remediating their retirement-wealth issues. The app is extremely efficient. Once an individual decides to act, they can complete the process via a couple of clicks. App users have the ability to open a voluntary retirement savings account, and even decide how much of their income they wish to allocate to their new account.

When the new FinTech tool was incorporated into the app, all of the fund participants utilizing the app were sent an invitation to meet their future self. The industry saw a 13% increase in the number of individuals signing up for voluntary savings accounts, and the total amount of assets allocated to said accounts increased by 54%.
RegTech and SupTech: Important sector-wide drivers

A fascinating aspect of the evolution occurring within the FinTech sector has been the generation of tools designed to help funds comply with the regulatory demands of their respective economies. Conversely, these technologies have also helped governments to more efficiently monitor their respective pension fund industries. All this has been achieved at a much lower cost than what the industry and governments previously paid for compliance-related activities. An additional benefit is that as we ensure that our respective pension industries are better regulated, our national debates can remain focused on what is really important: providing better pensions to retirees.

RegTech involves any application or platform designed to increase the efficiency with which a firm performs regulatory compliance activities through the use of automated processes which occur at a much lower cost. SupTech, for its part, involves the financial technology tools which help regulators perform their oversight role in society.

In the Mexican context, all of the foregoing occurs within a framework comprised of the following factors:

- Identity management: occurs primarily vis-à-vis Know Your Client principles; frequently improves efficiency with which identification occurs, whereas biometric verification or blockchains are used.
- Real-time monitoring: PLD/FT monitoring is difficult, due to the drop in quality and the enormous amount of data involved.
- Risk management: automated risk management via Big Data; e.g., capital reporting, liquidity reporting and stress tests.
- Modeling, scenario analyses and predictions: necessary in order to perform stress tests and risk management. Due to the huge amount of variables, risks and external shocks involved, these tasks have become increasingly more complex to perform with a high degree of precision.
- Regulatory updates: explanation and interpretation of regulatory changes and analysis of impact on organization.
- Analyses and reports: advanced analysis of huge volumes of data utilizing Big Data, and automated interaction with officials.
- Compliance and identity vulnerability: automatic monitoring of compliance with a number of laws and applicable regulations, to include consumer protection on through to questions involving tax and prudent behavior questions.
The future of the pension fund sector in terms of FinTech

In terms of its ability to efficiently incorporate financial technology tools, the pension industry will need to remain open to addressing the demand generated by new consumption models. As many of the individuals presenting at this FIAP event have mentioned, finding an individual capable of making good decisions with regard to their savings and personal finances is a daunting task. Very few of us have the necessary skill sets to optimize our decision-making processes; especially when it comes to the financial sector. Fortunately, many new FinTech tools are designed to take into account human behavior when it comes to personal finances, and utilize evidence gained within the field of behavioral economics to help guide them towards a better decision. These tools are an excellent way to identify the appetite for risk that individuals possess, and then help match them to a given investment profile. Among the many new FinTech tools which societies use to drive savings and personal-finance decision making, we now have the ability to advise individuals on their investment strategy through the use of algorithms known as robo-advisors.

The most important aspect of these tools is their ability to help individuals remove the emotional aspect from their decision-making processes; especially when it comes to the issue of investment decision making. This is vital during times of financial stress, during which individuals tend to make decisions under pressure which can lead to questionable results. FinTech tools have the ability to help the pension fund sector to achieve its principal goal: generating pensions for the current and future generations of retirees. Additionally, they can play a critical role in an organization’s strategy – or even in an entire sector’s strategy – aimed at educating the public about our mission and the benefits which can be generated by the financial instruments available within the pension and longevity insurance sectors. Clearly, they can also increase competition between funds and insurance companies, as well as increase the transparency with which these sectors operate. A digital app which gives a concise and easily understood explanation of the services, yields and fees charged by a group of funds is a force for good in society. As we begin to make headway in terms of providing these types of objective evaluations, the tide of public opinion will begin to turn in our favor and people will begin to show more interest in the retirement instruments available in our respective national markets.
CHAPTER III

STRUCTURAL CHANGES IN THE LABOR MARKET

ANDREA REPETTO. Employment, automation and new technologies.
ROBERTO MÉNDEZ. Chilean pension-sector challenges vis-à-vis latest generation of workers.
MARIANO BOSCH. The future of work in Latin America and the Caribbean: Challenges and opportunities
CAPÍTULO II
DESAFÍOS FUTUROS PARA LAS INVERSIONES DE LOS FONDOS DE PENSIONES
CHAPTER III
STRUCTURAL CHANGES IN THE LABOR MARKET

EMPLOYMENT, AUTOMATION AND NEW TECHNOLOGIES
ANDREA REPETTO¹

¹ PhD in Economics, Massachusetts Institute of Technology. BSc in Business Engineering, MA in Economics from the Catholic University of Chile. Professor, School of Government, Universidad Adolfo Ibáñez (UAI). Director, Center for Labor Policy (UAI). Chairs Master’s degree in economics program at UAI. Board Director at Fundación Superación de la Pobreza, an anti-poverty NGO. Principal areas of research include analysis of fiscal and social policy, labor market dynamics and behavioral economics.
Technological advances evoke a wide variety of reactions within society. On the one hand, one tends to stand in awe of what has occurred during recent decades. The evolution of automation technologies which has occurred during the last 15 years has been especially remarkable. Individuals can now perform tasks via their cellular phones which were frankly on imaginable only a few years ago. For instance, in the US there is even an app through which an individual can go to confession and receive absolution. Technology has introduced efficiency to nearly every aspect of life, thereby enormously expanding possibilities.

However, technology has also generated a fair degree of uncertainty within societies. This dynamic has been especially acute when it comes to advances in the field of automation technology. As more and more tasks performed by humans have become computerized, anxiety has increased in terms of the potential impact of technological advances on labor markets. Journalists have served to deepen societal insecurities by focusing on a variety of indicators which correlate to a fairly bleak outlook; both in terms of lost jobs and lost income, due robots ostensibly replacing humans. These factors comprise the flip side of the wonder that many experience as they contemplate the conveniences of the Digital Age.

As such, the goal of this text is to delineate the manner two issues interact with one another. The first involves the effects of automation technology on employment. Are we facing a future in which the majority of jobs will simply disappear? Are robots going to replace their human counterparts? Will the concept of work slowly become irrelevant? The second topic involves employment via digital platforms which connect clients with providers of goods and services; i.e., the gig economy. This second issue begs another set of questions. How large will the gig economy eventually become? Does the gig economy generate what one would consider reasonable employment conditions?
Employment and uncertainty

In modern day society, one often hears the phrase “the Fourth Industrial Revolution”. This term implies that three other revolutions have preceded said fourth event. In effect, humans have experienced several periods of history during which technological quantum leaps have occurred. During these periods of major technological shifts (i.e., industrial revolutions), we have observed how quickly technology can penetrate a nation’s means of production. This, in turn, has generated a concomitant impact on labor markets. During each period of history in which technological evolution has accelerated, many within society have expressed concern about the potential impact upon employment levels. In fact, each cycle of industrial revolution has included a fair amount of doomsayers who prophesy the onset of pandemic unemployment.

However, in each and every case, these technological quantum leaps have merely translated into more jobs for all concerned. Industrial revolutions have never even resulted in a net decrease in employment. International employment levels have consistently increased throughout human history, including these periods of accelerated technological evolution. At the end of the day, increases in technological sophistication have always correlated to stronger job markets. An individual’s capacity to provide labor through a given set of skills has always been valued within our economies, and all of the evidence points to this being a pattern which will continue into the foreseeable future.

What has occurred during these times of industrial revolution is that the occupational composition of a given society shifted. Some types of work began to disappear, even as others were generated by the appearance of new technology. This dynamic correlates to what economics characterize as the complementarity – or conversely, the substitutability – of a given field of employment vis-à-vis technological innovation. For instance, robots can be utilized to perform a task which a human worker performs and thereby serve as a substitute for said individual. Robots can also be designed to perform a task which simply supports the production activity performed by a human worker, and thus serve to complement – i.e., increase the productivity of – said individual.

The following two graphs illustrate these concepts in a very straightforward manner which allows us to ascertain the net impact of automation technology. Graph 1 utilizes data from the World Bank in order to demonstrate the evolution of the world labor force during the period comprising 1991 to 2016 (grey line, left-hand axis). Billions of workers entered the labor market during this period of history. The lion’s share of workers, therefore, found work. As one can ascertain from the behavior of the unemployment rate delineated in Graph 1 (red line, right-hand axis),
employment levels have remained fairly stable throughout the Fourth Industrial Revolution. In fact, this data demonstrates that during the 25 years in question advances in technology only served to drive international employment rates up.

Graph 1 evaluates an extremely similar period of time (i.e., 1991-2018) in terms of the occupational structure of the international workforce. The data, which was also generated by the World Bank, illustrates the proportional employment gains and losses observed within the manufacturing, agricultural and service sectors. While the manufacturing sector workforce has remained proportionately stable during the period, the service sector share has increased and the agricultural sector’s proportion has decreased. It should be noted that this does not necessarily point to a drop in agricultural sector productivity. A rational evaluation would infer that increases in productivity have led to a scenario in which consumption of agricultural goods simply outpaced the sector’s proportional employment growth.
In order to understand these changes in the occupational structures of societies, economists classify the tasks performed in a given field into two sets of general categories. The first set involves dividing tasks into manual or cognitive activities. Clearly, any manual labor also requires some degree of cognitive acumen; and, conversely, all cognitive work requires some degree of manual ability. This division simply helps economists quantify the impact of technological change upon employment in terms of a variety of jobs.

The other classification factor involves dividing occupations into routine and nonroutine activities. The primary aim here is to determine whether a given task can be delineated in such a manner that a computer program might be generated to automate it. If this is the case, then said task is considered to be routine in nature. It should be noted that the routine-nonroutine dichotomy refers to the current capacity of computer programs to automate a task, and not to the capacity which future programs might possess.

In light of the foregoing, the literature classifies tasks which can be performed by a worker into the four categories included in Figure 1. The first category is comprised
of routine, manual tasks. In general, we refer here to activities which require low to intermediate levels of training. For example, this category typically involves production-line job positions.

The second category, which involves individuals involved in routine, cognitive tasks, is primarily comprised of office workers possessing intermediate levels of training. For example, this refers to work performed by bank tellers and certain types of office workers.

Nonroutine tasks requiring certain manual skill sets are traditionally performed by workers who possess a relatively low amount of training. This type of work requires workers who are capable of adapting to a variety of changing scenarios; i.e., those experienced by individuals working at kindergartens, old age homes or as security guards. As a result, these manual labor positions involve levels of complexity which are more difficult to precisely delineate via a computer program.

Lastly, the tasks which comprise the nonroutine, cognitive work category normally require individuals with a fairly high level of training. The job positions included in this section of the table require individuals to demonstrate, inter alia, problem-solving skills, intuition, creativity, as well as the ability to negotiate and persuade others.

The literature includes evidence that tasks subject to routinization have been negatively impacted by the latest industrial revolution. As noted, these tasks involve individuals who possess intermediate-level training. Given said skill sets, individuals employed in such occupations are forced to seek employment in less-
Qualified sectors of the job market. This shift, in turn, translates into poorer labor market conditions for less-qualified workers. Even though the jobs performed by less-qualified individuals are not easily routinized, said workers still face increased competition from the flow of intermediate-level workers into their sector of the job market.

Individuals performing nonroutine cognitive work are the clear winners in terms of the revolution in automation technology. Technological innovation tends to drive this sector of the job market and normally serves to increase the productivity levels of such workers. This dynamic is often described as the polarization of the job market.

Through the use of the foregoing categories, some studies have generated estimates on the percentage of jobs which are at risk due to automation. Graph 3 provides the estimates of three such studies, and illustrates the percentage of US occupations with a 70% or higher probability of being substituted.
The first study, published by Frey and Osborne in 2013, estimated the expected impact of computerization on 702 occupations within the US labor market. The authors consulted experts regarding the probability of automating the tasks associated with a variety of job positions. As one can see, the study concluded that 47% of US occupations are at high risk of being automated.

The second study, performed by Manyika et al (2017), defines automation as the use of artificial intelligence and robots on production lines. Furthermore, and as opposed to the previous study, it reviews the activities associated with each occupation; that is, rather than evaluating each occupation as a whole. The study projects that 26% of occupations are at high risk of being automated in the United States.

Lastly, a third study published by an OECD team (Arntz et al) utilized another approach. The team employed the PIACC test – which measures workplace skill sets within the adult population – because survey respondents provide an extremely detailed account of the variety of tasks they perform while fulfilling their respective job responsibilities. The authors paid particular attention to the freedom which PIACC respondents possessed in terms of performing certain tasks associated with a given occupation (sequence, planning frequency, etc.). Through the use of this methodology, Arntz et al (2016) estimated that 9% of US occupations were at high risk of being substituted.

These three papers provide clear evidence of exactly how much uncertainty there is regarding the future of the current set of occupations. As noted, each of the cited studies concurs that between 10% and 50% of occupations have a high probability of being substituted by automation technology. However, it should be noted that all three base their estimates on the current capacity of this technology; i.e., they fail to take into account that the speed with which the automation field is evolving. For instance, technology current exists which was frankly unthinkable only 5 to 10 years ago.

In terms of available evidence on the automation-substitution dynamic, Chile also falls within the 10-50% range. However, these figures are also suspect whereas they too fail to take into account potential advances in automation technology. Although generating estimates based on such data is not ideal, it does allow one to evaluate what has occurred within the Chilean job market in terms of occupational structure. As such, we do have the ability to ascertain whether or not evidence whether or

---

2 Programme for the International Assessment of Adult Competencies: an OECD initiative designed to help governments evaluate, monitor and analyze the distribution level of skill sets within the adult population, as the well as the application of said skill sets in a variety of contexts.
not evidence exists which points to an occupational polarization having occurred within said nation.

Graph 4 illustrates the evolution of the occupational composition of Chile a period of 25 years (1990-2015). The graph was generated utilizing National Socio-Economic Characterization Survey (CASEN) data from 12 waves. As one can ascertain, the category of technical professionals who possess intermediate-level training has experienced a marked decrease (-11%). This group is followed by office workers (-7%) and the category comprised of professionals, scientists and intellectuals (-3%).

Conversely, other occupations have experienced increases in demand: technicians who set up and operate machinery (8%); jobs involving unskilled workers (7%); craft and related trades workers (6%).

It is important to note that the Fourth Industrial Revolution does not comprise the only factor which has impacted the occupational structure of Chile. Successful gains have been made in terms of increasing access to higher learning and reengineering the nation’s vocational training programs.
Productivity

As one moves beyond the aforementioned projections and shifts in its occupational structure, it is necessary to ascertain whether or not a technological revolution has truly occurred within Chile. Why is this the case? To begin with, one would expect to see a concomitant impact on national productivity levels. However, no evidence for such a correlation has been found. On the contrary, total factor productivity in Chile has not measurably increased in decades. This scenario would seem to beg the following question. Why have we not seen a larger impact on productivity vis-à-vis such a significant event such as an industrial revolution?

The lack of gains in productivity may be partially due to Chilean workers lacking the necessary skill sets to fully capitalize upon automation technologies. Although various job-skill and cognitive-ability instruments have detected advances on this front, our national labor force continues to lag measurably behind workers in more developed nations.

Another contributing factor may be the fact that Chilean wages are relatively low. Given such low labor costs, the potential payoff of automation technology is proportionately diminished; this is to say, the option is less attractive than in other national contexts.

The limited capacity of small and medium-sized enterprises to absorb automation technology may also play a part in this dynamic; i.e., lack of requisite training, limited access to financing, etc.

Chile also faces challenges in terms of infrastructure. The inability to absorb and capitalize upon the benefits of automation technology requires components such as reasonably-priced Internet access. While the price of bandwidth is one of the highest in the world, service quality tends to vary wildly.

All of the foregoing factors generate impediments to the speed with which Chile is able to absorb the automation technology made available during the Fourth Industrial Revolution. While this dynamic impedes Chile’s ability to achieve higher levels of productivity, it does comprise an opportunity to address its workforce training issues. Once this issue is addressed, workers in a variety of skill set categories will have an opportunity to capitalize upon the available benefits of automation technology.
Employment via digital platforms

In Chile, approximately 150,000 are employed by digital platforms according to figures provided by the Ministry of Labor during a CNN interview conducted during February 2019. This total represents 1.7% of the national job market.

While no official Chilean figures are available, other nations have made efforts to provide more precise estimates. For example, the US Bureau of Labor Statistics performed a specific study during 2017, during which it determined that 1% of the employed population in the US worked for a digital platform. Slightly over half of said workers were male, 64% between the ages of 25 and 54, 23% were over 54, 82% held a full time position, and 41% possessed higher learning. Therefore, individuals involved in digital-platform employment tend to differ from the average US worker.

A recent study by University of Chicago academic, Dimitri Koustas, utilizes bank information of a highly significant group of workers in the United States in order to determine the source of their income.3 The study characterizes digital platform workers as individuals who generate income from said platforms.

An especially interesting finding from the study is that a significant percentage of digital platform workers experienced drops in income prior to entry into the gig economy. This indicates that digital platform jobs seem to allow individuals to remediate said drops in income.

From the standpoint of public policy, one major challenge has been the ability to categorize workers vis-à-vis traditional labor law parameters. At first sight, one might be tempted to classify digital platform workers as economically-dependent employees; this is to say, the platform acts as employer given the fact that, inter alia, it is the party who sets the wage level and imposes contractual terms.

On the other hand, however, one might easily describe individuals generating income on a digital platform as being self-employed; which is to say, said workers own and utilize the equipment and tools needed to perform a given set of services. Additionally, it is they who cover the costs of maintenance, repair, replacement and use, as well as determine when and for how long a given shift will be. Lastly, they may all these decisions without a significant degree of input from the platform itself. Needless to say, in this scenario workers are also free to generate income from more than one digital platform at a time.

In light of the foregoing, it is easy to ascertain why a significant degree of controversy has arisen with regard to how societies should regulate digital platform work. For example, the Supreme Court of the United Kingdom, the Cour d’appel de Paris (France), and the Supreme Court of California have ruled that these workers are dependent employees. However, a Philadelphia US district court recently ruled that this sector of the labor market is comprised of independent contractors.

In Chile, the labor law reform bill recently sent to the Senate defines these workers as self-employed. It mandates that these individuals invoice their services rendered, and that the platforms withhold the con commitment taxes and individual-capitalization account contributions. In my judgment, there is still room for improvement in terms of bolstering this regulatory framework.

For instance, digital platform workers should have the ability to exercise their right to freedom of association in order to engage in collective bargaining with digital platform employers. Furthermore, said platforms could use their negotiating power within the insurance sector in order to obtain optimal rates for their service providers; for example, automobile insurance. Clearly, workers also deserve protection against discriminatory practices during hiring, firing and in terms of the manner in which services are rendered.

Conclusions

Technological advances have the capacity to positively – or negatively – impact the manner in which workers generate income. As a result, public policy should seek to generate mechanisms which ensure that potential benefits are available to all involved.

Firstly, the Chilean educational system needs to be fully evaluated in terms of what we are teaching, as well as how and when said education is occurring. Technological advances must be allowed to play a sizable role in classrooms in order to ensure children and young adults possess the skill sets they will need to address the exigencies of the Digital Age. Workers too must be prepared to learn the things which will allow them to acquire new skills sets. Therefore, workforce training programs will also need to step up to the challenge and ensure adults also have an opportunity to update their knowledge and training.

Lastly, public policy must never lose sight of the fact that, while employment terms and conditions may change, the need to provide adequate protection for workers has not. In particular, Chilean labor law needs to more proactively address worker rights in terms of occupations, such as those provided by digital platforms, which tend to have little to no bargaining power during negotiations.
CHAPTER III

STRUCTURAL CHANGES IN THE LABOR MARKET

CHILEAN PENSION-SECTOR CHALLENGES VIS-À-VIS LATEST GENERATION OF WORKERS

ROBERTO MÉNDEZ

1 Roberto Méndez is a full-time member of the School of Government at the Catholic University of Chile. Holds a doctorate and MBA from Stanford University, as well as a BSc in Business Engineering from the Catholic University. Currently serves on the Board of Directors at AFP Provida pension fund. Regular contributor to La Tercera. Founder and former CEO at Adimark, Chile’s premier polling firm. Former Bank President, as well as vice-chairman of the Board of Directors, Banco Santander Chile. Former president, as well as chairman of the board, at the Chilean Institute of Rational Management (ICARE).
Trust and credibility are issues of paramount importance to any pension system. Current pensioners, as well as retirees of the future, depend upon the pension sector to meet its obligations. This degree of certainty is often of even more relevance to individuals than the eventual payout amount. When societies lack such certainty, pension schemes become unviable even within the medium term. This is because, when systems lack such trust and credibility, they are constantly subjected to structural changes, hybridization, and even being completely replaced by an alternative framework.

In my judgment, the Chilean pension model has enjoyed three decades of extremely high public approval ratings. Fortunately, a wealth of survey data exists which serves to vindicate this statement. Unfortunately, the relationship between pension fund administrators and the Chilean public has undergone a major change. As one can ascertain from Graph 1, this shift in public opinion occurred in an extremely short amount of time; i.e., during the period 2008-2016. On the left-hand side, we have the results from a 2008 survey performed by Adimark. These results show that 56% of AFP participants surveyed had a positive opinion of the Chilean pension model. Only 19% of survey replies indicated that respondents were dissatisfied with the said pension system.²

Eight years later, the Centro de Estudios Públicos (CEP) performed an extremely similar survey which generated an entirely different set of results. The 2016 survey found that only 9% of respondents indicated that they were content with the Chilean framework.³ The survey also found that 75% of these AFP participants were dissatisfied. Given the fact that only eight years had gone by, the 2016 findings are extremely noteworthy.

² Adimark, Satisfacción con sistema AFP, 2008.
³ Centro de Estudios Públicos, Satisfacción con sistema de pensiones, 2016.
In light of the foregoing, one tends to question why the dynamic became so active during the period 2008-2016. Why did public opinion take such a dramatic turn in such a short period of time? In my judgment, the breaking point came in 2011.

As Graph 2 clearly demonstrates, public opinion was fairly stable up until 2010. It even showed some improvement. I was personally involved in these surveys, as part of my work at the Chilean Association of Pension Fund Administrators (AAFP), a trade organization which brings together the fund administrators created via the regulatory framework established in Decreto Ley 3500 de 1980. As noted in the graph, the AAFP conducted the survey on a fairly regular basis during the period comprising 1999-2015. During these waves, it is fairly easy to ascertain that a sharp change occurred in 2011; after which time, public opinion continued to drop. This trend continued survey after survey. The AAFP discontinued the survey in 2016, ostensibly due to such negative public opinion regarding the national pension model.

---

*Results do not total 100, as “Undecided” and “No Opinion” responses not included.

---

4 Legislation available online at: https://www.leychile.cl/Navegar?idNorma=7147.
Were we to examine this same issue in terms of dissatisfaction levels, the AFP system basically generated the same score (see Graph 3). In 2011, a trend began which continued gaining momentum over time. While the results for 2008 and 2009 are ostensibly due to the world financial crisis, 2010 results show that things had stabilized temporarily. Therefore, 2011 is a watershed year in Chile in terms of dissatisfaction levels among pension-fund participants.
What occurred in 2011?

This is an important question. As stated, 2011 comprises a watershed year in the social history of Chile. Many public opinion surveys indicate that a major shift took place in 2011 due to a convergence of ostensibly unrelated events. However, said events definitely had a profound impact on societal perspectives and attitudes.

In 2011, the Chilean pension model turned 30. As a result, the first generation of workers who had accrued three decades within the system began to retire with pensions; i.e., pensions generated by individuals involved in gainful employment for a period of 30 years. As those of us within the pension sector are aware, pension payouts did not even begin to meet with these individuals’ approval. The first generation of AFP pensioners then became embittered with the model. Perhaps 30 years of outstanding average yields – which at times even surpassed projections made when the system was launched – only served to generate irrational expectations among these fund participants; i.e., expectations which the AFP sector was unable or unwilling to acknowledge, and then address, in a timely fashion.

As this first generation of workers began to line up for retirement in 2011, a nationwide
student social movement began under the cry of “Down with capitalism!” (No al lucro). Although the movement participants were initially intent on getting free university education, the movement quickly lost focus and began to focus on a wide variety of sectors within the Chilean economy. In 2015, the somewhat diffused societal frustration seen in No al lucro became hyper-focused in the No more AFP’s social phenomenon. It came as a logical consequence of the broader anti-capitalist feeling which had been building within Chilean society, given the fact that the pension sector that failed to generate a timely and coherent response to pensioner complaints. Additionally, the Chilean public’s rejection of for-profit entities began within the educational sector, and then moved on to more generalized targets such as corporations, the private sector as a whole and, for many within the society, the entire neoliberal perspective on economic activity.

Having been around for nearly eight years now, the pension issue still occupies an extremely prominent position in Chilean life. In fact, the current administration led by Sebastian Piñera was given a major mandate from voters in terms of the necessity to generate an immediate response to the pension issue. Graph 4 provides some context regarding the issues which the public is concerned about, through the use of data generated by the CEP, a leading Chilean think tank. The graph covers the period comprising 2010-2018 and, as one can ascertain, the pension issue has become the most relevant issue in Chilean society. While this state of affairs is not altogether surprising when one considers that our society is in the middle of a major pension reform debate, I do believe that it is somewhat extraordinary that even employment and education were deemed by Chileans to be of lesser importance.

5 https://www.cepchile.cl/cep/site/edic/base/port/encuestasCEP.html
During the entire political history of our nation, the issue of pensions has never occupied such a prominent position on the national agenda. And in terms of its sudden appearance on same, the issue is best described as having appeared relatively from nowhere. For instance, the pension item did not even appear on the CEP team’s survey instruments until 2010.

In light of the foregoing, the challenge which the Chilean pension fund sector faces in terms of generating retirement wealth in the 21st century is extremely complex. This is, in part, due to low interest rates within the financial market, increases in life expectancy and the litany of reforms currently being debated within Congress. However, said complexity is primarily due to the degree of uncertainty which has materialized with regard to the future of work. There is fairly widespread consensus that the current trend in automation technology will correlate to a significant degree of impact on labor markets across the globe. Thus, all of the foregoing factors have converged at this moment in human history, and are generating an increasingly high degree of uncertainty among Chileans. Under these
circumstances, practically every segment of our workforce — regardless of their respective age or socioeconomic standing — is anxious about their future prospects for employment; and, in consequence, extremely concerned about their ability to generate an adequate pension.

**Impact of immigration on the pension issue**

Clearly, other societal factors have also served to increase anxiety in the general public. For example, another issue which has materialized of late is immigration. Much has been said about the subject. However, a fair degree of nebulosity remains; even with regard to the magnitude of the immigrant influx into Chile. Graph 5 includes the best figures we currently have on our immigrant population. The number of foreign-born individuals who reside in Chile doubled between 2016 and 2018. The majority of these immigrants have found their way into the national workforce. As a result, immigrants have had a measurable impact on labor demand, and to some degree, have served to intensify competition within Chile’s labor market.

**GRAPH 5**

**IMMIGRATION: TOTAL NUMBER OF FOREIGN-BORN INDIVIDUALS RESIDING IN CHILE**

![Graph showing the total number of foreign-born individuals residing in Chile from 2010 to 2018.](source: Central Bank, 2017 Census Data, INE, Department of Foreign Affairs and Immigration.)

Graph 6, for its part, illustrates the shift in Chilean public opinion vis-à-vis immigrants. The graph breaks down said reaction by socio-economic standing. As one would expect, the highest income group had the most positive reaction to
the following declaration: “In general, immigrants have benefitted the (Chilean) economy.” In fact, 55% of Chile’s wealthiest citizens found this to be the case. Of course, the middle and lower classes had a drastically different opinion of the two-fold increase in immigrants. Only 30 percent of these individuals feel that immigrants contribute to the economic stability of the nation.

![Graph](image)

**GRAPH 6**
PERCENTAGE OF POSITIVE RESPONSES TO IMMIGRANT INFLUX, BY SOCIOECONOMIC LEVEL

In order to conduct an objective analysis of employment issues, one must first possess accurate data on the national workforce and labor market. Unfortunately, this process has been extremely complex in Chile due to a controversy which arose between the Ministry of Labor and Social Well-Being and the National Institute of Statistics (INE) in December of 2018. This situation cast doubt on employment and wage data generated by the INE. In February 2019, the Minister of Labor even went so far as to publicly question the veracity of INE data, stating that “wages grew at double the rate reported by the INE”. Clearly, something needs to be done to remediate this issue immediately, whereas our Congress is reviewing a pension sector reform package and a great deal of labor law legislation even as we speak.

The challenge for 2019

Given the foregoing, it is clear that 2019 constitutes a historical high point in terms of pension sector uncertainty. And it is equally clear that Chilean workers are very much aware of this fact. The *Chile Employee Benefit Trends Study 2018*, published by MetLife, evaluates formal-sector workforce reaction to available retirement savings plans. To clarify, the study defines formal sector employers as firms with more than 50 individuals on the payroll. Graph 7 demonstrates the evolution which said workforce’s perception has undergone during the period comprising 2013-2018. To be sure, it has taken a noticeable turn for the worst during these five years. In fact, nearly half of all formal sector workers surveyed felt that they are far from generating enough retirement wealth in their AFP accounts.

![Graph 7](https://benefittrends.metlife.com/global-perspectives/chile/en/index)

It is important to note that Graph 7 indicates that a significant decrease occurred in a period of only five years, with 26% of survey participants responding in 2017 that they were on track in terms of retirement wealth generation; which is to say, this is a major drop from the 42% figure observed in 2013. We refer here to a nearly 5 percentage point drop per year, a dynamic which points to the aforementioned

---

dynamic: pension-related uncertainty has undergone several sharp increases in an alarmingly short period of time.

Evolution of Chilean labor market

The Chilean labor market is undergoing an evolution without historical precedent. Unfortunately, a fair amount of unfounded myths and media reports have only fueled the fire and led to many believing that they may one day be replaced by a robot at their workstation.

Some of the changes have already arrived. For example, digital platforms have completely revamped the way delivery services and cab hailing occurs in modern society. Other services sectors have also been impacted, although the scenario has been fairly informal to date. Cellular apps such as those offered by Uber, Cornershop and Rappi have generated thousands of new jobs. Unfortunately, the employment conditions involved have not always been optimal. The following photo, in my judgment, is a perfect illustration of the crude realities which digital platform workers often face. As one can see, a mother is pedaling her bicycle, monitoring her GPS app on her cellular phone, and holding her child as she is on her way to make a delivery. Although this woman is probably happy to at least have a job, and by said means provide a roof over her head and food on the family table, the precarious nature of her job is painfully self-evident. At the end of the day, automation technology and digital platforms are a mixed bag in terms of ramifications for national workforces.
Inexplicable level of pessimism

An ostensibly inexplicable level of pessimism has overtaken Chilean society in 2019, according to a variety of consumer and market indicators. In my judgment, the pension-related uncertainty mentioned above has, at least in part, played a significant role in the onset of this negative outlook. Graph 8 illustrates the evolution of the Chilean consumer price index (IPEC), and covers the period comprising March 2002 through to March 2019. We can see how the indicator experienced a 50-point drop which began in June 2018 and continues on today.

A very unique generation of young Chileans

The current generation of young people in Chile is very different from the generations of young people which preceded it. Among other issues, the latest generation of young workers has demonstrated a complete lack of interest in politics; a factor which has more than likely left political parties fairly perplexed. The National Youth Survey, or Encuesta Nacional de Juventud as it is known in Chile, indicates that a highly significant change occurred in terms of the manner in which these individuals view politics during the period comprising 2006 to 2015; a dynamic which can clearly be ascertained in Graph 9. The survey, which was performed by the National Institute
of Youth (INJUV), found that the vast majority of young people had no loyalty to a particular political party or specific ideology. In 2006, approximately 50% of the young people surveyed in Chile expressed a preference for a specific political ideology. Given the fact that said percentage has now dropped to 25%, this is a major issue which needs to be evaluated; albeit with a good degree of caution. For example, the shift might simply be due to the fact that the traditional dichotomy of rightist and leftist ideology simply no longer applies to this group of individuals.

It seems that the pension sector, as well as the private sector as a whole, needs to take a long hard look at the issue and make the necessary adjustments vis-à-vis the latest generation of young Chileans. Individuals who were born shortly before or after the beginning of the new millennium have not tended to fit into traditional societal paradigms. In fact, they seem to possess a very different set of values, aspirations and lifestyle choices. Clearly, the evolution seen in Chile is part of a broader global phenomenon. Due to the digital nature of modern society, Chilean millennials closely approximate their peers born during this period of time across the globe.

Graph 10 shows us the results of a very straightforward survey performed by Adimark in 2011, and again in 2015. The question put to young people between

---

8 Survey results are available online at: https://biblioteca.digital.gob.cl/handle/123456789/1388.
the ages of 15 and 19 was the following: If you won USD 140,000 in a contest, what would you do with the money? The difference between the two survey waves could not have been more marked. In 2011, half of those surveys responded that they would purchase a vehicle and 65 percent would use the money to buy a home. By 2015, things had undergone a huge shift. A significant proportion of respondents now indicated that a new vehicle or apartment were not even on their wish list. This group of young people prioritized experiences such as travel or studying abroad over more traditional purchases of material possessions. What triggered this huge shift? Clearly, these young people are simply not as interested in consumer items and much more focused on accumulating experiences. In my judgment, one can rationally infer that these individuals are also proportionately much less likely to consider retirement savings to be an issue of relevance; this is to say, when we evaluate them vis-à-vis previous generations of young people.

Another factor which characterizes the current generation of Millennials within the workforce is the frequency with which they change jobs. As one can ascertain from Graph 11, the job mobility observed among workers between the ages of 18
and 24, as well as those between 25 and 34 years of age, is much higher than other groups as of the first quarter of 2019 according to the Workmonitor Survey. A huge difference was detected between workers who were older than 34, as opposed to the first two groups comprised of individuals under the age of 34. Furthermore, the survey also indicated that 26.7% of formal sector workers had changed jobs during the first quarter of 2019. This is an extraordinary outcome when one considers that it translates into a 100% annual workforce turnover rate. The entire scenario becomes even more fascinating when one takes into account that the turnover rate among the younger of the two millennial groups – comprised of individuals who are 18 to 24 years old – experienced a 38% turnover rate during the aforementioned quarter. While we might not know exactly what has triggered this huge change within society and job markets, the dynamic has major implications for the pension fund sector. Clearly, job security and stability are no longer as relevant as they once were in times past.

GRAPH 11
Q1 JOB TURNOVER RATE IN 2019
% OF FORMAL SECTOR, BY AGE GROUP

A world of fewer possessions

The latest generation of workers place a great deal less emphasis on the accumulation of consumer goods. This is in line with a broader trend among all consumers towards purchasing less goods and services during recent decades. The
INE performs a survey of household income every five years within Chile, and the instrument – known as the *EPF Survey* – is very valuable in terms of its ability to monitor as well as evaluate household consumption patterns.\(^9\)

**GRAPH 12**

**CONSUMPTION CATEGORIES AS PERCENTAGE OF HOUSEHOLD EXPENDITURES**

\[
\begin{array}{c|c|c|c|c|c|c}
\hline
\text{Category} & 2012 & 2017 \\
\hline
\text{Healthcare} & 6.3 & 7.6 \\
\text{Restaurants/hotels} & 4.2 & 5.8 \\
\text{TV/Cable} & 4.9 & 5.3 \\
\text{Apparel} & 4.4 & 4.1 \\
\text{Home furnishings} & 6.8 & 6.3 \\
\hline
\end{array}
\]

SOURCE: VIII HOUSEHOLD INCOME SURVEY, INE.

---

**The need for pension reform**

Unfortunately, the basic foundations of the Chilean pension model have failed to evolve in response to the aforementioned cultural, demographic and political shifts which have occurred since its creation in 1981. Despite all of the social upheaval seen of late, I remain optimistic regarding the continued viability of the individual capitalization alternative within the national pension sector. I believe empirical evidence exists for such a posture; namely, the pension sector survey conducted by the Chilean AFP Association in 2015 (see Graph 13). The results of said survey are a clear indication that, despite intense criticism of the pension sector as a whole, the vast majority of Chileans remain convinced of the prudence and desirability of utilizing individual retirement accounts for workers. More than half of the population expressed their view that the ability to choose between funds and investment-risk levels is a good thing.

---

9 *The Household Income Survey, or Encuesta de Presupuestos Familiares, gathers data on income and expenditure. The survey is performed in major metropolitan areas (regional capitals, suburbs), and published every five years. Available online at: https://www.ine.cl/estadisticas/ingresos-y-gastos/epf.*
Steps need to be taken to acknowledge and then remediate the current level of dissatisfaction among workers, as well as the societal uncertainty in terms of the future of pensions. The current reform package which is being debated even as we publish this book will not be the last reform we make to the current Chilean pension model. Augusto Iglesias, our current pension czar, has made this extremely clear during his remarks here, as well as in the press. The challenge which we face is simple: we need to find a way to provide better pensions to people. And this will need to occur in terms of the current generation of pensioners, as well as future generations of retirees.

Conclusions

There is a healthy degree of consensus within Chilean society regarding the necessity to reform our pension system. The first step, on the part of the pension industry, must be to regain the public’s trust in order that Chileans begin to believe again in the model’s overall viability. We know that individual savings accounts are the cornerstone of a successful system. Therefore, this aspect of the model must inform the entire process by which we intend to regain public confidence. Additionally, we must never forget that many tools are available that are society

---

can utilized to perfect the current framework. In a book recently published by a group of authors led by Salvador Valdés, an entire litany of strategies – aimed at remediating the gap between worker retirement expectations and what the pension industry can realistically provide – are covered.\textsuperscript{11} The entire world of employment has undergone a major evolution, and Chilean society is demanding something be done to address pension sector issues. As a result, it is now time to respond to said societal expectations. As an industry, we have failed to address them for too long. Fortunately, time remains to address the doubts and concerns of our fellow countrymen – and we know that the overall framework in place is one of the finest in the world. It is simply a matter of taking immediate action to remediate its shortcomings.

\textsuperscript{11} Pensiones: del Descontento a las Soluciones, Ediciones UC, 2018.
THE FUTURE OF WORK IN LATIN AMERICA AND THE CARIBBEAN: CHALLENGES AND OPPORTUNITIES

MARIANO BOSCH

1 This article is based on the IDB study entitled The Future of Work in Latin America and the Caribbean, available at: https://www.iadb.org/en/labor-and-pensions/future-work-latin-america-and-caribbean-great-opportunity-region.

2 Mariano Bosch holds a PhD in Economics from the London School of Economics. Currently serves as Principal Specialist, as well as pension specialist, at the Inter-American Development Bank’s Labor Markets and Social Security Division. Since joining the IDB staff in 2011, has led research projects in the area of labor markets, pensions and social welfare policy. Prior to this, served as a consultant at the World Bank, and professor at the University of Alicante (Spain). Author of a number of articles on labor markets, as well as development issues, published in peer-reviewed publications such as American Economics Journal: Applied Economics, Journal of Development Economics, The World Bank Economic Review, Labor Economics, Economics & Human Biology, and Social Science & Medicine.
While I intend to cover a variety of issues related to the future of work in Latin America and the Caribbean, this text includes two major themes. The first has to do with the future of work within said region in terms of the literature. The second involves a general overview of strategies which may prove useful in our efforts to generate more inclusive pension systems vis-à-vis the new set of labor market parameters which have materialized in recent times.

I wish to begin with a comment which is very much in line with the assertion of Andrea Repetto. In recent months, a veritable cacophony of messages is being generated by the media, NGOs and academia regarding the future of work. Unfortunately, many actors even go as far to prophesy a robot/AI apocalypse. Having said that, personal experience has fully convinced me of the singular importance and relevance of automation technology. Choosing to ignore an issue which has generated such a significant degree of societal tension would be nothing short of irrational. To put this in real world terms, when I joined the Inter-American Development Bank (IDB) team a few years ago the entire automation issue was primarily limited to remarks about a potential – albeit peripheral – impact on labor markets. To clarify, most of society was only discussing how technology might have a somewhat secondary impact on productivity levels, economic growth and regional infrastructure. Clearly, however, this dynamic has undergone a major evolution. As of 2019, one cannot attend an IDB-sponsored event without expecting to hear someone remark on the issues of, inter alia, block chains, Big Data and artificial intelligence. Everything points to automation technology occupying a prominent position on the IDB agenda well into the foreseeable future.

The potential impact of all of technology-related issues is increasingly finding its way on to the agendas of other NGOs as well. And, to be frank, the ubiquity of the issue has me somewhat concerned. It is difficult for individuals to constantly be exposed to such a large-scale barrage of rhetoric without becoming at least a bit anxious. For my part, I sat down and began to contemplate how I might ensure a robot didn’t walk into the IDB and put me out of a job.
Debate parameters

Before getting started, I think it best to delineate exactly what issues are at debate. I mention this because there is apparently a good deal of confusion in society in terms of the potential impact of certain trends on our job markets; i.e., the way in which certain sectors perform certain activities; the manner in which technological trends will impact worker skill-set trends; and, the impact of said automation upon employment.

Two major trends

In my viewpoint, society currently faces two major trends. The first is fairly self-evident: an entire host of technological advances has occurred during the last two decades. This uninterrupted series of events has clearly generated a lot of speculation within our respective societies with regard to the eventual impact of automation technology upon job markets. The second major trend – which has a permanent place on every debate agenda within the pension sector – is population aging. My take on the available evidence is that this issue is going to have a major impact on our national job markets. Another highly relevant aspect of this dynamic is that the effects will probably be felt sooner than later. In fact, I expect we will begin to see measurable changes on demand levels which are directly attributable to population aging in the very near future.

Latin America and the Caribbean on track to age rapidly

As we have heard time and again, Latin America and the Caribbean are currently aging at an extraordinary rate. While the demographic shift took longer to finally materialize within the region, the speed with which it is occurring has already surpassed the trajectory observed in Europe and other regions. Graph 1 provides an outstanding illustration of this whole dynamic. To clarify what I am attempting to communicate in this graph, the bars represent the period of time which a given nation – which initially had an older adult population which represented 10% of the national population – required to become a nation with an older adult population which represents 20% of said whole. One can easily ascertain from the graph that the United Kingdom took 75 years to finally reach the 20% mark. Conversely, the graph also shows how quickly three nations within Latin America (i.e., Chile and Mexico and Nicaragua) are completing said transformation cycle. As noted, the societies are undergoing the selfsame demographic shift in only a third of the time. Clearly, even though many nations within Latin America and the Caribbean have not even reached the 10% mark, once they do, the speed with which they will reach 20% will outpace everything we have seen to date other regions.
CHAPTER III
STRUCTURAL CHANGES IN THE LABOR MARKET

The central message here is that, given the current set of circumstances, Latin America and the Caribbean have yet to make tangible progress in terms of addressing – or at least preparing to address – the societal challenges generated population aging. And, undoubtedly, the impact of said demographic shift will not be limited to national pension sectors. For instance, the concomitant impact on regional labor markets is going to be – in relative to – without precedent in human history. Therefore, it is more imperative than ever to never forget that this entire population dynamic also constitutes an enormous opportunity for economies. At the end of the day, a demographic shift of this magnitude will trigger a major increase in the variety of occupations available within the regional job market.

More older adults, higher life expectancies

While the future population of older adults will be larger, it is also important to understand that these individuals will also be living longer lives. This dynamic should also be evaluated vis-à-vis the evolution in automation technology and the aforementioned concomitant impact on labor markets. The convergence of these two factors will have an unquestionably major impact on the occupational structure of Latin American and Caribbean nations. And the dynamics of said impact may come as a surprise to many in society. For example, the US Bureau of Labor Statistics found that software developers only came in fifth in terms of projected increases in job demand. Personal-care workers, food service workers, nurses and home care assistants are all expected to outpace programmers in terms of job demand. Therefore, whereas automation technology is expected to drive the number of software developer jobs up to 250,000 during the period 2016-2026 (see Graph 2), the demographic shift is expected to have a proportionately far greater impact on care and service sector employment levels.
In light of the foregoing, many immediately begin to question why such a great deal of media attention is focused on the potential impact of technology on labor markets. Additionally, one also tends to ask why we so often hear about a potential spike in demand for computer programmers. However, given all the evidence we have on occupational composition, there is a glaring lack of coverage on the projected increase in demand for the other four occupations included in Graph 2. In my view, we all need to begin to evaluate what our respective societies are doing to prepare for such an enormous shift in the occupational structure of national and regional job markets.

Furthermore, the magnitude of the demographic shift is much easier to quantify; this is to say, we know exactly how much demand for these occupations is going to increase in the near term. However, as one observes media coverage on the potential demand generated by automation technology, empirically-based parameters are almost never cited. Therefore, it would seem that societies are faced with a clear-cut decision. We can either opt for investing in educational and vocational training resources designed to respond to clearly quantifiable labor market demand, or choose to allocate these precious finite resources to fulfilling demand which may never materialize. As stated, our collective response to the Fourth Industrial Evolution also needs to include education initiatives which generate digital skill sets even before an individual enters the labor market.

Another fascinating aspect of these issues is the manner in which automation technology and the demographic shift tend to interact. I suspect that this technology is going to affect job demand for occupations driven by population aging.
Technology is transforming production and consumption patterns

As society attempts to ascertain what the eventual effect of automation technology will be, I feel that most of us fail to clearly identify the involved factors. Additionally, another even more complex issue is the potential synergies generated between said technology and the demographic evolution of our populations. As a result, I found two of the trends which Andrea Repetto addresses in her text even more relevant. She provides an eloquent description of the manner in which society perceives the potential impact of automation technology and digital platforms. As I began to contemplate her remarks, our future potential to automate routine tasks and eliminate transaction costs via these two channels became increasingly significant. In my judgment, society – as well as every major actor within the pension sector – needs to make a concerted effort to delineate the potential ramifications of automation technology and digital platform. This is to say, we need to be clear about how these two trends are going to impact labor market trends. Otherwise, we are in real danger of repeating past mistakes in terms of failing to generate workforce training and educational sector policy capable of meeting labor market demand. As stated, in the past we often lacked the forethought or empirical evidence needed to properly forecast future occupational composition. Here again, this is no longer the case.

Not all technology is created equal

On the one hand, many technologies are designed to handle routine-oriented tasks. Societies also now possess platform technology which couples consumers with providers of goods and services in a variety of sectors throughout our economies. These platforms help decrease transaction costs and, in many cases, have completely eliminated them. As a result, we can now rent an apartment without having to pay a sizable fee to a real estate agent. We can also go online and perform the type of market research one needs to purchase a car in a matter of hours. As many are aware, this process used to take weeks to finish, as an individual struggled to find time to visit car dealerships and make long distance calls. Another major evolution is the manner in which men and women can now work from their home for clients and firms which are not even in the same nation. Fifteen years ago, this required commuting on an almost weekly basis. I have touched upon each of these issues in order to say the following: we are focusing on the wrong aspects of the automation debate. Why are we paying so much attention to the manufacturing sector, when the impact of automation technology has been so widespread?

In light of the foregoing, I think the best place to start is with an in-depth analysis of the impact of technology. Additionally, we need to begin to identify the level of said impact vis-à-vis each category of technological evolution. In this instance, I wish
to focus on the potential impact of digital platforms in terms of the services that pension systems provide to societies.

**Digital platform employment: Blessing or curse?**

Efforts have been made to determine whether or not the jobs generated by digital platforms comprise decent employment opportunities or not. Clearly, certain segments of society view them in an extremely negative light and have characterized said employment as something akin to economic slavery. My general impression of digital-platform work, which has been informed by years of travel throughout Latin America, is that societies have tended towards a decidedly mixed reaction to the uberization of work. In fact, during my travel I have had conversations with a number of drivers who worked precisely for Uber and Cabify. The general narrative has been that these jobs have helped individuals find employment in situations where no other work was available. Several indicated that no one within their societies was willing to employ, for example, a middle-aged woman with children. For these drivers, digital platforms were their only employment alternative.

Clearly, the foregoing does not tell the whole story. When asked about their experiences with digital platform work, many replied that they were forced to work up to 14 hours a day in order to generate a decent income. Therefore, my overall impression is that digital platforms do in fact represent a promising source of employment. However, I hope that society never forgets that it has a responsibility to objectively evaluate the employment conditions which these individuals are subjected to. In my mind, this would be a particularly productive exercise because these digital platforms possess almost an almost infinite capacity for evolution. With a minimum of effort, society can fully capitalize upon the various opportunity areas which are innate to this innovative business sector. In my judgment, given its immense potential and unprecedented flexibility, this business model is definitely worth making the effort to perfect.

Issues which need to be addressed include untenable labor conditions, monopoly and the social well-being of digital platform workers. Clearly, society cannot simply continue to allow a completely unregulated job market to operate without at least a minimum of labor law parameters. In these circumstances, shifts tend to evolve from a typical eight-hour day into a 15-hour marathon. These individuals begin to lose touch with families and friends fairly rapidly when forced to operate their vehicle or computer more than 12 hours a day. Another major concern here is that, when governments choose to ignore digital platforms and other such labor markets, one can only suspect that eventually the whole lot will simply devolve into monopoly.

Now that we know what the challenges are, it is important to begin to consider how
we can best reap the potential benefits of digital platforms. Secondly, this process will organically begin to generate productive mechanisms designed to mitigate risks; at least, this is my take on the scenario.

Next we have the issue of available opportunities. And I refer here to the ways in which the pension sector can best serve digital platform workers. It seems that there are a whole host of potential incentives which might be generated – and then facilitated by – the use of automation technology. The aim here would be to drive the contribution rates of digital platform workers in terms of their respective individual retirement accounts. And clearly the benefits would not be limited to the pension sector, whereas we can capitalize upon available synergies to drive savings in other more generalized types of bank accounts.

Along these very lines, the Inter-American Development Bank recently initiated a project with the Cabify platform, which operates throughout Latin America. The IDB team performed a series of surveys. Clearly, this enormous amount of data is going to revolutionize our capacity to quantify what is actually occurring within the digital platform sector. In spring of 2020, as well as November 2019, we will have the results generated during two waves which will be conducted in for Latin American nations. The primary aim is to begin to build a profile of these workers, determine the general socioeconomic conditions of same, and ascertain what type of work they are involved in.

The preliminary results have been fascinating. For example, nearly 75% of operators indicated that their position at Cabify comprised their sole source of income. These results are at odds with the message promulgated by platforms via their media campaigns; i.e., ads that often seek to drive home the fact that these jobs are ostensibly just a great way to earn extra income. Survey results seem to indicate that this is simply not the case, at least when it comes to Latin America and the Caribbean. Once again, it is important to reiterate that these are only preliminary results. However, in my judgment, they speak for themselves.

The bottom line here is that we need to make a concerted effort to eliminate the maximum number of gray areas. This is likely the only way we will ever achieve lasting and economically-viable solutions to the challenges of technological automation. While one should never see to stifle a sector which possesses such tremendous economic potential, we definitely do not need de facto monopoly operating within the region. Additionally, an objective analysis of platform operation and potential will inform the manner in which we utilize same to optimize our social security systems. To achieve these ends, we need a solid understanding of the traditional economic indicators operating within the platform sector.
IDB/Cabify pilot program

This publication seems like the perfect opportunity to share some of the details regarding a pilot program which the IDB has initiated with the firm Cabify in Peru. Cabify is a ride hailing platform which, although based in Spain, operates throughout much of Latin America. The IDB designed a cellular app aimed at providing Cabify drivers with a convenient method for allotting a percentage of their wages to a savings account. The program was initially aimed at increasing voluntary retirement savings within this group of individuals. Unfortunately, the IDB team quickly ascertained that the Peruvian economy involved a number of impediments which prevented nontraditional sector workers from contributing to a retirement savings account. One of the most emblematic restrictions is that Peruvian workers are unable to allocate funds to a retirement account unless they have accrued at least five years within the national social security system. Given these limitations imposed by the State, it was simply impossible to carry out the program as originally intended. Fortunately, there is a bill pending which proposes to remediate this regulatory flaw. For now, however Peruvians are unable to generate requirement wealth unless they are involved in formal sector employment; this is to say, if they intend to do so via a voluntary retirement savings account.

Given the aforesaid impediments, our IDB team simply began to discuss a potential workaround solution for the cellular app. At the end of the day, we decided on a strategy which has a great deal in common with the default option utilized by pension funds. The app utilizes a pop-up screen which advises drivers that they now have a savings option available to them, and that they can also allocate funds to same. Similar to the default enrollment option, the central strategy here involves facilitating the process of opening and allocating funds to a savings account. This is to say, our development team went with an extremely well-defined strategy: to limit the entire process to five or less mouse clicks. We also utilize the Cabify platform to share a video which provided a very succinct explanation of what was proposed. For example, we clearly delineated the amount of money which would be allocated to the savings account; i.e., the percentage of income involved. The video also expressly indicated that account holders would have complete freedom to access the funds at any time in the future.

When drivers wish to open a savings account, they are forwarded to a page in which they enter their name, national identity number, and other personal data. Cabify then begins to allocate the respective amount of income generated via the digital platform to the individual’s account.

3 https://cabify.com/es
The IDB team partnered with the Banco de Crédito del Perú (BCP) in order to provide drivers with savings accounts. It is the largest banking entity in Peru, and turned out to be the only bank in the nation which accepted the team’s offer to participate in the project. Therefore, there is a significant degree of reticence in terms of remediating the lack of access which a significant sector of the workforce has to two savings accounts. In my viewpoint, this is an especially strange dynamic, given that the volume of potential account holders involved is so enormous. One would expect the banking sector to be extremely proactive vis-à-vis such a great opportunity. However, our team found that the banking entities which we contacted generally replied that, either informal sector workers were simply not of interest, or that the amount of funds involved did not warrant action.

Additionally, we determine that the Peruvian regulatory framework was failing to generate any mechanisms which would tend to inculcate a culture of savings within the informal sector. This situation clearly did nothing to ease the process by which an NGO might attempt to launch such an initiative. Therefore, one might say that there is a tremendous opportunity area here in terms of the State becoming proactive and pushing initiatives which have the added benefit of involving extremely attractive financial components. Clearly, this would also allow governments to effectuate a paradigm shift in terms of encouraging certain sectors of the economy to stop writing off entire sectors of the workforce; especially sectors such as this which have demonstrated a clear potential for significant growth.

Drivers accumulate savings through an automatic mechanism. Therefore, one need convince a worker of the program’s efficacy on one occasion. Once the worker decides to enroll, the account is open and ready to begin accruing the agreed percentage of income. This is an especially productive scenario, whereas it does not involve a monthly decision. The entire dynamic is also completely in line with every lesson learned from experts working in the field of behavioral economics.

As yet, given the current set of circumstances within the Peruvian banking sector, workers are still obliged to visit a bank branch in order to get their savings account card. However, the hope is that this will eventually change and that the entire process will be handled online.

Everyone on the IDB team feels that a tremendous amount of valuable, real-world lessons were learned during the launch of this initiative. After nearly 18 months of attempting to implement the app, it has become clear to us that one must first clearly delineate the logistical parameters involved before taking on such a project. As Pablo Antolín indicated at this FIAP seminar, initiatives which have a true impact in individuals’ lives tend to require the greatest amount of effort to achieve. When one takes into account the fact that we refer here to segments of the workforce
which have been effectively marginalized for decades by the financial sector, these types of undertakings are even more challenging. However, these types of monumental efforts are worth every hour one spends striving to achieve objectives, because we are talking about inculcating a culture of savings within a population of nontraditional workers. At the end of the day, they represent a win-win for the State, banking sector and every worker involved.

Final thoughts

In closing, I would first like to clarify that at the outset we attempted to generate a much more traditional model. Before we began developing the app, we tried our luck with a traditional savings account product. The IDB team visited the Cabify-Peru headquarters in order to offer savings account enrollment via a face-to-face setting. We showed up with paper and pen in hand, confident that the old tried and true methods were a good place to start. I must admit that during this initial phase of the initiative we encountered a fair degree of resistance. During the first four weeks of our efforts, as one can ascertain from Graph 3, the inertia of the project

At the end of this four-week period, we were beginning to convince almost one third of the individuals that we were able to speak to about the program. It is interesting to evaluate this tendency in terms of the broader importance of inculcating a culture of savings. This is to say, it is rational to expect that, as drivers began to hear about coworkers signing up for the savings program, the task of convincing individuals became successively easier over time. Here again, behavioral economics has a huge
role to play when your team begins to think about generating this type of initiative or another similar tool aimed at convincing workers to open a savings account; to include, inter alia, retirement savings accounts.

To reiterate, the current financial sector paradigm within Latin American and the Caribbean does nothing to inculcate a culture of savings a mom informal sector workers in many of the region’s labor markets. Many national financial sectors are completely incapable of addressing these new types of employment. Too many even lack the necessary mechanisms to even offer retirement savings accounts to informal sector workers. For instance, many banking sectors have fairly high monthly or yearly minimums in terms of the amount of funds which a worker must contribute to a given savings account. This is problematic because many of these workers experience significant variances in their income level. Clearly, this aspect needs to be clearly addressed when generating public policy aimed at improving or reforming aspects of a nation’s social security system. As indicated above, this issue will only grow in relevance as the gig economy continues to increase at its current exponential rate. Therefore, as members of the FIAP begin to address this type of public policy within their societies, one must take into account that these individuals are operating under highly variable conditions in which, if a worker becomes ill one week, they can experience a drastic drop in monthly income. This entire spectrum of variables must inform the processes through which nations endeavor to generate policy which properly addresses nontraditional labor markets.

Additionally, the current trend within the pension sector to focus primarily on digital solutions is not necessarily an optimal solution. At the end of the day, the informal and nontraditional sectors also require face-to-face contact; at least at the outset. The IDB team noted a significant degree of reticence among said workers with regard to voluntary retirement savings, so the social security sector also needs to generate initiatives which address the traditional aspects of customer service and financial education. This would seem the best route to achieving lasting impact in terms of fomenting a culture of savings among, inter alia, these sectors of the workforce.

Another major opportunity area is leveraging the digital skill sets which FIAP members currently possess in order to simplify enrollment processes. I make mention of this issue because, at least in the past, an ostensibly simple task such as signing up for an individual retirement account becomes an extremely complex process for the IT engineers charged with implementation. For instance, when we attempted to execute a batch enrollment of hundreds of participants, it became immediately apparent that this was simply not an option. And to contextualize this in real-world terms, our insistence on pursuing this strategy ended up pushing our launch date back by six months. Project leaders need to ensure such bottlenecks are
resolved as soon as possible in order to ensure that innovative solutions such as the Cabify-IDB app are rolled out in a timely fashion.

In light of the foregoing, an issue of major importance is determining what conditions will be conducive to the implementation of a digital app capable of addressing labor markets throughout Latin America and the Caribbean. At the end of the day, action will need to be taken in three stages. Firstly, our respective national regulatory frameworks will need to delineate exactly what a digital platform worker is. Are they to be considered salaried employees? Or should we view them as self-employed? Clearly, it may be that they comprise a new hybrid which is a mix of both.

What we cannot afford to do is continue to allow this sector of the job market to operate without any regulatory parameters. This would be completely irrational because digital platforms are here to stay and must be addressed. Several nations within Latin America have begun to regulate their platform sectors. A wide variety of legislative options are available, and all that remains to be done is to iron out the details of how these workers are going to be classified. Once this question is resolved by legislators, measures can be implemented. However, even if the debate on digital platform workers has not concluded within a given nation, the issue of self-employed workers can be addressed. The IDB and OECD have been categorical in terms of their stance: it is preferable to mandate that self-employed workers also need to participate in available social security schemes. They are exposed to the same variety of risks as every other segment of the workforce; therefore it is somewhat absurd to generate an entirely separate regulatory framework to address their situation. The same rules which apply to formal-sector employment need to apply to this group of workers. This is exactly where the State can play an especially decisive role. Legislatures must ensure that the self-employed workforce in their nations have clearly defined tax policies which are designed to drive participation rates in their respective social security systems.

Digital platforms can also read determinant in the success of such efforts. At the end of the day, it is they who are charged with the task of withholding taxes and handling deposits to individual retirement accounts. As such, public policy makers need to ensure that regulatory frameworks clearly defined the roles of their respective digital platform sectors. For their part, digital platform firms need to fulfill their obligations. Unfortunately, some public policies have failed to adequately address this new sector of the economy. For example, Brazil initially introduced a regulatory framework which basically made adherence, on the part of digital platforms, optional. A short time later, regulators began to question the long term viability of the legislation and decided to generate another policy which mandates withholding on the part of digital platforms in Brazil. Here again, the debate regarding the role of digital platforms within the job market and economy
has yet to conclude. Therefore, it is hoped that the debate process will inform future regulatory measures generated by Latin American and Caribbean administrations. Clearly, a great deal remains to be done in terms of delineating the role these platforms will play in the aforementioned societies.

Along the same lines, pension fund administrators also need to engage in an objective evaluation of what their role will be in terms of remediating digital platform shortfalls. A drastic change needs to occur if the pension sector intends to generate economically-viable and lasting solutions to the social security needs of sector workers. And such measures will need to address more than digital platform workers. The social security sector will also need to address the litany of new challenges generated by such strong growth within the self-employed sector of the workforce. This is to say, the pension fund administrators sector must clearly delineate the role it is to play in the new labor markets of Latin America and the Caribbean.
CHAPTER IV

INCENTIVES FOR THE DEVELOPMENT OF VOLUNTARY SAVINGS

RENEE SCHAAF. Voluntary savings: Reinvented in the Digital Age. Observations and insights from the frontline.
PABLO SEPRENGER. Sustainable voluntary retirement savings growth: The secret (and politically incorrect) ingredient.
FRANCESCO BRIGANTI. The growing importance of voluntary pension systems in Europe.
VOLUNTARY SAVINGS: REINVENTED IN THE DIGITAL AGE. OBSERVATIONS AND INSIGHTS FROM THE FRONTLINE

RENEE SCHAAF

1 Renee leads the company’s U.S. retirement business serving retirement savings and income needs of several thousand employers and millions of individual customers. Collaborating across the company, she works to design real-world solutions to meet customer needs. Prior to her current role, Renee was chief operating officer for Principal International where she led global business development, strategy and operations in Latin America and Asia. Throughout her career she’s held numerous leadership roles covering business strategy, product development, technology, marketing, distribution and customer experience. Renee holds a degree from Iowa State University and an MBA from Drake University. She completed the Global Advanced Management Program from Northwestern University, Kellogg School of Management in 2016.
How can we, as a global community, work together to increase voluntary savings? Additionally, how can we embrace new technologies with an eye to truly reaching portions of the population which we have failed to reach thus far? What strategies will allow us to engage these demographics better and work with them in order to create a positive retirement outcome?

I am not a policy maker, regulator or academic approaching these issues from a theoretical standpoint. I am here to represent a team of practitioners that work with nations every day throughout Latin America, Asia and the United States, at firms which are focused on delivering pensions and long-term savings solutions to citizens in order to help them achieve financial security.

As a result, I want to draw on this background and share some of things that we are doing. I also view this as an opportunity to remark on some of the outcomes we are beginning to see as we combine sound pension policy with innovative digital technologies that engage individuals and invite them to take an active role in generating retirement wealth. We are beginning to see that these technologies are helping to create a more even playing field within the voluntary savings sector.

Therefore, I wish to provide some remarks on the subject of developing incentives aimed at encouraging higher levels of voluntary savings within societies.

The data and observations which I will be sharing comprise more than a mere series of interesting facts. Furthermore, I am convinced that they are mission-critical issues which need to remain in the forefront of our minds into the foreseeable future.

One need only take a passing glance at the Figure 1 in order to ascertain the scale of the issue. In short, the figure illustrates the average net replacement rates generated by public pension plans. The shortfall between said replacement rates and the target of 70% could not be clearer.
On average, individuals throughout the world need to accumulate enough wealth and savings to replace 70% of their pre-retirement income; that is, if they are to achieve financial security upon retirement. As we evaluate national contexts across the globe, significant gaps exist in almost every economy. For example, the small sample of nations included on the Figure 1 involves substantial shortfalls in every case. Even nations which have proven to be best in class in terms of delivering benefits (i.e., income replacement) through their public pension plans – Brazil, China, United States – have one characteristic in common. They are operating pay-as-you-go systems which are, even in the medium-term, completely unsustainable.

As a result, properly engaging individuals in order to fill this gap through the use of voluntary savings is critical.

How should societies engage individuals in order to drive retirement savings?

This is a decidedly global issue. Every society on earth currently faces this challenge. There is a huge amount of empirical evidence that suggests that, if one wishes to
reach the middle class in order to inculcate a culture of voluntary retirement savings, the best tool available is a workplace structure. Occupational pension plans are, without a doubt, unbeatable.

Another issue which is also nearly axiomatic is the effectiveness of the various mechanisms which comprise said workplace plans: automatic enrollment; automatic escalation of the deferral percentage; and “do-it-for-me” investment tools such as Target Date Funds (TDFs).

However, what actions should pension sector leadership take in national contexts or specific scenarios in which workers lack access to occupational pension plans? For instance, what should we do in instances where labor market informality levels are high? Or, in cases such as the United States, nations in which the gig economy is growing? All of these scenarios generate gaps between what traditional occupational pension plans can provide and what is needed to remediate individuals’ retirement wealth gaps.

At Principal, we have observed the efficacy of responsibly employing digital means to inform and encourage individuals to become more proactive about retirement wealth generation. This is the case with individuals who lack access to workplace savings plans, as well as those involved in traditional, formal-sector employment.

Encouraging voluntary savings using digital advice and sales

I would like to take this opportunity to share an example of where we are utilizing digital technologies within the construct of an occupational pension plan in order to add even greater effectiveness and generate even better outcomes. To begin with, we should delineate exactly what makes digital tools so attractive. Digital tools are simple, convenient, and cost-effective. They also provide the sector with the ability to personalize data provided to fund participants. The last characteristic is the primary potentiator that makes the digital option so effective. This is because advice must be tailored to the individual situation and needs of the recipient. Clearly, advice and other information must be as engaging as it is relevant. We know that we possess the capability to achieve these ends because we have a significant amount of evidence that indicates digital campaigns have correlated to increases in participation levels.

Before I continue to share more of the evidence and examples which we have seen in recent months, I think it best to clearly delineate the criteria used to the judge the effectiveness of a given digital campaign or application designed to encourage voluntary savings. In my judgment, three main components comprise this list.
The primary aim of any system or program – be it in-person, over the phone or online – should be to deliver intelligible financial education. If individual recipients are unable to understand the message we are attempting to convey, our efforts have been in vain. They need to understand what options are available to them. Under optimal circumstances, the message which is delivered must be accompanied by interactive digital tools; i.e., ways to engage. And by interactive, I mean that individuals are made aware of the variety of ways in which they can save, as well as the impact of said alternatives upon retirement-wealth generation.

The second aim of all digital initiatives should be to deliver actionable advice. I cannot overemphasize the importance of this aspect of digital campaigns and tools. Everyone needs advice in terms of determining how much of our income should be allocated to retirement savings, in terms of an appropriate investment strategy, and in terms of determining what is appropriate for their personal situation. The vast majority of society is not comprised of financial experts. Additionally, one must never forget that this type of information is difficult to obtain through one’s own devices. Historically, and traditionally, human beings have provided guidance in these instances. The only problem with relying on human advisors is that, in nearly every national context on earth, it is almost impossible for a member of the middle class to get the attention of a qualified financial planner to help them map out an individual retirement strategy. This is especially the case in terms of receiving professional advice at a fee which is affordable to a member of this income group. Therefore, we can safely say that reaching the middle class with appropriate retirement savings advice is a difficult undertaking.

Fortunately, we possess the digital capacity to bridge this gap. Digital technology is capable of generating a ubiquitous, extremely cost-effective advice delivery mechanism which is personalized for an audience of one.

Of course, the sales and service aspect of all this is also highly relevant. Fund participants should be able to take action, and said action should be a fairly simplified affair. Under ideal condition, it should not take more than a couple of mouse clicks to perform a given task.

These three components comprise what an effective digital experience should be for the individuals we serve. The digital scenario is often referred to as a managed-account environment in a U.S. context. The tools utilized to operate such an environment are referred to as robo-advisors.
How has the digital scenario evolved?

I would like to illustrate the evolution of digital advice tools through the use of a case which I find remarkable. It is the story of the experience of Principal in China. Principal has a joint venture with China Construction Bank (CCBPAM). CCBPAM specializes in delivering mutual fund products to the people of China. Traditionally, if we were to analyze the manner in which such a joint venture has managed to attract clients, everything would point to the traditional banking-sector channels. This is to say, when an individual is interested in purchasing a mutual fund, they simply visit the nearest branch and speak to a banker. Their banker then recommends a given mutual fund, and then they proceed to transact the purchase.

This is no longer always the case in China. The entire paradigm has shifted. To provide some context, in early 2016 the joint venture had not received any clients via the digital channel. Up until this time, every single individual transacting a purchase with CCBPAM did so by walking into a bank branch. However, by January 2017 the number of customers arriving via the digital route had skyrocketed to 1.2 million. Within nine months, that figure had doubled to 2.2 million. Within 15 months, the figure had doubled again, increasing to 4.4 million. Between December 2018 and February 2019, nearly 2,000,000 more clients contacted our firm and purchased mutual fund or long-term savings products as a result of our digital platforms. Anyone in the sector would immediately want to know what dynamic was at work here. More than an evolution of the market, this has been a revolution.

How are these types of results achieved?

I am firmly convinced that two major factors contributed to this paradigm shift. Firstly, our joint venture partnered with Ali Baba. Perhaps not all of you will be familiar with the size of Ali Baba’s footprint in the Chinese economy. It is basically the Amazon of China. Together, we put our storefront on Ali Baba’s portal. This move made us visible and accessible to millions of potential customers. The newfound visibility gained through the portal was leveraged in order to drive the launch of a direct-to-consumer digital platform. This is to say, we launched both simultaneously in order to capitalize upon available synergies. It was the combination of these two strategies that delivered the results illustrated in the Figure 2. It is fairly easy to see how the digital channel quickly caught up to and then outperformed the traditional visit to a bank branch.
This dynamic, in and of itself, is as interesting as it is exciting. And yet, it is even more interesting and exciting when evaluated vis-à-vis the characteristics of the individuals who are arriving to CCBPAM via the digital platform. For starters, these individuals are young: 55% are under the age of 35. In other words, we refer here to first-time savers. We are reaching a demographic which traditional means were never able to attract.

Furthermore, as we analyze the average ticket price of the products being purchased, it is fairly low. These individuals are making fairly small-scale purchases. However, approximately 35% of clients opted into a systematic savings plan. This means that even though ticket prices are fairly low, transactions are occurring every single month of the year. The cumulative impact of this type of behavior over time is huge. These individuals are setting aside funds in order to generate retirement wealth or accrue capital for long-term life projects. It is always exciting to see individuals engaged in this type of savings. Additionally, it is the best indicator we have that the message is getting through to individuals within a given economy.
Lastly, as we observe the behavior of individuals arriving at CCBPAM via the digital platform, it becomes immediately evident that this demographic has demonstrated a higher probability of remaining active in terms of mutual funds and long-term savings. This means that they continue using these types of financial products for a longer amount of time than their traditional-channel counterparts. Here again, this has been a significant discovery which definitely affected the way we approach client interaction.

Digital platforms, therefore, comprise a completely new way of doing business. They have moved beyond a time when they were perceived as little more than window dressing. The above anecdotal evidence should make it clear that this is definitely no longer the case. Digital platforms are having a major impact which, from what we have seen thus far, will continue apace in the short and medium term. It is important to keep in mind that these platforms are reaching a group of investors which has, to date, failed to engage with all other means.

What is occurring in other markets?

In the United States, we have seen similar increases in interest in digital solutions. The following graphic demonstrates how the robo-advisor sector has evolved by leaps and bounds within the US. In order to clarify what the term refers to, a robo-advisor is comprised of a company that offers solutions via electronic means with an eye to covering the three elements mentioned above: education, advice and the ability to transact and engage on an ongoing basis.

As you can see (see Figure 3), the evolution of the US sector has been significant but nowhere near what we have observed within the Chinese economy. Logic would dictate that the determinant factor is fairly straightforward: individuals within U.S. society incorporate technology into their everyday lives a bit more slowly than their Chinese counterparts. And yet, we are seeing a significant trend towards the use of digital advising platforms among Americans.
From a retirement and pension perspective, and as a practitioner within the retirement wealth sector, how does one go about incorporating these solutions known to inculcate a culture of savings into the current spectrum of financial instruments within said sector? In order to answer this question, I would like to share a financial product which was recently introduced within the US market.

The product was introduced by Principal and we already have some, albeit very preliminary, data available. Unlike the pension system operating in Chile, there is a flaw in the U.S. 401(k) model. An individual can spend their entire life working at a firm which offers a 401(k) or defined contribution plan and manage to accrue exactly enough funds to carry them through retirement. The major flaw is that there is no obligation to utilize programmed withdrawal or an annuity, in order to exponentially decrease an individual’s chances of running out of said retirement wealth. This dynamic avails people an opportunity to – and exposes them to the risk of – undertaking the management of their nest egg resources and investing it for the future. Clearly, most of us within society are not going to have an optimal outcome under the circumstances. The programmed withdrawal or annuity alternative is an exponentially safer strategy.

In order to address this issue, Principal is employing the technology used within a managed account context in order to address instances in a person’s life such as job changes or reaching retirement age. We now provide them the ability to – either through their mobile device or laptop – execute a transaction in order to invest their retirement wealth via electronic means. The process is extremely simple – i.e., normally involves a couple clicks of the mouse – and the alternatives presented to
an individual are based on their risk profile and other basic data which we possess on said client. This strategy allows individuals to roll over all of the resources which they have accumulated during a lifetime of work into a personal pension plan. Additionally, this type of timely and efficient management of the decision-making process ensures that our customers never lose any of the related tax benefits. We feel that this is a significant tool which fulfills a critical need within the US market.

This initiative was introduced in mid-March 2019 via what is known as a soft launch. Soft launch involves less emphasis on media campaigns and the like. In fact, we opted for simply adding the tool onto our web portal. Then, we waited to see how many would begin to utilize the tool via their mobile device or laptop computer.

The preliminary results have been very encouraging. We are currently at approximately 130 accounts and US$8 million in assets which, as stated, and comprise 401(k) resources which have been rolled over into a personal pension account.

The approach we utilized was to do everything possible to make the digital tool, as well as the associated decision-making process, as intuitive and unfrightening as possible. Clearly, it is a major decision in an individual’s life. Any of us within the pension sector who have had the opportunity to monitor conversations at a call center can attest to the fact that the vast majority of individuals within society feel absolutely overwhelmed with these types of decisions. Most of society does not understand the difference between a fixed income and equity. Nor do they fully comprehend the ramifications of issues such as longevity risk, market risk and interest rate risk. To be sure, I think most of us within the pension sector would agree that it would almost be irrational to expect that individuals – who are not economists or who do not work within the financial sector – would be capable of achieving optimal outcomes if left to their own devices.

Firms within the pension sector willing to focus resources on their ability to present financial decision-making in a more simplified format through the use of electronic means – and provide information in a relevant and engaging manner – will end up with increased market share. Therefore, this is a scenario in which both clients and firms can profit from investment in digital platforms. It is a superb example of how to properly utilize managed account within a context of retirement accounts.

There are a wide variety of citable examples involving initiatives which we are currently rolling out and beginning to compile data on. One such example is currently being utilized in the United States. One of the major challenges we face in the U.S. is convincing individuals to make the decision to enroll in an employer sponsored savings program. Despite a wealth of empirical evidence demonstrating
that automatic enrollment is the way to go nowadays, it is surprising to see how many employers are unwilling to approach this issue proactively. They simply do not want to get involved. Therefore, generating an enrollment means which is separate from – or in addition to – the automatic enrollment option is a significant issue which merits review at every firm within the sector.

At the close of 2018, Principal rolled out enrollment process which was very simple and extremely intuitive. It utilizes a feature which is similar to the manner in which an individual tracks a package on Amazon. We have utilized technology which mimics package tracking software at Principal in order to track the interaction timeline with participants. This is to say, an individual is fully aware of how much time is remaining in the interaction process. This answers the primary question almost anyone asks when engaged about modifying or rolling over a given account: how long is this going to take?

When people know exactly where they are in the transaction process, we believe that they become more relaxed and think more clearly. When things are quick, easy and intuitive, firms have a greater probability of successfully engaging clients and helping them to make responsible decisions. Therefore, our firm sees a lot of potential in this technology. If one evaluates the amount of deferrals on an individual basis using our online platform which has a great customer experience, people defer 34% more than via other enrollment mechanisms. Even more exciting is the fact that approximately 25% of these individuals are signing up to escalate their deferral by 1% per year. This dynamic allows us to be in a position to help individuals achieve the financial security they desire.

Similar results have been observed in Chile. Within the AFP Cuprum fund, our firm rolled out a mobile app in April of 2019. One might ask what relevance a mobile app would have in an AFP context. Principal launched the app as part of a broader strategy to optimize our ability to engage with fund participants. It is also part of our strategy to inform fund participants where they stand in terms of their projected retirement wealth. The app also allows us to simplify the manner in which our fund participants transact with us: on their device, and at a time of their own choosing. It provides transactional convenience and an opportunity for us to optimize our information delivery processes.

After only two weeks since launching the app, we have already racked up more than 35,000 downloads. Therefore, if we know that this technology has proven to be effective, and we know that the Chilean public is willing to absorb and utilize said tools, why aren’t more firms within the sector pursuing such ends? The industry needs to embrace digital platforms: they are a game changer.
SUSTAINABLE VOLUNTARY RETIREMENT SAVINGS GROWTH: THE SECRET (AND POLITICALLY INCORRECT) INGREDIENT

PABLO SPRENGER

Pablo Sprenger holds a licentiate in industrial engineering from the Catholic University of Chile, and an MBA from Northwestern (Kellogg). During a 20-year career within the financial sector, as primarily focused on investments and savings in a variety of positions held at retirement funds, hedge funds and financial groups. After having served for five years as CEO of SURA Asset Management (Mexico), now serves as CEO of SURA Asset Management (International) which has operations in Argentina, Australia, Chile, Colombia, Luxembourg, Mexico, Peru and Uruguay.
Upon reading the present text, some might be left with the impression that the author is a bit of a Luddite. I assure you that this is not the case. In addition to being steadfastly pro-technology, I am convinced that disruptive technology has a key role to play in terms of facilitating and informing the processes by which the pension industry interacts with millions of account holders. The plan is to share some experiences which demonstrate how digital tools can stimulate a culture of voluntary savings within a society. I also intend to explain why an extremely significant number of individuals within Latin American society have failed to acknowledge the ever-increasing relevance of generating retirement wealth. The plan is to cover these issues through the use of four central messages.

Firstly, I assert that the phrase “voluntary savings” fails to communicate the nature of the notion in question; i.e., saving for retirement ceased to be optional decades ago. On the contrary, it is a fact of life for every economically-active member of society. Given the current economic panorama, individuals who choose to forego allocating a percentage of their annual income to an individual retirement account should not expect to receive an adequate pension payout upon retirement; which is to say, enough retirement income to cover even their needs over an increasingly indeterminate amount of time.

In fact, while dining with several pension-fund presidents last night, we began to chat about the obligation on the part of funds to suggest that clients increase their current 10% saving rate to a more rational rate of 20-25%. We all agreed upon the fact that there is nothing optional about such a rate; on the contrary, everyone felt that what so many within society characterize as voluntary retirement savings actually comprises a determinant factor in terms of pension success.

Secondly, even if the Latin American voluntary savings sector were to begin generating optimal sector-growth strategies immediately, we still need to acknowledge that we are already behind the eight ball. This is to say, regulators, legislators, the pension industry, the media and the individuals who comprise Latin American society need to understand that so many decades of pension fund success
(inter alia, consistently high yields) has often only served to engender complacency; resting on our laurels, as it were. As yield rates climbed, each of the aforementioned actors began to forget that a significant proportion of our respective populations do not actively contribute to a voluntary retirement account. As often occurs in open economies, the pension sector has had little incentive to remediate the situation. Fortunately, steps can be taken to generate the needed course correction. Therefore, I wish to utilize this opportunity to share a strategy for generating market incentives aimed at remediating the current voluntary savings shortfall within the Americas.

Let me begin by stating that I am in complete agreement with Renee Schaaf; which is to say, our industry needs to increase the scope and coverage of the financial advisory services we provide to our fund participants. How so? The most efficacious route to turning the pension tide is to ensure that a greater number of fund participants have access to personalized investment advice. As our colleague stated, when individuals are uncertain about how to invest such huge amounts of assets, they tend to become extremely hesitant to act. Furthermore, all available evidence points to society having only one tool at its disposal with which to address this situation: increasing the financial IQ of workers. All other factors pale in comparison in terms of general importance. And while other strategies only treat the symptoms, better-informed fund participants generate a solution which permanently addresses the root cause of the voluntary savings shortfall in the Americas. Thus, in terms of long term sustainability, it is our best option.

Several of this year’s FIAP presenters have mentioned the fact that, when human beings lack the necessary skill sets to make a given choice, they tend to put off the decision indefinitely. Consequently, it is imperative that we begin to provide the personalized professional advisory services that one requires to make such decisions. The only problem is that, as Renee Schaaf stated, such services come at a high price; especially in an industry such as our own, which operates vis-à-vis such narrow profit margins.

Clearly, the industry needs to undergo a major paradigm shift. For decades, the pension sector has invested a great deal of time and resources evaluating and analyzing factors such as tax incentives, savings liquidity, automatic enrollment, as well as employer-sponsored retirement plans. While the success of these measures has been irrefutable in terms of those individuals who have had the ability to take advantage of them, such initiatives have failed to address Latin America’s main challenge: propagating a culture of voluntary retirement savings. If the pension sector’s aim is to avoid the appearance – and increasing momentum – of campaigns such as the No more AFPs movement in Chile and the rest of the Americas, then steps need to be taken immediately to deliver the aforementioned advising services to fund participants.
One might ask why it is so imperative to take immediate action. Barring a major overhaul of the regulatory framework, the only asset we currently have—in terms of turning the tide of nearly endemic negative public opinion—is the use of innovative solutions. To clarify, were we to attempt to change retirement ages, the only means available is legislation. The same is true of initiatives aimed at increasing contribution rates; at some point, the Senate has to become involved. And as Chile’s pension czar, Rodrigo Valdés, stated to all those in attendance, the type of changes which equate to tangible shifts in an existing paradigm tend to be the most difficult to implement within society. In light of the foregoing, it would seem that the pension fund sector has only one tool at its disposal: voluntary savings. Thus, we need to take immediate action aimed at raising retirement wealth IQs, and then move on to our next challenge, which is increasing voluntary savings levels within our nations.

If our industry intends to utilize voluntary savings to effectuate a paradigm shift within our respective economies aimed at generating decent pensions for our populations, we are going to need to change the way we approach the issue of fomenting a culture of voluntary savings within our societies.

**Changing the way society views voluntary savings**

As stated, the first thing that will need to change is the manner in which view voluntary savings. Here again, this is not an innately voluntary activity. Given the current international economic panorama, individuals are obligated to take these types of additional steps in order to generate what one would characterize as an adequate pension payout. This is to say, it is a moral duty that we have to our future selves. As a result, the pension industry has a concomitant moral obligation to determine how it intends to address the voluntary savings shortfall which currently pervades every society within Latin America. Anything short of a complete overhaul of society’s perception of voluntary retirement savings will simply lead to a continuation of the status quo. And that is simply not in option, especially in light of the public’s perception of the pension fund industry.

Another factor involves the increased life expectancy of human beings. In addition to being a global determinant, the issue is especially relevant to the Latin American context. Demographic, parametric, behavioral and structural factors have all played a part in these exponential increases in life expectancy. In fact, as Guillermo Arthur mentioned during his opening remarks, we might soon be facing an age in which biological death becomes optional.

The relative size of our national older-adult populations has increased markedly in recent decades. A major trend towards early retirement—which is to say, retiring at age 50 or 55 years—has only served to increase the period of time which an
individual’s retirement wealth must cover. In fact, this situation has led to many people facing 40-year long retirements. By anyone’s reckoning, this is an extremely large amount of time; and one which Latin America’s relatively low contribution rates will never be capable of addressing. Our pension sectors have also been faced with steadily decreasing yields which have become so widespread throughout the world. Latin American informality, employment gaps, and labor markets which are incapable of sustaining young – and increasingly larger – populations are converging into a decidedly negative scenario.

Another factor which we need to overcome is the lack of willingness on the part of Latin Americans to save. To this, we must also add that many do not even know how one goes about engaging in said activity. At any rate, I often fall into the former category. Being a married man with four daughters, when faced with the need to do a bit of damage control, suggesting an increase in our family contribution rate is about the last thing that would occur to me. Faced with 5:1 odds, better men than I have opted for a visit to the mall, offering to buy a purse or – when circumstances dictate – suggesting that we all take a family vacation. Even the head of a pension fund is subject to the societal demands which exert their influence on every other member of society. And clearly, almost every one of us seems to be doing everything we can to avoid addressing our long-term savings goals; that is, in terms of available statistics.

If we – as the very sector of civil society charged with addressing our economy’s retirement needs – fail to generate increased public awareness, this trend will simply continue undeterred until it reaches terminal velocity. In fact, several of our presenters have already suggested we have reached that point on the both the public opinion and pension adequacy spectrums. If we fail to generate a paradigm shift in terms of how our societies’ perceive voluntary retirement savings programs, the pension gap will simply continue to widen. As stated, this is going to simply exacerbate the negative public opinion issue.

The foregoing scenario means that generating adequate pension payouts for a significant proportion of the population is a more challenging proposition than ever. For instance, the intergenerational dependency rate is becoming increasingly unrealistic. Here again, the Latin American pension sector has been extremely slow to respond to an important – if not potentially determinant – factor.

In order to contextualize what we refer to here, I wish to perform a simple exercise. How many of those attending the 2019 FIAP forum have three or more siblings? Approximately 60% to 70% of those in attendance are from four-child families, it seems. As many of you are aware, the vast majority of Chilean families are now limited to one or two children.
How can we best address the pension gap?

Everything points to voluntary retirement savings being our best defense against increases in the current Latin American pension gap. However, I wish to take this opportunity to perform a critical evaluation of its voluntary retirement savings sector, with a special focus on indicators which are often utilized to illustrate the sector’s purportedly flawless track record. To perform the aforementioned analysis, I will be utilizing the cases of Chile and Mexico.

Firstly, we will need to clearly delineate what is meant by voluntary retirement savings success. The indicator which is most often used to measure success is sector growth. However, this strategy can be extremely tricky when we choose to evaluate things vis-à-vis an extremely low baseline. This is because the ensuing – and ostensibly marked – increases in sector growth rates can lead one to erroneous conclusions regarding the current voluntary savings paradigm; among other things, we can completely overestimate the relative degree of sector success.

The total volume of assets under management is also frequently utilized to measure voluntary savings sector growth. This too can lead us astray, because the volume of assets under management tells us nothing about the level of coverage the sector is achieving. This is due to the fact that growth can occur among sectors of the population who do not necessarily even require increased levels of voluntary savings; i.e., those segments which already possess a sufficient amount – or even a surplus – of assets to meet their retirement needs. Others point to the number of available plans, pension coverage or better pensions – this is to say, voluntary savings as a percentage of pension growth – as factors which point to sector growth.

Unfortunately, the least cited of the foregoing indicators has been the issue of significant improvements in pension payout levels. When evaluating pension sector performance and growth, one should remain focused on that segment of the population who is most in need of progress on all three fronts.

A truly comprehensive analysis of the pension question indicates that the pension sector is not the root cause of the problem. The main challenge here is related to the fact that a significant proportion of the population lacks access to formal sector employment and, as a result, to the pension system and retirement-savings products. Thus, drawing conclusions about pension sector success is a highly complex undertaking. One must use a good deal of caution and fully understand the determinant factors involved; not to mention, the manner in which said factors interact with one another.
Case study: Chile

In my judgment, the Chilean case is especially illustrative of this last aspect: it underlines the fact that we need to understand the way in which important sector factors interact. As one can ascertain from Graph 1, Chile has made a great deal of headway in terms of perceived success. For instance, assets under management have increased at a CAGR rate of 20%. It should be noted that we refer here to over USD 10 billion in assets which we must then multiply by a factor of 27 over a period of 18 years. The Chilean pension industry has ostensibly generated a significant amount of success – and for a significant amount of time. For instance, as one reviews the number of retirement accounts being opened, the figure stands at well over 2 million. This translates into an annual growth rate of 16%. This is to say, the total volume of Chilean retirement accounts has increased by a factor of 15 during a period of only 18 years.

Unfortunately, these two factors do not tell the whole story. Other factors must also be taken into account. For instance, to begin with one should immediately subtract a full 25% of the aforementioned total number of retirement savings. This is because many Chileans have more than one individual retirement account. At the end of the day, the net quantity of accounts is 1.75 million. When one takes into account that 400,000 of said net total involve accounts with a zero balance, the total falls...
to 1.35 million. Why so many accounts with a zero balance? This is because many individuals open an account and then never allocate any funds. And the story does not end here.

We must deduct another 500,000 accounts which involve balances under USD 500 within the over-45 demographic, whereas these voluntary savings instruments will generate a difference of only USD 2 in the pension payout. Thus, we are essentially dealing with a pool of 850,000 accounts. Unfortunately, less than half of these account holders actually allocated a proportion of their income to their accounts during 2018. This is to say, a more accurate net total of active voluntary retirement savings accounts within Chile amounts to something approximately 425,000.

Whereas we might have begun at the 2 million mark, the figure almost immediately dropped to 425,000. I can think of no better way to illustrate the current disconnect in our sector in terms of perceived success and what one might term empirically-based success. Success is relative, it seems. Additionally, I wish to remark that, while figures such as assets under management are reliable, I would never place our existing statistics on pension coverage in the same category. In fact, in my judgment it would be almost reckless to base our national or regional strategies on our current database of coverage statistics.

Therefore, if we intend to determine what factors are determinant to such an outstanding track record, we must first objectively evaluate sector success vis-à-vis assets under management. As we can tell from Graph 1, something occurred in 2001 to shift the historical trajectory of the sector. An event occurred which generated decidedly positive outcomes. One possible cause is the reintroduction of tax incentives in 2001. Traditional analyses asserted that said benefits constituted a major change in the sector’s regulatory framework.

The most interesting facet of all this is that, as one delves deeper it becomes increasingly clear that tax benefits – in and of themselves – do not explain the change in trajectory present in the aforementioned graph; this is to say, the new trend in terms of total assets under management. Every tax attorney in Chile knows that these benefits were in place long before 2001. However, the tax incentives introduced in said year did not constitute a wholesale restructuring of the regulatory framework. They were simply an adjustment.

At this stage of my own personal analysis, I began to question what – seemingly invisible – factor caused the trajectory change. On the one hand, the as yet unidentified issue was clearly an important factor. However determinant it might be, it was certainly not what one would characterize as self-evident. And I hasten to add that proved to be as politically incorrect as it was obscure.
The changes in the Chilean tax code which occurred in 2001 simply served to formalize and codify existing Chilean tax incentives. In short, the legislation permitted voluntary retirement fund administrators to begin to charge asset management fees. The law also permitted the entry of new competitors into the voluntary retirement savings sector. This is to say, before the legislation was introduced pension fund administrators were not allowed to charge commissions for managing voluntary retirement savings assets. In my judgment, the fact that firms were not allowed to generate any income from voluntary retirement savings products led to a scenario in which they failed to promote the sale of said products. Here again, while it might not be the most politically correct aspect of the industry, it is a market-driven reality that we can ill afford to simply ignore.

In 2001, Law N° 19.168 was enacted, thereby opening up the voluntary retirement savings sector to competition. It achieved this end by allowing new competitors to enter the sector; banks, insurance companies and mutual funds. And as a result, I believe that the secret and politically incorrect secret to our success has been thecapitalistic tendencies of private firms to optimize operations. Once competition was unleashed and firms were allowed to charge a nominal fee for services rendered, there was simply no looking back.

Thus, while many of the main actors within the national pension sector have focused on the usual suspects (tax incentives, automatic enrollment, lowering fund manager fees, digital tools designed to increase accessibility), few if any have looked to the tried and true capitalist nature of open markets to explain the huge gains made within the voluntary retirement savings sector since year 2000. Once allowed to offer economically-feasible financial advisory services, fund teams were able to sit down with clients and begin to explain the benefits of opening a voluntary retirement savings account. Clearly, these meetings also afforded fund professionals an opportunity to explain the risks involved when an individual fails to generate additional retirement wealth via such products; which is to say, the risks in terms of pension sufficiency generated by a failure to open a voluntary savings account.

As we have heard from many FIAP presenters in recent years, the principles of behavioral economics dictate that less-informed individuals tend to put off the decision-making process, where as their better-informed counterparts tend to act upon said knowledge. Therefore, I wish to challenge the industry – as well as every other actor within the pension sector – to begin to rethink the manner in which we approach the issue of digital technology.

I have no idea of how many of the individuals in attendance take time out to enjoy a bit of exercise, but it has increasingly become a fact of life for many within Latin American society. It is clearly not an optional behavior. Individuals who live
sedentary lives tend to develop medical problems fairly quickly. And in that sense the issue of exercise has a great deal in common with the voluntary retirement savings paradigm. If one plans to engage in what is increasingly referred to as active aging, one must exercise. Along the same lines, there is an entire spectrum of other financial criteria which must be met if one intends to enjoy their retirement years.

Therefore, exercise seems to be an especially useful analogy. Firstly, one can utilize discounts to attract individuals to sign up at the neighborhood gym. In this instance, discounts are analogous to tax incentives. In terms of driving participation rates within the voluntary savings sector, one can consider how attractive exercise becomes vis-à-vis a discount.

This is to say, if someone walked up to you and offered you a major discount on a gym membership, would you start your training regimen the next day? If we take this analogy one step further, and allow you to forego the whole gym membership signup process, would you show up immediately to start working off the pounds? This has been tried for decades within the exercise sector, and these types of measures have not significantly increased sector growth for several decades. I think it is equally rational to expect that they will have the same net effect on sector participation rates. These two measures (financial incentives, automatic enrollment) simply do not possess the ability to affect a major shift in the participation paradigm.

To bring this analogy to its logical conclusion, let us turn to the issue of what I will term the gym commute. If you had a gym which was 50 feet away from your front door, how would this increase your probabilities for attaining a major lifestyle change? Digital applications allow individuals to sign up, and then decide how much of their income to allocate to a voluntary risk retirement savings account. However, they do not innately possess the ability to convince people to deposit funds and generate retirement wealth.

Thus, as we move through the parameters involved in this especially well-suited analogy, we see how apropos it is in terms of getting to the central issue here on our panel of experts: voluntary retirement savings. It becomes almost immediately clear that the availability of a given digital application in no way correlates to a concomitant measurable increase in the number of individuals choosing to open voluntary retirement savings accounts.

In a related issue, one should also take into account that everyone possesses their own, unique degree of digital skill sets. Some are able to utilize a new retirement-product app, while others will feel overwhelmed by the prospect of rolling over such a huge amount of assets on their cell phone. Additionally, cell phone capacity varies greatly throughout society. Therefore, not everyone has the same amount of
cell phone memory available for installing every app they deem useful. Decisions need to be made, and frankly Facebook and Instagram will probably win out. Many might argue that parameters such as cell phone capacity can be easily remedied through the purchase of a new phone. However, not everyone has USD 1000 in disposable income to buy the latest iPhone. There is often a whole list of items which take priority over such a purchase. Even middle-class individuals are beginning to curtail such major consumer items. At the end of the day, therefore, the foregoing factors – taken separately and/or collectively – in no way demonstrate the ability to exercise a measurable impact on human behavior vis-à-vis such a major decision as opening a voluntary retirement savings account. If they can't get us to sign a gym membership, it is simply irrational to expect that they will lead us to allocate 20% of our monthly income to a savings account.

Now let’s try adjusting the parameters. What would your reaction be if your family physician indicated that you will die if you do not begin an exercise program immediately? Although certain individuals might simply disregard such well-intended advice, the majority of us would do anything it took to avoid an imminent heart attack, etc. This is to say, we would effectuate the needed lifestyle change. This dynamic is extremely germane to what I wish to propose to the FIAP membership.

As I stated, I am in complete agreement with the spirit of Renee Schaaf’s remarks regarding personalized financial advising services. In my judgment this issue comprises what ought to be our prime objective within the pension sector. As our colleague indicated, we currently do not have an economically-viable means for delivering such services to all of our clients. This is to say, retirement funds can simply not afford to send a representative to provide house or office visits to every one of our fund participants.

Before sharing my proposal, I first wish to talk about strategies aimed at increasing access to personalized advising services. Let’s use the example of Juan, a financial advising professional who earns a base salary of USD 1000; i.e., before commissions. He also earns 1% of every AFP account which he opens, as well as 10% of every voluntary savings account that he opens. While these parameters are not an exact representation of current commission schedules, I do believe that they are an accurate reflection of the current scenario within the sector.

Our financial planning professional has two clients. The first client is named Pedro, and he has a voluntary retirement savings account balance of USD 500,000. Clearly, this is an individual who understands the benefits of regularly contributing to a voluntary retirement savings account. The second client, Andrés, has not opened a voluntary retirement account, but does have the ability to allocate USD 100 per month to such a product. Perhaps the reader will infer where I am going with
this. How would we expect a pension fund to behave in such a seminar in? I think most would agree that it is irrational to expect that an account such as that opened by Andrés – which will generate a monthly commission of USD 10 – will take precedence over an account such as Pedro’s, which will generate USD 5000 per month.

Additionally, this scenario clearly begs the following question: who is in most need of Juan’s financial acumen, Pedro or Andrés? Is it Pedro, who needs to explain tax related issues, as well as perhaps some guidance in terms of portfolio optimization? Or is it Andrés, who needs to get some expert advice on why he needs to change his entire perception of retirement wealth generation? For nearly two decades now, the sector response has been categorical: focus on Pedro. It directed its advising services towards clients requiring clarity on tax issues, as well as those with a great deal of capacity to set aside funds for retirement. This generated a scenario in which only a lucky few within the participant pool managed to make significant gains in terms of their voluntary savings account balances. While few would deny the fact that the penchant within the sector for focusing on these individuals has had extremely positive outcomes for those involved, the major shortcoming of such a strategy is that the retirement sector is losing out on approximately 80% of the potential market. It also means that these individuals are not taking advantage of the exemplary results achieved by the aforementioned privileged few.

Clearly, one is free to view this situation as a business opportunity, or to perceive it as a sector responsibility. While the pension sector has experimented with a variety of digital tools and retirement instruments, they have failed to achieve what we would characterize as optimal results. And while I would be the first to concede that our industry is in the preliminary stages of such progress, one thing is clear. Something must be done to provide more coverage in terms of personalized financial advising services. In fact, this issue comprises our principal challenge within the Latin American pension services sector. This lack of advising services is impeding the entry of hundreds of thousands of Latin American workers into our sector.

Clearly, we need to remediate the issue. In fact, as I have attempted to assert, it behooves us to do so. On the one hand, there is a concept known as demand-side subsidies in economics. Of course, in this instance our sector needs to work on generating supply-side subsidies. For instance, if the fee schedule involves commissions between 0.56% and 0.60%, individuals who have accounts such as Andrés involving USD 100 per month will be left by the wayside. Even though this amount of capital invested in an individual retirement account will pay major dividends in the life of this gentleman, the scenario is simply not economically feasible. He will not receive personalized advisory services, even though a voluntary savings account would make a world of difference in his life; which is to say, it would allow him to live in dignity – rather
than poverty – during old age. Additionally, it should be noted that financing the entire development lifecycle of a digital phone application may not even be feasible given the current commission schedule. There are simply not enough resources being generated.

Therefore, those of us within the sector need to discuss – and then begin generating – public policy capable of generating the subsidies we need to remediate this fundamental shortcoming of the pension sector. It is an issue which transcends the innately public or private facets of life. This is a societal problem. As such, failure to effectively address said problem has the potential to impact of very wide spectrum of individuals within our nations. Therefore, we need to decide – as a society – how we intend to generate subsidies capable of ensuring that our respective populations receive the professional, personalized financial advising they need.

The example of Andrés serves to illustrate another aspect of the financial education and advising question. Many within society simply do not possess the skill sets needed to navigate such deep waters as those found in the financial sector. As we have heard time and time again at FIAP forums, the parameters involved are fairly complex; and especially in terms of the way in which they interact and morph over time vis-à-vis participant risk and age factors. We cannot afford to leave individuals to their own devices when all of us are extremely aware that entire teams of highly-trained professionals are used to conduct portfolio management operations at our respective funds. Left on his own, how is Andrés to know how much to allocate on a monthly basis to his voluntary retirement account? What type of instrument should he be involved in? Clearly, the industry has an implied responsibility to at least attempt to optimize the decision-making capacity of every member of society.

A factor which further complicates this entire dynamic is the lack of trust that Latin American banking institutions have generated within their respective societies. Here again, in my view the retirement products sector needs to get much more proactive in terms of remediating this credibility gap. It is in our own best interest, and also comprises an ideal opportunity for national governments to exercise leadership; in terms of increasing our regional financial-education IQ, as well as in terms of ensuring that the proper regulatory mechanisms are in place to ensure the public has an accurate perception of sector credibility. Under optimal conditions, the pension industry will work hand-in-hand with the public sector in order to address this issue of paramount importance which, to one degree or another, may be currently impeding within the entire retirement savings sector.

As other presenters have stated this year, one of the most basic tenets of behavioral economics dictates that, under the foregoing conditions, human beings tend to procrastinate. The sector, not unlike the physician in our analogy, needs to
have the courage to lay everything out in black and white. This is, according to many behavioral economists, the only way we will ever get people to make a life-changing decision; i.e., such as beginning an exercise program, or beginning a monthly retirement savings program. As occurs when individuals fail to heed doctor warnings, the outcomes are fairly bleak. People are going to end up facing enormous financial challenges at an age when generating income is rarely an option. No one wants to see people end up in the circumstances. Thus, even as we challenge individuals to make a course correction every day at our jobs within the pension sector, we must also challenge ourselves to pursue a new goal: letting people know, in no uncertain terms, that voluntary savings is no longer voluntary. We have an obligation to let them know that the traditional route to pension sufficiency is part of a bygone era. Frankly, the industry has been far too passive with regard to this role for far too long; which is ironic, whereas it a role which it is uniquely qualified to play within society.

**Case study: Mexico**

The Mexican scenario is a bit more precarious, given that its current contribution rate is lower than in Chile. However, as Graph 2 clearly demonstrates, Mexico’s volunteer retirement savings sector has been showing signs of stable growth for nearly four years (2015-2018). Here again, the enormous capacity of the private sector in terms of financial education and marketing has been determinant in terms of driving demand for retirement-related financial products. Fortunately, in the case of Mexico the pension industry has fulfilled its obligations and the sector has undergone a 45% increase in growth since its launch in 2010. In other words, it has experienced more growth than any other investment alternative within the Mexican economy; gains which represent approximately 2% of all assets under management within the national financial system.

Clearly, this type of progress merits analysis. In my view, the first factor involves the fact that there are major three pension fund administrators – which are known as AFORES in Mexico – who collectively serve approximately 40% of the higher workforce within said nation. These three leaders have been extremely proactive, whereas the other funds within the sector have experienced negligible levels of growth. Here again, a rational analysis would seem to point to a lack of financial education initiatives at said funds. And, clearly, industry leaders opted for a decidedly proactive approach to the selfsame issue. They could not stand by and watch so many hard-working Mexicans fail to avail themselves of the benefits of a voluntary retirement savings account.

In my view, this dynamic is due to a single, fairly straightforward issue: at times,
our industry forgets our duty to the nation overrides factors of a purely market-driven nature. And it is easy to understand how this occurs. Perhaps we need to get back to basics and start generating actionable financial education agendas; for the good of our firms, and for the good of our societies.

Speaking for my own team of professionals, SURA-Mexico has made major contributions to the growth of voluntary savings within the Mexican economy through its Periodic Savings Program (plan de ahorro periódico). As you can see, Graph 2 includes evidence that beginning in 2015 we started generating some truly outstanding results.

GRAPH 2
INCREASES IN CONTRIBUTION LEVELS AT SURA-MEXICO

Conclusions

To begin with, I would like to revisit a point made by Renee Schaaf regarding the need to simplify the processes by which a voluntary retirement savings account can be opened and utilized by the client (see Figure 1). An ideal place to begin reducing complexity levels would be to couch our explanation of these products in layman’s terms; which is to say, present things in such a way that an individual of average intelligence is capable of understanding all of the major dynamics involved. And before I am accused of elitist thinking, please allow me to clarify that many of my closest friends do not instantly ascertain what these products are when the subject
is touched on at lunch. Although these products may seem fairly simple to those who are well-versed in financial sector terminology – i.e., the FIAP membership – I assure you that this is not the case with many individuals who possess even above average financial IQs. Retirement wealth instruments can get quite complicated rather quickly, therefore our industry needs to grapple with this challenge until we generate sales pitches which the general public can follow. Here again, it all comes back to generating thought-provoking, innovative and inspiring financial education programs. To do this, we are going to need professionals practiced in the art of conducting thought-provoking, innovating and inspiring strategy sessions. Otherwise, every actor within the pension sector will have – by default – failed to meet their obligation of fomenting a culture of retirement savings within our respective societies.

Although we all long to see progress made in terms of automatic enrollment, improved and more widespread use of technology, more simplified financial products, as well as innovative marketing strategies, everything must occur in terms of one primary aim: ensuring the general public understands the benefits of engaging with retirement savings instruments. This is the key to sustainable sector growth.

I say this all because, while flashy marketing and high tech mechanisms often generate a great deal of short term results, it is higher financial-education IQs that are going to ensure people find their way to retirement savings products. Once they begin to earn enough income to start setting a small percentage aside, our investment in world-class financial education programs will start to pay dividends. Every dollar invested in financial education is a dollar invested in the future of the sector. Clearly, said investment will also generate major dividends in terms of pension sufficiency.
If we intend to generate incentives designed to drive sector growth, we need to fulfill the following four basic criteria: employer and employee tax benefits; portability and liquidity, in special cases; stricter regulatory frameworks designed to mandate voluntary retirement savings; and, supply-side subsidies aimed at achieving optimal participation rates. In terms of this last component, I feel that it is time we began considering the introduction of federally-mandated subsidies aimed at ensuring the largest number of individuals possible have access to professional advising services. As stated, this type of measure will generate results for our industry, sector professionals, governments charged with ensuring citizens are at an acceptable level of retirement wealth, as well as every member of society who would be afforded an opportunity to reap the rewards of higher pension payouts.

In Chile, we currently have a 15% tax rebate aimed at incentivizing voluntary retirement savings. However, to date this mechanism has produced fairly mediocre results within our economy. When Chileans do choose to take advantage of said tax incentive, everything points to their having done so in order to simply take advantage of the tax rebate; i.e., they are not necessarily in search of a means to generate more retirement wealth. In addition to the lackluster results of such measures, Chilean society’s opposition to the AFP model due to mediocre payout levels is gaining momentum with every passing day.
Under the circumstances, something truly disruptive needs to occur. Perhaps it is time to begin utilizing a proportion of these tax revenues to cover the cost of financial advising services. These resources will cover the hiring and training of professionals capable of addressing the financial-education IQ gap within our respective societies. I also feel that it would be best to focus our efforts on individuals who still have time to remediate their retirement wealth situation; i.e., workers who still have enough economically-active years to generate an acceptable pension payout. Here again, this is a win-win for all concerned: retirees, pension funds and governments.

In closing, the financial education shortfall issue is reaching the boiling point. In fact, we have been witnessing this issue reach critical mass for the last four years. And as Renee Schaaf indicates, once we do generate a truly innovative strategy, we mustn’t forget that orthodoxy is the enemy of change. We can either begin to immediately increase our societies’ retirement-instrument IQs or forever lose the opportunity to generate better pensions for the individuals involved. Secondly, we need to overcome our hesitancy in terms of only introducing fully-developed education programs. We need to get past this type of antiquated thinking and ensure something is being done to remediate this completely economically-unviable scenario. At the end of the day, this is something new for the entire industry and sector. Therefore, our major opportunity areas will be generated through doing rather than contemplating and evaluating. We are by nature a rather conservative lot, but the time constraints involved here necessitate immediate action aimed at generating effective, interesting and innovative financial education strategies.
THE GROWING IMPORTANCE OF VOLUNTARY PENSION SYSTEMS IN EUROPE
FRANCESCO BRIGANTI

1 Francesco Briganti holds a Ph.D in EU law, focused on the legal creation of a pan-European employee benefits plan. He has presented at more than 300 public events around the world and often lectures on EU law and EU lobbying affairs at several universities. Has served as lobbyist on EU affairs related to insurance and employee benefits matters for 13 years, and is currently the Secretary General of the Cross Border Benefits Alliance-Europe (www.cbba-europe.eu), a new EU advocacy organization promoting the development of cross border and pan-European employee benefits plans vis-à-vis European and national decision makers. Francesco is a member of the Occupational Pensions Stakeholder Group (OPSG) of European Insurance and Occupational Pensions Authority (EIOPA). He is also Chair of the Italian branch of the International Employee Benefits Association (IEBA), and in January 2019 was appointed Chair of the new IEBA EU branch (www.IEBA.org.uk). Francesco is also the CEO of Employee Benefits and Welfare Institute, a Brussels based public affairs company (www.ebwi.eu).
Cross Border Benefits Alliance – Europe (CBBA-Europe)

I would like to begin with a brief overview of what the Cross Border Benefits Alliance – Europe (CBBA-Europe) mission entails. Based in Brussels, CBBA-Europe is a growing EU advocacy federation that was founded in October 2017. Our federation is made up of:

- Sponsoring employers;
- Benefits’ providers (pension funds, insurance companies);
- Financial industry (asset managers);
- Experts (lawyers, professors, actuaries, large-scale consultancies);
- National, international associations and networks.

CBBA-Europe supports all stakeholders who have demonstrated a willingness to create cross-border pensions within the existing legal framework, by providing institutional and advocacy support. The Alliance also works to create an environment in which better legislation is enacted, with an eye to going beyond the existing framework and creating pan-European pensions for future generations of workers.

Currently, there is a fairly strong and widespread legal debate regarding public and private pension schemes underway in nearly every nation which comprises the European Union. At issue is the legal feasibility – vis-à-vis EU treaties – of generating (private) cross-border and pan-European pension schemes, whereas all schemes are currently limited to national frameworks. CBBA-Europe works so diligently to foment the existence of pan-European pensions because, given the common market in which Europeans already work and live, this approach would generate a wide variety of positive outcomes: increased portability, mobility of workers, and especially economies of scale for firms. Many CBBA-Europe members – to include, insurance firms, multinationals, pension funds and financial-sector firms – strongly favor the creation of cross-border pension frameworks. As one would expect, a fair amount of resistance also exists due to factors such as national protectionism. For
example, some national governments of EU member states are against cross-border pension structures due to the fear that said pension schemes will simply become a way to channel economic resources out of their respective economies. Of course, the issue is also often much more complex, but this generalization of perceptions will have to suffice for the purposes of this text.

It is interesting to note that, in addition to our European and multinational members, we also have a significant number of US stakeholders who are members of the CBBA-Europe. Clearly, US firms are also very interested in pan-European solutions.

**The growing importance of voluntary pension plans in Europe**

Whereas the European voluntary pension sector is a huge market, the aim here is not to expound upon every single voluntary model available. Instead, it seems more appropriate to limit the scope to focusing on current trends within the voluntary pension plan market. Firstly, let’s delineate exactly what we refer to in Europe when we say pension system. In the vast majority of European nations, the system outlined in Figure 1 best describes the model being utilized.
As noted, the first pillar is absolutely statutory and most often mandatory (see Figure 2). The scale of the first pillar within the European context is truly remarkable. The very enormity of this pillar is what serves to often make it such an immense roadblock to the introduction of voluntary pension plans.

### FIGURE 2

<table>
<thead>
<tr>
<th>1st pillar</th>
<th>2nd pillar</th>
<th>3rd pillar</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1st pillar pensions</strong>: statutory, normally mandatory by law, and Pay As You Go (PAYG) or tax financed; traditionally DB, but not always (sometimes NDC; and other times flat rate/means tested)</td>
<td><strong>2nd pillar occupational/workplace pensions</strong>, so co-financed by the employer: usually funded; sometimes voluntary, other times mandatory; DC or DB.</td>
<td><strong>3rd pillar individual pensions</strong>: funded, DC, and voluntary, normally not financed by employer;</td>
</tr>
</tbody>
</table>

In Europe, the second pillar is normally co-financed by employer contributions. As Renee Schaaf mentioned, companies cover a portion of employees’ pensions. Employees, however, do not always participate in terms of making contributions. The second pillar/workplace schemes are normally funded and, with the exception of some EU Countries, often voluntary. And they can be defined contribution or defined-benefit in nature.

The third pillar is comprised of individual pension arrangements which are financial instruments. On offer in a number of national markets, they are funded, defined contribution and – of course – completely voluntary in nature.

When one speaks about voluntary pension systems, in principle the discussion should focus on the second and third pillars. This is due to the fact that the first pillar is basically mandated by law.

In some nations, the first pillar is comprised of two separate levels, as illustrated in
the following graph. One nation, Finland, operates extremely successful pension schemes which are included in the first category entitled Case Nº 1 in Figure 3. The Finnish first-pillar, mandatory pensions are mixed systems managed by a few non-profit providers approved by the State. In this scenario, 30% of those schemes are funded. The other 70% are pay-as-you-go. In this framework, individuals have the option to increase their individual contribution level and increase their eventual payout. Therefore, there is ostensibly much less need for other pension plan providers to operate within the market. Individuals can simply remain within the national pension system.

The second scenario, labeled as Case Nº 2, is quite interesting because it was adopted in some nations which have proven track records in terms of economic growth and stability. In general, we refer here to other Scandinavian countries (Denmark and Sweden) and scenarios that involve an additional first-pillar layer which is funded. Therefore, the first pillar is comprised of a pay-as-you-go or tax-based component, with an additional mandatory component which is mandated by law. This additional component is known as the First pillar bis. Case Nº 2 comprises what was introduced in Central and Eastern Europe, and most of us here at the FIAP forum will be aware of their general parameters. Poland, Hungary, Slovakia, Romania, and the Baltic nations, for example, ruled out this type of framework. Unfortunately, and unlike the cases of Denmark and Sweden, results were less than optimal. This is because in those cases, the funded component was not added
to the existing PAYG system. The pillar was later split into two parts (the usual PAYG, in addition to a funded component), by keeping unchanged the amount of contributions originally paid to the former system. In other words, the funded part was “extracted” from a pre-existing PAYG system. As mentioned during the first day of our proceedings, diversification, in terms of funded and pay-as-you-go hybrids, is not a bad idea. However, it is very different to add funded layers to a PAYG scheme, or to cut the financing of the latter in order to divert contributions to funded schemes.

The third scenario is labeled as Case Nº 3. It is basically comprised of Switzerland, which provides excellent pensions to its citizenry. Unfortunately, it does not really fall within the purview of this text. Therefore, we will not examine it more deeply than the characteristics included in this graphic.

The basic problem in Europe is that workers contribute a large amount of resources to their first pillar pension plans, and the vast majority of are pay-as-you-go. This is a huge trap because, as this type of scenario involves a great deal of cost efficiency, it becomes increasingly difficult to transition from a pay-as-you-go system to a framework containing additional funded components.

Other EU Countries like the Netherlands and Sweden and, to a lesser extent other States, made their occupational second pillar mandatory through the use of collective agreements (see Figure 4).

**FIGURE 4**

SOURCE: THE AUTHOR.
There is a high degree of consensus that a mixed first pillar pension (PAYG/tax-based + funded) or a mandatory second pillar is the best strategy available in terms of achieving long-term sustainability, pension adequacy and solidarity (intergenerational/intragenerational). As such, nations utilizing an extremely large, PAYG first pillar face much more significant challenges in terms of introducing a funded voluntary (or mandatory) layer when the contributions to PAYG are already very high.

Main incentives/attempts to encourage funded pension systems in Europe

There are currently seven main strategies and incentives currently being employed throughout Europe:

1) Tax incentives (and other social costs) to join voluntary funded pensions for second and third pillars;
2) Automatic enrollment into second pillar pension funds;
3) Collective agreements favoring adhesion to second pillar pensions;
4) Structural pension reforms of the first pillar introducing funded pensions;
5) Role of local/regional authorities to promote pension funds locally;
6) New methods to compel enrollment in second pillar pension funds;
7) New EU Regulation on Pan-European Personal Pension (PEPP);

In terms of tax incentives, those of us involved in the pension sector are fairly familiar with what this issue entails in an EU context. Almost all European countries provide tax incentives when individuals and/or workers decide to join a private funded pension product. The most commonly-used pension fund tax regime in Europe is EET.2 However, other formulas such as ETT are utilized in nations like Sweden Italy and Denmark.3 TEE (Luxembourg, Hungary, Czech Republic) and TET (Belgium, France, Austria) are also used.4 5 Thus, while tax incentives are quite ubiquitous, the strategies to employ them within economies vary from nation to nation.

---

2 EET: Exempt contributions, exempt investment income and capital gains of the pension institution, taxed benefits.
3 ETT: Exempt contributions, taxed investment income and capital gains of the pension institution, taxed benefits.
4 TEE: Taxed contributions, exempt investment income and capital gains of the pension institution, exempt benefits.
5 TET: Taxed contributions, exempt investment income and capital gains of the pension institution, taxed benefits.
In some EU Countries, deductions on the employer’s or employee’s social security contributions are also used in scenarios involving occupational pensions.

The second main strategy is automatic enrollment. The first nation within Europe to introduce this type of measure was the United Kingdom. Italy followed soon thereafter and Ireland is currently preparing to introduce an automatic enrollment mechanism. The strategy has proved highly efficient in terms of boosting participation rates. Unless an individual explicitly expresses a desire to forego participating in a given pension scheme, they are automatically enrolled. Again, the emphasis here is a discussion of second pillar pensions. Therefore, employers play a role. The big news here is that if employees do not opt out, employers must pay a mandated contribution. Differences across countries exist in terms of who contributes more between the employer and the employee. For example, in the United Kingdom automatic enrollment involved employees contributing more than employers when the initiative was launched. However, in Italy the inverse was true and employers paid more into pension funds than their workers, even though part of contributions to Italian pension funds is represented by a severance pay (or final career payment) that workers would otherwise receive as a lump sum at the end of their careers (TFR). Another factor, in terms of the different automatic enrollment modalities utilized in Europe, is who chooses a given pension fund. At times, employers have the ability to determine which pension scheme is utilized at a given firm, while in other instances it is workers to choose. The legal possibility to withdraw funds from an occupational retirement scheme during an individual’s work-life is also a factor which varies from nation to nation throughout Europe. As we all realize, allowing individuals to use retirement funds before reaching retirement age can be financial suicide in old age. A failure to limit access to pension plan resources can effectively turn them into an ATM. On the other hand, many view this liberal framework as a means to incentivize initial enrollment, because workers do not feel “trapped” in a situation in which their money is effectively unavailable until retirement.

Another factor which is especially common in the Scandinavian nations, as well as the rest of what is known as continental Europe, is the use of collective agreements setting up pension funds. In continental Europe, these collective agreements exist at the company, as well as sector-wide, level within economies such as Germany, France, Belgium, the Netherlands and Italy. In some national contexts, these types of agreements are mandatory and in others they are optional. As a result, when the agreements are not binding, a pension plan of reference created via collective agreement exists. However, individuals covered by said agreements have the right to participate or forgo enrollment. Of course, this factor correlates to national contexts but it may also vary in accordance with the state of industrial relations within a given economy. In cases where industrial relations are very strong,
such as in Scandinavian countries, there is an obligation to follow the outcomes of collective agreements and hence the ability to enroll in a pension fund if this latter was generated via collective agreement. Whereas in Southern Europe, as well as within the English-speaking nations, collective agreements are normally weaker and not typically sector-wide; to include companies and workers who did not sign a particular agreement (erga omnes obligation). In Great Britain, collective agreements were dramatically weakened during the Thatcher governments. As a result, collective agreements were henceforth viewed as gentlemen’s agreements;–i.e., unlike in Scandinavian or certain nations within cotton and will Europe, no legal compulsion existed to enroll in a pension scheme generated via a British collective agreement.

The fourth factor – described above in terms of the different pension pillars that exist in Europe –, involves introducing funded components into the first pillar. This type of structural pension reform, as many of you are well aware, has been fairly common within the Latin American context; most notably, in the case of Chile, where the pension system was made exclusively funded during the 1980s. It was mentioned that an attempt to reform the first pillar, by reducing the (previously existing) PAYG component in order to create a funded layer was especially made in Central and Eastern Europe. During the first day of this seminar, the issue was touched upon. This reform effort, in and of itself, was noble. Unfortunately, it was often a failure because while employers were still obliged to allocate their contributions to sustain the PAYG part, workers started to allocate part of their social security contributions to funded schemes. This produced a huge deficit within the pay-as-you-go system, because part of its resources (workers’ contributions) were diverted to new, funded pension schemes. However, pensions still had to be paid to the millions of retirees who were covered by the PAYG system. As one would expect, when the pay-as-you-go schemes began to hemorrhage resources, many governments either chose to reduce the funded component of the first pillar or even went so far as to nationalize the entire pension fund. For example, this was the case in Poland, Hungary and – more recently – it is happening in Romania. Given this tendency across a wide variety of national contexts, it is preferable to introduce pension reform which involves an additional contribution to a funded scheme as occurred in Sweden and Denmark; which is to say, it is preferable to avoid restricting the financing of an ongoing pay-as-you-go system (or at least keep said restrictions to a minimum).

In terms of the international voluntary pension savings sector, the issue of regional initiatives is a fascinating subject. In highly decentralized nations regions and even some municipalities, some truly innovative public awareness and financial education programs have been generated. Sometimes, these regional and local governments even cover the costs of pension plan management. Additionally, this issue merits close review because these governmental entities have achieved much
higher participation rates within their respective regional pension schemes than their national counterparts. Of course, the number of decentralized nations is relatively few, which means that case studies are somewhat limited. But at the end of the day, societies endeavoring to introduce pension reform should take a long hard look at how many regional entities have approached participation-rate challenges. Local governments are often closer to citizens than their national counterparts, and local awareness campaigns and incentives often work better.

As stated, the sixth factor involves strategies designed to compel individuals to enroll in second-pillar pension plans; either through the passage of new legislation or the generation of collective agreements which are stronger and whose purviews are increased to include non-signatory companies and workers.

The final factor involves the Pan-European Pension Product (PEPP). This personal pension product, which was approved in April 2019, is intended to boost the growth of the third pillar pension industry in the EU, which is currently worth about €7 trillion of assets. It is hoped that the initiative will increase competition among providers and provide a more dynamic voluntary savings market. Additionally, it provides portability for account holders living in or working in EU member States, and is intended to boost the voluntary scheme market within nations which currently lacked second pillar (workplace) schemes. The initiative also provides greater flexibility to firms operating pension funds. For example, a company can set up a fund in Luxembourg and offer it to individuals within every single member State within the European Union. This is to say, it need not obtain separate authorizations within each national regulatory framework. The PEPP was designed with clearly delineated parameters which consumers can understand. During the discussions on the PEPP it was even proposed to provide individuals with the option of purchasing the PEPP default investment option online. However, the final text of the legislation did not include this option. In instances involving non-default options, individuals must obtain advising services before purchasing. The PEPP, which is a third pillar pension product, was especially designed for markets in which the occupational pensions (second pillar) mentioned by Renee Schaaf are not very common; and for those markets where third pillar individual pensions are very expensive in terms of administration and investment fees. As we know, there are several nations which fit this profile. Therefore, everything points to the PEPP proving to be a welcome addition to many economies throughout Europe by increasing competition and the variety of pension options on offer; especially in Central and Eastern European nations.

Factors which may impede the promotion of voluntary funded pensions in Europe

In terms of voluntary funded pension plans, the relative magnitude of the first
pillar’s pay-as-you-go component within many European nations comprises a relevant roadblock to the introduction and proliferation of voluntary schemes. In many cases these huge PAYG funds comprise the entire national pension sector. As stated, they are also extremely expensive endeavors.

Many nations within Europe utilize more than 20% of workers’ wages to fund the PAYG components. To clarify, this level is relatively high when compared to the OECD average of 18.4%. The list of such economies includes Italy, France, Hungary, Poland, Latvia, Greece, the Czech Republic, Spain, Austria, Portugal, Estonia and Slovenia. Clearly, this is a major issue which needs to be remediated as soon as possible. Among other issues, this huge percentage has driven up the cost of labor across the entire continent.

Another major impediment to the prolific nation of voluntary pension funds has been the fact that younger generations have been earning less than preceding generations. To further compound this dynamic, many within the sector have observed that younger workers are far less aware of the importance of generating retirement income. Due to their more restricted resources, it is far more difficult to convince these individuals to allocate a percentage of their income to a retirement account. They are often more focused on raising a family and providing for same. Public financial incentives are also expensive, and as one would expect EU states tend to have high levels of public debt. This serves to further complicate the task of incentivizing private savings.

In terms of public awareness campaigns designed to inculcate a culture of retirement savings, society has undergone a major shift in that our parents’ generation perceived the pension as an instrument guaranteed by the State. Therefore, in times past pensions were simply not an issue which merited public awareness campaign. The challenge, then, is to convince younger generations that pensions are an issue which they must address. Many nations have, to be frank, done little to nothing to address the issue. Logic dictates that governments are afraid to incite widespread fear. Additionally, it is often much easier to simply sweep the problem under the carpet and continue on with business as usual. Clearly, individual politicians are hesitant to address such controversial issues as the fact that the current economically active population will simply not receive the same levels of pension which their predecessors enjoyed because, even if active workers continue paying high pension contributions, the consequences of the public pension reforms will fall on the new generations and will not retroactively affect individuals covered under the pre-reformed system.

In terms of voluntary funded pensions, in many countries, private pension plans which were launched in the past proved to be too expensive due to administration
fees and asset management. Inefficiently operated bonds serve to deteriorate the the public’s perception of voluntary funded pensions. Clearly, if individuals feel that voluntary pension funds do not have a high degree of credibility, our mission of inculcating a culture of retirement savings becomes exponentially more challenging. It is our deepest hope that the recently enacted PEPP will go a long way towards remediating this issue and restoring the European public’s faith in responsibly managed funds.

The aforementioned tendency of some governments to avail themselves the resources available in the first pillar bis (funded part) only serve to further complicate issues in terms of the credibility gap. Therefore, political risk often comprises a major factor in the introduction and proliferation of voluntary funded pension plans within an economy.

Conclusions

The fact that PAYG pension schemes are utilized in the majority of European nations, funded pension layers need to be introduced in order to diversify pension sectors and address issues such as population aging, increases in the demographic dependency ratio and low fertility rates. In my opinion, a mix of pay-as-you-go and funded components is the best strategy available, and one which many EU member states have pursued through the use of a variety of tax incentives and other measures aimed at promoting funded pensions, especially in terms of second-pillar, occupational pensions. To date, evidence indicates that mechanisms such as automatic enrollment (tacit consent), proactive trade unions (collective agreements), and/or new strategies designed to mandate higher enrollment rates provide better results than tax incentives. The new PEPP initiative shows how serious European community is about fomenting the voluntary funded pension sector by generating a product which serves to increase competition with nationally-based pension products, which have often proved as expensive as they are inefficient.

Be they voluntary and/or mandatory, new funded pensions face two major obstacles to success: occupational/second pillar driving increases in cost of labor, thereby threatening competitiveness of EU firms in a continent where contributions to PAYG pensions are often already high; and, due to lower wages and in contrast to the preceding generation, younger workers find it more difficult to allocate income to voluntary pension schemes. The public pension debate has failed to adequately address the gravity of the issue both in the short and medium term. Therefore, there is a serious lack of awareness in terms of the generational gap which has been generated between the current retiree population and ensuing generations. This is a twofold mistake, whereas society is failing to avail itself an opportunity to capitalize upon intergenerational solidarity, and once it becomes clear up pension crisis is
looming people will be less apt to cooperate. Ideally, contributions into current PAYG pensions should be reduced for young workers in order to provide them an opportunity to pay into individual capitalization pensions. Such a measure would have the added benefit of helping to keep labor costs under control. However, the drastic reductions to PAYG pensions undertaking in several Central and Eastern European countries led to terrible deficits and disruptive U-turn reforms, including the nationalization of their funded pensions. Indeed, it is always easier to transform a funded frame into a PAYG scheme; moving from PAYG to a funded framework is a much more difficult undertaking.

A gradual, small reduction of contributions to PAYG systems, perhaps via a 1% rate for younger generations would prove to be a good starting point. In terms of finding ways to capitalize upon intergenerational solidarity, few believe that there is room for at least discussing how generous current pension payout levels are. However, the potential synergies here would be truly incredible: resources from reductions in current payouts could be seeded into individual capitalization accounts. Yet again, this is why it is so important to have a healthy, constructive debate on the pension issue. For example, very few politicians would be willing to mention how generous current pensions are vis-à-vis what current retirees contributed into their respective systems. Failure to address these issues head on may lead to the current levels of dissatisfaction among younger generations growing. And, to be clear, there are definite signs that younger workers already feel cheated by what is occurring. Therefore, continued failure to address accrued rights is a ticking time bomb.

This scenario has generated a new generation that is much more skeptical of notions such as *intergenerational solidarity*, which served as the foundations of PAYG pension schemes. Instead, these individuals are increasingly in favor of individual capitalization schemes. Although the credibility of collective and intergenerational frameworks is increasingly tenuous, this scenario represents a major opportunity in terms of reevaluating the role of the State, employers, employees and the individual in generating retirement wealth. Everything seems to point that this moment in history is a major opportunity to objectively discuss the subject of radical pension reform aimed at readjusting the balance between funded and pay-as-you-go systems.
CHAPTER V

NEW INVESTMENT TRENDS

TIM GIFFORD. Capital markets: Alternative investments, commercial real estate, trends.
TAKAYA SEKINE. View from the Quantitative analysis: the World has changed with ESG.
THOMAS METZLER. Transforming insurance asset management for the institutional market.
RUPERT WATTS. A passive approach to risk parity.
CAPITAL MARKETS: ALTERNATIVE INVESTMENTS, COMMERCIAL REAL ESTATE, TRENDS

TIM GIFFORD

---

1 Senior Managing Director, Capital Advisors Latin America. Heads CBRE’s investment banking operations within the region, focusing on complex cross-border investment advisory services. Advises institutional investors on mergers and acquisitions, dispositions, and financing of commercial real estate throughout Latin America. Working closely with firm’s office locations in Latin America, provides clients seamless capital markets advisory service. Possesses more than 20 years of experience in commercial real estate and investment banking business in Latin American and Caribbean markets.
CBRE is the largest real estate corporation in the world, with the largest amount of real estate assets under management.

My remarks on commercial real estate will focus on current trends within said sector as they relate to three major categories: global capital markets, US capital markets and Latin American capital markets. I will focus on the aforementioned capital markets and what CBRE’s expectations are in terms of the short and medium-term horizon.

I. Global capital markets

Cross-Border activity

Firstly, I would like to share some remarks on global capital markets. As you can ascertain from Graph 1, 2018 surpassed 2015 as the best year for real estate capital markets within the current cycle in terms of capital volume and capital allocated to said asset class. Global transaction volume exceeded USD $1 trillion globally, a figure which was 6% above 2017 volume. In fact, 2018 results surpassed even 2007 in terms of total volume. A quick glance at the graph makes it clear that the majority of the volume is generated within the Americas, followed by Europe and Asia Pacific. The lion’s share of the volume within the Americas occurred within the United States.
In terms of the sources of capital involved, the Graph 2 includes a fairly clear description of the current scenario in terms of where the money is coming from and where it is heading to. One of the most significant transitions that we observed during the period 2017-2018 was a reduction in Asian capital outflows into foreign commercial real estate markets. In relative terms, when one refers to Asian capital they are basically saying Chinese capital. This dynamic continues apace in 2019, and here again, it is primarily Chinese investors to whom one refers. Another major trend that we identified for the period 2018-2019, was a measurable increase in European capital outflows.
CBRE attributed much of this scenario to the fact that Chinese investors – especially in terms of firms such as Anbang Insurance Group, which maintained a fairly aggressive stance for several years – began to pull back in terms of commercial real estate. At the same time, the evolving geopolitical situation in Europe has attracted investment to the US. In the UK, Brexit caused many local investors to look across the Atlantic for investment opportunities. The Gilets jaunes (yellow vest) movement in France then had an impact on the perception of that market. For their part, German investors have experienced lower yields and returns in their market and have also begun looking abroad.

The two major reasons we feel that foreign investors are looking abroad are diversification and a desire to achieve better yields. Another contributing factor, which is related to the broader diversification issue, is currency exposure. It is also worth mentioning that, as Chinese companies are substantially reducing outbound investment, European and Americas investors will continue to boost capital flow. In our view, this dynamic is ostensibly due to increased appetite on the part of property companies.
Investor types

Having established what the capital flow scenario looks like, I would like to delineate what type of investor is currently active in the international commercial real estate market (see Graph 3). The most important aspect of this issue is that private property companies comprised the most active group of investors in 2018. Historically, private equity has played the most active role within the international real estate market. In 2018, a noticeable increase occurred in terms of extremely large platform and portfolio acquisitions. The percent and amount of cross-border capital for property investments is expected to be lower for private property companies in 2019. This is due to the fact that 2018 figures were skewed by multiple, large-entity level transactions.

Therefore, the overall expectation for 2019 is that private equity will become more active in terms of cross-border transactions, as well as commercial real estate.

Yields

In terms of trends related to yields generated by this asset class, a generalized compression has occurred in property yields. Yields are typically calculated vis-à-vis a cap rate, which is equal to the net operating income of a property divided by the total purchase price. Yields are tracked by monitoring transactions which are reported to public markets in terms of what prices are being paid in addition to what cap rates are being placed on said assets.
After nine years of steady compression (see Graph 4), yields began to flatten out during the second half of 2018. The general consensus is that cap rates are going to stabilize during 2018-2019, and that a concomitant uptick in global cap rates will occur in 2020. Much of this thinking is being driven by the perception of the Federal Reserve potentially increasing interest rates. However, it should be noted that the overall outlook has been slightly adjusted due to what has been occurring in US debt markets.

There are two other important issues which merit review. Global average yields for office, industrial and retail are expected to remain stable in 2019 and rise slightly in 2020. Although retail and office properties lead the global market, the dynamic within the US is completely different. This is primarily due to the relevance of firms such as Amazon within the economy. Clearly, there is less need for retail and office space.

In light of the foregoing, it is expected that investors will continue to diversify into secondary markets in search of yield. Global bond yields are expected to compress in the first half of 2019 due to the rise in economic and risk, but resume their climb as economic growth picks up in the second half of the year. Over 2019, the spread between real estate and bonds is expected to narrow.
Returns outlook

In general, income growth and fair pricing are expected to drive returns, with gently rising income expected to offset slightly higher cap rates in 2020. But, as Graph 5 illustrates, expected global returns on commercial real estate are currently trending downward. The most important aspect of the graph is the total return levels which appear in pink. Total return is impacted by price appreciation, which, in turn, is a function of the previously cited yield or cap rate compressions. The view is that yields will not continue to decrease and that the majority of the income generated by commercial property is expected to come from income.

GRAPH 5
GLOBAL INVESTMENT RETURN OUTLOOK

Within the Americas context, income is expected to remain stable and very robust over the coming quarters and the coming years. As a result, capital flows will remain strong in 2019, shifting to core investments in diversified markets for more opportunistic assets as investors seek out better pricing and more stable income growth.
II. US capital markets

Now I will turn to US capital markets as of the first quarter of 2019, the primary issue which I intend to address. In my judgment, this is of particular relevance to many national contexts, whereas the US is a bit of a trendsetter when it comes to global real estate markets. This is the case simply because it comprises the largest market on the planet.

As one evaluates Graph 6, it becomes immediately apparent that during the third and fourth quarter of 2018 a massive amount of activity occurred. Unfortunately, the first quarter of 2019 comprises our slowest start since about 2012. The view of CBRE is that acquisition volume will begin to increase in the ensuing quarters of 2019. The reason why our organization believes this is that, as we interact with commercial real estate agents throughout the US, they are indicating internally that their pipelines are actually stronger in 2019 than they were in 2018. Therefore, overall volume in 2019 is expected to track similarly to that seen during 2018. While there may be a slight downward adjustment in relative terms, the overall trend will resemble what we saw in 2018.

Cross-border investment totals USD 6.5 billion in the first quarter of 2019, which comprises a decrease of just over 50%; this is to say, both year-over-year and relative to the first quarter results average of the past five years. Trailing four-quarter volume remained up by 60.4% year-over-year.

A significant contributing factor in terms of the apparently weak Q1 2019 start was the drop off in entity-level volume during said quarter. Large entity-level deals have been a major driver of cross-border volumes for the past five years.

To clarify, the ostensible Q1 2019 slowdown seen in graph 6 is due to two extremely large, platform-level and several portfolio-level transactions skewing annual comparison figures for cross-border industrial investment; specifically, a USD 4 billion takeover of GLP by a Chinese consortium which occurred in the first quarter of 2018 and then skewed the numbers in Q4 2018. Industrial investment experienced the second largest year-over-year decrease in Q1; only hospitality properties managed to decrease more sharply. Excluding entity-level deals, industrial investment increased significantly year-over-year and was roughly in line with the robust USD 1.5 billion average of the past eight quarters.
Graph 7 gives us an excellent overview of what the market is choosing to invest in within the US context. Multifamily properties are the clear leader in terms of attracting commercial real estate investment. A deeper analysis of this asset class will be included below because it constitutes a major trend within the Latin American market. The second most active class is office space, which is followed by industrial and retail. Industrial is the new darling of commercial real estate in the United States, and retail has become the new ugly duckling in terms of investor perceptions. This is primarily the case for 2019 and the first two quarters of 2020.

When viewing Table 1, it is important to note that the figures on the left-hand side are quarter-over-quarter, whereas the right-hand side is primarily year-over-year. In terms of the year over year basis, there is an overall impression of continued growth and activity. However, it is interesting to see that the industrial property asset class has clearly been the most active.
TABLE 1
COMMERCIAL REAL ESTATE ACQUISITIONS VOLUME

<table>
<thead>
<tr>
<th>Total ($ billions)</th>
<th>Change (%)</th>
<th>Market Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2019</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Types of Acquisitions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multifamily</td>
<td>35.5</td>
<td>-1.6</td>
</tr>
<tr>
<td>Office</td>
<td>25.1</td>
<td>-15.1</td>
</tr>
<tr>
<td>Industrial</td>
<td>17.5</td>
<td>-14.9</td>
</tr>
<tr>
<td>Retail</td>
<td>11.7</td>
<td>-1.6</td>
</tr>
<tr>
<td>Hotel</td>
<td>6.0</td>
<td>-34.1</td>
</tr>
<tr>
<td>Other</td>
<td>3.0</td>
<td>-19.7</td>
</tr>
<tr>
<td>Total</td>
<td>99.6</td>
<td>-13.7</td>
</tr>
<tr>
<td>NOTE: TOTALS INCLUDE SINGLE-ASSET, PORTFOLIO AND ENTITY-LEVEL TRANSACTIONS. &quot;OTHER&quot; CATEGORY INCLUDES SENIOR HOUSING AND EXCLUDES DEVELOPMENT SITES. SOURCE: CBRE RESEARCH, REAL CAPITAL ANALYTICS, Q1 2019. SOME NUMBERS MAY NOT TOTAL DUE TO ROUNDING.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therefore, even though portfolio asset acquisitions have skewed figures, industrial commercial real estate remains very attractive; as do multifamily properties. The big lag is largely due to the slowdown in retail space.

Cross-border activity

In terms of who is doing the investment, cross-border investment is now led by Canadian investors who have replaced the Chinese. Canadian capital has always been very active within the US market (see Graph 7), due to the fact that opportunities tend to be limited within their home market. The larger, more robust market to the south, therefore, has always attracted a great deal of interest. Germany is another major investor within the US commercial real estate market. German investors have always been active in the US market due to the same dynamic seen in Canada: a lack of sufficient opportunities. In search of yield, they have consistently shown interest in US commercial properties. In fact, yield is a major reason why investors from a wide variety of nations have historically kept an eye on the US market.
In terms of cross-border investment in 2019, a number of factors should be taken into account. For instance, cross-border activity was up by 62.8% on a year-over-year basis. The increase was boosted by the USD 17 billion entity-level transaction of Brookfield buying GGP. With regard to the aforementioned multifamily asset class, this category experienced the largest YoY increase, with cross-border investment up by 100.8% to USD 6.1 billion. The office and retail sectors also registered high year-over-year growth in cross-border investment. Canada-based Brookfield acquisition of Forest City – portfolio of office, multifamily and retail properties valued at USD 11 billion – was the driving force behind Canada’s rank as the top cross-border investor in the US. Chinese investment in the US real estate was the lowest annual level of US investment in many years, down by 60% from its peak volume of USD 14.1 billion in 2016. Singapore outpaced China as APAC’s biggest cross-border investor on an annual basis. Singapore’s 2018 volume of USD 6.5 billion was 16% higher than China’s total investment. Inbound capital from China declined by 57.8% during the four quarters ending in Q1.
US cap rates

In terms of cap rates, the US rates trajectory has been similar to trend observed at international level: downward, with a flattening off during the period 2009-2018. Cap rates are currently at or near historic lows across all sectors, except for certain retail segments.

One such segment is the hotel asset class, which has consistently achieved the highest yield. This is because the hotel property class is essentially an alternative class within a broader alternative category. This is to say, it has a completely different dynamic than other asset classes. In every other case, one is focused on tenant credit risk, whereas in the hotel class said risk is not a factor; instead, operations are everything. Therefore, the hotel asset class always trades at a margin, in terms of a higher yield basis and concomitant higher risk parameter.

As illustrated in Graph 8, retail yield rates also experienced an uptick. As mentioned, the retail asset class has encountered a great deal of difficulty within the US commercial real estate market. This dynamic has largely been limited to shopping centers and much of the downturn is related to the evolution of online platforms such as Amazon. Therefore, as one would expect, the market is attempting to ascertain what the total impact of said change in consumption patterns will be. Another major concern is identify which asset classes – and, for that matter,
subclasses—will survive this huge paradigm shift within the retail market. This uncertainty is driving up yields within the retail asset class.

Although the graph also indicates that Treasury bill yields are also increasing during the past six months we are actually seeing an ongoing compression of US Treasury notes. This dynamic is, in turn, causing a resurgence of interest. These circumstances are also increasing pressure on said asset category’s cap rates.

Table 2 illustrates exactly what is occurring in terms of US cap rates. The most important aspect of the US cap rate scenario is that multifamily properties are experiencing the highest levels of activity and the lowest cap rates in the commercial real estate sector. The multifamily sector is followed by CBD office (i.e., office space located in a central business district). The third asset class is industrial real estate. In fact, there has actually been more downward pressure on yields generated by the industrial asset class, and upward pressure on yields from retail properties.

- With yields compressed and strong competition for assets in gateway markets (including competition from foreign capital), many investors began to diversify into secondary markets in 2018.
- This trend will likely continue in 2019 as wage growth picks up and investors shift to smaller markets with strong job growth.
- Rising interest rates have caused the cap rate spread over the 10-year Treasury yield to narrow. This may cause some investors to reevaluate the risk-to-return ratio of their portfolios and decide they require higher cap rates.

The expectation is that compression will increase in 2019, in terms of the spread between 10-year Treasury notes and asset-class cap rates. Graph 10 shows that multifamily cap rates were a standout in terms of experiencing the largest sector decrease. The 17-basis point (bps) drop was due to a 26-bps decrease in cap rates for garden-style apartments.
CHAPTER V
NEW INVESTMENT TRENDS

TABLE 2
CAP RATES AND YIELD SPREAD, BY ASSET CLASS

<table>
<thead>
<tr>
<th>Property Sector &amp; Segment</th>
<th>Q1 2019</th>
<th>Q1 2018</th>
<th>Change (bps)</th>
<th>Spread Over 10-Year Treasury (bps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office - CBD</td>
<td>5.27</td>
<td>5.41</td>
<td>-15</td>
<td>286</td>
</tr>
<tr>
<td>Office - Suburban</td>
<td>6.84</td>
<td>6.80</td>
<td>4</td>
<td>443</td>
</tr>
<tr>
<td>Office - Total</td>
<td>6.61</td>
<td>6.58</td>
<td>3</td>
<td>420</td>
</tr>
<tr>
<td>Industrial - Flex</td>
<td>6.42</td>
<td>6.61</td>
<td>-19</td>
<td>401</td>
</tr>
<tr>
<td>Industrial - Warehouse</td>
<td>6.39</td>
<td>6.19</td>
<td>21</td>
<td>398</td>
</tr>
<tr>
<td>Industrial - Total</td>
<td>6.40</td>
<td>6.38</td>
<td>2</td>
<td>399</td>
</tr>
<tr>
<td>Retail - Shops</td>
<td>6.07</td>
<td>6.05</td>
<td>3</td>
<td>366</td>
</tr>
<tr>
<td>Retail - Centers</td>
<td>7.07</td>
<td>7.04</td>
<td>4</td>
<td>466</td>
</tr>
<tr>
<td>Retail - Total</td>
<td>6.49</td>
<td>6.53</td>
<td>-4</td>
<td>408</td>
</tr>
<tr>
<td>Multifamily - Garden</td>
<td>5.51</td>
<td>5.76</td>
<td>-26</td>
<td>310</td>
</tr>
<tr>
<td>Multifamily - Mid/High-rise</td>
<td>5.05</td>
<td>5.00</td>
<td>5</td>
<td>264</td>
</tr>
<tr>
<td>Multifamily - Total</td>
<td>5.43</td>
<td>5.61</td>
<td>-17</td>
<td>302</td>
</tr>
<tr>
<td>Hotel - Full Service</td>
<td>7.73</td>
<td>7.64</td>
<td>10</td>
<td>532</td>
</tr>
<tr>
<td>Hotel - Limited Service</td>
<td>8.92</td>
<td>9.11</td>
<td>-19</td>
<td>651</td>
</tr>
<tr>
<td>Hotel - Total</td>
<td>8.63</td>
<td>8.68</td>
<td>-6</td>
<td>622</td>
</tr>
</tbody>
</table>

NOTE: SPREADS BASED ON 10-YEAR TREASURY BOND RATE AT PERIOD END.

Cap rates for other commercial real estate class types were relatively stable, with slight drops in hotel and retail, and small gains in the industrial and office property sectors. Cap rates for garden-style apartments, industrial-flex properties, limited-service hotels and CBD office decreased by a minimum of 15 bps year-over-year.

NCREIF Property Index

The National Council of Real Estate Investment Fiduciaries (NCREIF) property index included in Graph 9 primarily endeavors to provide “a historical measurement of property-level returns to increase the understanding of, and lend credibility to, real estate as an institutional investment asset class”.² The NCREIF Property Index dates back to Q4 1977 and, according to the Council’s web portal, is comprised exclusively of “operating properties acquired, at least in part, on behalf of tax-exempt institutions and held in a fiduciary environment”.

As mentioned above, on a global basis the expectation is that the majority of returns on commercial real estate will be generated by income, whereas less is expected to be generated via asset appreciation. Graph 9 clearly shows how the period 2017-2019 is projected to be extremely stable in nature. By year 2020, a slight softening of the sector is expected to occur in terms of capital appreciation and pricing of asset classes within the US market.

GRAPH 9

**NCREIF PROPERTY INDEX RETURNS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Appreciation</th>
<th>Income</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>-16.9</td>
<td>-16.9</td>
<td>-16.9</td>
</tr>
<tr>
<td>2008</td>
<td>3.1</td>
<td>3.1</td>
<td>3.1</td>
</tr>
<tr>
<td>2009</td>
<td>13.3</td>
<td>13.3</td>
<td>13.3</td>
</tr>
<tr>
<td>2010</td>
<td>14.3</td>
<td>14.3</td>
<td>14.3</td>
</tr>
<tr>
<td>2011</td>
<td>10.5</td>
<td>10.5</td>
<td>10.5</td>
</tr>
<tr>
<td>2012</td>
<td>11.0</td>
<td>11.0</td>
<td>11.0</td>
</tr>
<tr>
<td>2013</td>
<td>9.0</td>
<td>9.0</td>
<td>9.0</td>
</tr>
<tr>
<td>2014</td>
<td>7.0</td>
<td>7.0</td>
<td>7.0</td>
</tr>
<tr>
<td>2015</td>
<td>4.7</td>
<td>4.7</td>
<td>4.7</td>
</tr>
<tr>
<td>2016</td>
<td>6.8</td>
<td>6.8</td>
<td>6.8</td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019*</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCE: CBRE RESEARCH, NATIONAL COUNCIL OF REAL ESTATE INVESTMENT FIDUCIARIES, Q1 2019. *FOR YEAR ENDING Q1 2019. ALL RETURNS ARE REPORTED ON AN UNLEVERED BASIS.

The total annual return in Q1 was 6.8%, up slightly (11 bps) vis-à-vis 2018. This was due to an increase of 103 bps in the annual retail return compared to year-end. Total annual returns edged down for all other property types during Q1. High prices and low cap rates are placing downward pressure on the appreciation portion of the return, but stable income returns are largely offsetting said decline.

Market outlook

With cap rates expected to hold steady and real estate a good hedge against rising inflation, an abundance of available capital should continue flowing into commercial real estate in 2019. Although interest rates are rising, they remain low relative to historical levels. Therefore, it is expected that investors will continue to seek higher yields than those available within the bond market. Given the volatility in the stock market and geopolitical uncertainties, both domestic and foreign investors will remain motivated to allocate capital to US commercial real estate; in part, because returns have been so sizable and stable. Industrial and multifamily assets are expected to continue to attract the highest level of investor interest.
One of the most important trends were seen within the United States is that retail is completely falling out of favor and, as a result, yields are pushing upward. Conversely, industrial commercial real estate is extremely attractive and demand is solid. A huge amount of capital is moving into the industrial asset class, which is generating a large amount of pressure on yields. Multifamily properties are also enjoying a great deal of favor.

We are now beginning to see these same trends surfacing in Latin American markets.

III. Latin American markets

Regional market levels

As an organization, our firm divides the region into two primary tiers (see Table 3). The first level can be characterized as the institutional investment markets tier, which is primarily comprised of Brazil, Mexico, and Chile. Level I is known as the institutional markets group because the nations within said category attract the vast majority of available institutional or cross-border capital. Mexico and Brazil receive a great deal of interest due to their relative size. Many of the major actors within the global capital market seek out projects which involve a minimum of USD 1 billion for each market into which they enter. Though smaller than many of its Latin American counterparts, the Chilean economy has consistently managed to attract global investment due to the fact that it is such a highly liquid market which is extremely active. At the end of the day, Mexico and Brazil are also very liquid investment markets which carry on a high level of cross-border activity. However, Chile punches above its weight due to factors such as the rule of law and its strictly enforced regulatory framework, which provide for a very stable operating environment for its markets; especially in comparison to the other two tiers.

Level II involves fairly small investment ticket sizes and is beginning to build up inertia in terms of cross-border activity. These secondary markets, known collectively as the emerging markets tier, are comprised of Colombia, Peru, Panama, Costa Rica, and Argentina. Large amounts of international capital have been moving into Colombia, and international as well as regional capital has been moving into Peru. Additionally, interest in Costa Rica and Panama has increased markedly during recent times because of their dollarization of their respective commercial real estate markets. Under these circumstances, investors are able to achieve similar returns and tenant-risk levels, at no cost in terms of yields. In fact, global investors are normally able to achieve higher yields than those available in their home markets. Although Argentina qualifies for inclusion in Level II, it did so during the administration of Macri. Given the elections pending in October 2019, it is in danger of falling into the third tier. Though the relative size of the Argentine
The economy has made it consistently attractive, but it has proved very difficult for cross-border investors. As such, a great deal is riding on the outcome of the 2019 presidential elections.

The Level III, or non-investment markets tier, is characterized by extremely restricted cross-border activity, as well as limited investment activity and product options. Venezuela, Ecuador, Bolivia, Guatemala, Honduras and El Salvador comprise this investment market.

<table>
<thead>
<tr>
<th>Level I</th>
<th>Level II</th>
<th>Level III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary investment markets</td>
<td>Emerging investment markets</td>
<td>Non-Investment markets</td>
</tr>
<tr>
<td>Significant cross-border activity</td>
<td>Increasing cross-border activity</td>
<td>Restricted/limited cross-border activity</td>
</tr>
<tr>
<td>Highly liquid investment markets</td>
<td>Small investment ticket sizes</td>
<td>Limited investment activity</td>
</tr>
<tr>
<td>Highly liquid investment markets</td>
<td></td>
<td>Limited product options</td>
</tr>
<tr>
<td>Brazil, Mexico, Chile</td>
<td>Colombia, Peru, Panama/Costa Rica, Argentina</td>
<td>Venezuela, Ecuador, Bolivia, Guatemala, Honduras, El Salvador</td>
</tr>
</tbody>
</table>

SOURCE: AUTHOR.
Cross-border summary
Level I - Primary investment markets

Mexico

In terms of a country by country breakdown of the tiers, I will begin with the Mexican economy. Mexico remains an attractive destination for international capital. However, a clear reversal is currently underway. It is interesting to note that domestic capital has been extremely hesitant to invest within the nation. This has led to a great deal of Mexican investment within the US market. International capital has remained interested in the Mexican commercial real estate market because, at the end of the day, it is taking a long-term view of what is occurring in terms of the current administration. The impact of current policies has not been extremely negative in terms of the Mexican economy. Therefore, cross-border investment interest in the nation has remained stable. In terms of the Mexico City commercial real estate market, the administration’s canceling of the Mexico City airport project and a halt to all construction projects over 15,000 m², which has had a marked impact in terms of increased levels of uncertainty in terms of the local market.

International capital loves this type of situation, whereas it is fairly sure that commercial real estate is necessarily holding at a fixed volume. This, in turn, tends to drive asset values and make rent increases much easier. Under these circumstances, Mexican investors tend to have a completely different view of the local market than their international-capital counterparts.

Another aspect of the Mexican scenario is that industrial commercial real estate is experiencing a huge amount of demand. Our firm is currently in the market with a portfolio valued at approximately USD 900 million. It represents the largest property portfolio ever taken to market in the Mexican economy, and clearly constitutes a very large transaction amount within said context. The process is currently being finalized.

We have seen a reduction in FIBRA³ activity and liquidity levels; which is to say, a drop in overall transactional activity. Due to the lack of liquidity, they no longer comprise an exit alternative. As a result, investment groups looking to exit portfolios in Mexico via a FIBRA alternative are being forced to sell off assets directly through other means. Given the circumstances, it is our view that any move on the part of the US to, for instance, signal border closings will cause industrial property rates to

³ FIBRA: Real estate investment trust.
shoot up by 100 to 200 basis points in a matter of days. Therefore, it will become impossible to sell off said assets as transaction activity completely shuts down. In this scenario, we have seen many clients working to downsize their risk and offload portfolios to the market immediately before any geopolitical factors intervene.

Another major development in the Mexican commercial real estate market has been the emergence of the multifamily asset class. In fact, we have observed a strong multifamily-property trend throughout all of Latin America, as more and more investor capital is attracted to said asset sector.

Brazil

In terms of international investors, no one is currently investing in the Brazilian commercial real estate market. The only available alternative is investment via local partnerships, because entities who have attempted direct asset acquisitions have achieved very poor results. The central factor in terms of the generalized failure of international capital within the Brazilian market has to do with timing. However, our firm has observed a significant increase in interest on the part of said investors and people are beginning to cautiously increase market participation. For now, the main objective seems to be taken advantage of opportunistic returns.

Brazil is a market where it is impossible to hedge one’s currency exposure. Therefore, investors are completely exposed to the full spectrum of risks associated with the commercial real estate market. Clearly, Brazil is not a viable option for institutional investors such as pension funds or other extremely conservative entities who have absolutely no desire to be currency traders. Given the currency dynamic in Brazil, the only option available involves taking a 20-year stance – along with the concomitant currency exposure – or simply foregoing investment in said commercial real estate market.

Chile

In relative terms, the multifamily asset class in the Chilean market is even stronger than in Mexico and Brazil. Our firm expects this trajectory to mimic what has been seen within the US market. As we monitor all of the multifamily assets within Latin America, we have noticed that – at the outset – a significant portion of conservative capital refused to invest in said asset class. Among other factors contributing to said reticence, the fact that lease agreements often involve one-year contracts did not serve to drive interest in multifamily properties. Additionally, the regulatory framework in Chile does little to protect landlord rights and it is extremely difficult to resolve situations involving problematic tenants. As we reviewed client portfolios, we found that less than 0.1% of properties involved bad debt. This level is significantly lower than bad debt levels in other asset classes within the Chilean
market. As one begins to delve deeper into the history of the multifamily asset class, it becomes increasingly apparent that it is rational to expect that we should be seen more institutional capital flowing into multifamily in the coming months and years.

Another important factor to take into account when assessing the Chilean commercial real estate market is that there has been a noticeable reduction in the flow of international capital into the nation. This dynamic has been primarily generated by the relatively high cost of domestic capital as well as the cost of hedging one’s exposure in terms of ensuring the Chilean market. The cost of said hedge is pushing many international investors to be less competitive in terms of court assets. Domestic buyers, for their part, have been increasing their allocations to US and South American commercial real estate within the Andean region. Chilean investors are after higher yields. Finally, it is important to note that Chile has the lowest yields and lowest cost of debt within Latin America.

Level II – Emerging investment markets

Colombia

Colombia remains a fairly small-scale market which is difficult for foreign investors to operate in; i.e., especially in terms of direct asset acquisition, which is a highly risky undertaking given the parameters involved. Among other factors, debt is not accretive. Therefore, if an investor is bringing in foreign capital it is impossible to hedge their currency risks.

In general, foreign capital is investing within the Colombian market at platform or portfolio levels via partnerships with local firms; which is to say, as opposed to engaging in their own direct acquisitions.

Peru

Within the Andean region, Peru is the most interesting market. We are seeing significant amounts of international investment flowing into the Peruvian commercial real estate market. It is especially attractive because it is a US dollarized market in terms of commercial real estate. Therefore, US or European investors wishing to avoid currency exposure and achieve a 100 to 200 basis-point spread over yield are bringing their capital to Peru. This type of behavior is in line with the broader international trends we are seeing in terms of investment capital seeking out better yields abroad.

This is a pattern similar to what we saw on a global scale during the period 2006-2007, wherein investors are beginning to expand beyond core markets in search of opportunities. The expectation is that this dynamic will drive investment in Peru and we expect to see high levels of activities within said market.
Argentina

As indicated, the Argentine market is basically on hold until the 2019 presidential election results are made known.

Panama and Costa Rica

These two nations are very interesting. I have combined the two economies because both are US dollarized. The other major factor which comes into play is US credit. Investors have the ability to buy nearshoring tenant firms such as Hewlett-Packard, Microsoft and Bank of America; and, as such, are underwriting US credit. However, in these two economies capital receives a cap-rate differential. Therefore, investors purchase credit at a level of about 8% in Panama and Costa Rica, whereas said credit would cost approximately 4% to 4.5% in Sunnyvale, California. Both nations also possess an active REIT market.

Investment origin

In 2018, the majority of investment within the Latin American commercial real estate sector came from Canada and the United States (see Graph 10). Chinese investors have yet to make any significant headway into the Latin American property market.

GRAPH 10
FOREIGN CAPITAL IN LATIN AMERICA

- United States, 45.0%
- China, 28.3%
- Germany, 4.0%
- Brazil, 6.0%
- Portugal, 0.1%
- France, 0.1%
- UK, 0.1%
- Chile, 3.0%
- Other, 6.0%
Cap rates

An especially relevant subject for FIAP members, Latin American capital markets, is even better than it appears at first glance (see Graph 11). For example, while Mexico is generally tracking at between 7-8%, our firm is currently working on a USD 100 million acquisition which is expected to trade in the low sixes. This is one of the top assets in the Mexican market, therefore we expect yields to be below the reported rate of 7%.

Another two issues which should be taken into account are REITs and the current administration. Local REITs, for their part, have seen a significant drop off in liquidity over past 12 months. Additionally, Mexican President López Obrador has impacted market activity, pushing many local investors – looking to allocate more capital to the US and other markets – to diversify risks.

GRAPH 11
LATAM CAPITAL MARKETS – CAP RATES

For its part, Brazil does not offer core investors with direct investment opportunities due to high costs of hedging and local debt. Its cap rates are fairly tricky due to
a significant spread between the going-in cap rate\textsuperscript{4} and the stabilized cap rate. Therefore, while we often discuss the expected rate of 8% to 9%, said rate actually expands to 10% when we refer to overall spread between cap rates in the markets. As previously stated, Brazil currently comprises an opportunistic investment market with the majority of the investment opportunities via platform or partnership.

In terms of Costa Rica, we have seen yields reaching 8%, but that figure is most relevant in terms of how the local REITs are pricing their assets. Additionally, Costa Rica and Panama should be treated as one market due to size and legal structure similarities (US dollarized). We have observed increasing levels of investor interest primarily due to the ability to acquire US multinational credit via USD leases at yields higher than comparable credit risks in US markets.

Colombia is currently tracking at between 8% and 9% in general, with industrial coming in at between 9% and 10% due to this asset class being increasingly out-of-favor. Colombia has limited core investment stock and – although it comprises a very attractive growth market – it is an expensive alternative for cross-border capital due the currency risks involved.

In Peru, we are actually seeing rates nearly breaching the 8% mark in cases involving top quality assets. But, on the whole, it is primarily an 8-9% market. The Peru office market appears to be emulating the Chilean market evolution of the past 10 years. We expect Peru to become a CRE investment market comparable in quality, size and conditions to Chile. Peru is the second fastest economy in the region. Limited local debt market which creates a floor for yield compression.

Chile is a market in which our firm has been extremely active. We advised Walmart on the disposition of their commercial real estate portfolio, for example. Chile provides an attractive market for core office product. Industrial opportunities remain limited with smaller ticket sizes. We are seeing yields breach 5%, and a significant amount of pressure which is related to the low cost of debt. An approximately 80-bps compression has occurred in the cost of Chilean debt, and this dynamic is driving property level yields.

Conclusions

One of the major trends which we are seeing within the Americas is the emergence of the multifamily asset class as being major factor within the commercial real estate market. In Mexico, the recent resurgence of the industrial property asset class appears to be mimicking what has taken place in the US market; although it should

\textsuperscript{4} Going-in cap rate is equal to first-year, net operating income divided property purchase price.
be noted that we have not seen a concomitant drop in retail in the Mexican market. In fact, investors should be aware that the retail market within Latin America has an entirely different dynamic than its US counterpart. In the US context, retail is softening and every village with a population of even 30,000 to 40,000 inhabitants has a shopping mall. In Latin America, large-scale shopping centers remain primarily limited to large urban centers and said urban-core properties continue to function apace. Digital platforms such as Amazon have not had a wide-scale impact on consumption patterns within the majority of Latin American societies because, to date, they lack the infrastructure to operate such operations.
VIEW FROM THE QUANTITATIVE ANALYSIS: THE WORLD HAS CHANGED WITH ESG

TAKAYA SEKINE

1 Takaya Sekine joined Amundi in 2000 and is Deputy Head of Quantitative Research since July 2018. Prior to that, he was Deputy CIO at Amundi Japan (between 2011 and 2018), Head of Index and Multi-strategies at Amundi Japan (between 2010 and 2011), Fund Manager (between 2007 and 2010) and Financial Engineer (between 2001 and 2007). Takaya began his career as an IT Manager at Amundi Japan’s predecessor company (between 2000 and 2001). Takaya is a CFA Charter holder since 2005, and an Associate member of the Association of Certified Fraud Examiners since 2010. He received the Ingénieur Civil des Mines degree from Ecole des Mines de Nancy in 2000. He has been involved in macroeconomic and policy related investment strategies.
At Amundi, Environmental, Social and Governance (ESG) criteria has played a central role in our approach to investment for many years. As we have analyzed the concomitant benefits of ESG-oriented investment strategies, the approach has demonstrated its ability to drive engagement, as well as impact management. However, in financial terms it initially seemed to generate fairly limited results. On the whole, the literature indicates that this is the pervasive dynamic. While academia generally accepts that ESG is relevant in terms of capital and corporate parameters, it is viewed exerting a fairly limited degree of influence on markets.

Thus, on the whole, academic findings have been a mixed bag. For example, there appears to be a relationship between shareholder rights and higher firm value, higher profits, higher sales growth, lower capital expenditures, and fewer corporate acquisitions, as well as a positive correlation between high corporate social responsibility and low cost of equity capital; which is to say, Employee relations, environmental policies and product strategies lower firms’ cost of equity. Corporate financial performance is often viewed as a U-shape function of corporate social performance and cultural differences explain the diversity and value or values-oriented differences in intentions of currently available ESG data. Some academics even point to a negative or neutral impact.

The Amundi ESG scoring system

Amundi has generated an ESG rating system which it applies all its asset classes. The approach is based on texts with a universal scope such as the United Nations Global Compact, the G20/OECD Principles of Corporate Governance, and International Labour Organization conventions. Its ESG analysis is based on a sector neutral approach that consists of rating companies by sector vis-à-vis their respective ESG practices. The system utilizes a scale which covers the spectrum from A (for best practices) to G (for worst practices). In order to rate more than 5,500 issuers around the world, Amundi’s ESG rating is based on a proprietary definition of the most relevant ESG criteria by sector with the associated weighting by criteria and scores sourced from multiple extra-financial data providers, which serves as an initial filter to its rating system.
Increasingly, sector-specific criteria are being utilized to ascertain investment advisability. For instance, the factor of whether or not an automotive manufacturer produces green cars can become determinant. Therefore, within the broader aims of monitoring commission in energy use, water and other universal issues, sector-focused criteria such as green financing come into play.

The social component of our broader ESG policy involves employment conditions, community involvement and sector-specific criteria such as access to medicine and digital devices. The governance component addresses factors such as board independence, audit and control, remuneration and shareholder rights.

In general, the aforementioned criteria are termed extra-financial or off-balance-sheet indicators. We have 10 years of monthly data points available in point-in-time. Data was generated in association with four underlying data vendors and then processed by a team of ESG analysts. We are moving from the current level of 5500 issuers to 8000 issuers by year 2021 in order to ensure that all of our policies and all of our investments conform to the exigencies of our ESG pillar.

The Amundi scoring system is sector-neutral and generates a Z-score profile via Gaussian mapping which is then adapted for ESG ratings (see Graph 1).
Role of ESG in markets

In general, the major payoff of utilizing sorted portfolios (ESG score – Euro Zone) has been the ability to transition from a U-shaped to S-shaped return curve. This aspect of the scenario was identified during our 2018 research. As one can ascertain from Graph 2, firms pursuing good ESG policy would be located on the left-hand side of the horizontal axis entitled sorted portfolios. Firms unable to achieve productive ESG policy are located on the right-hand (i.e., fifth quintile).

It is interesting to note that prior to 2014, the relative quality of ESG policy pursued had little to no effect on returns. However, after 2014 there is a strong correlation within the eurozone between high-quality ESG policy and better returns. Clearly the inverse was also true, as our research indicates that bad ESG policy corresponds to weaker returns. Firms with weak ESG policy fell into the fifth quintile and were strongly penalized for their failure to generate better policies. Thus they only achieved 7.5% annualized returns, while their counterparts with strong ESG policies achieved 14.7% annualized returns. The contrast in mindsets, as well as results, could not be clearer. ESG is having a major impact on the investment community, and our firm expects that this influence will only continue to grow over time.

GRAPH 2
CORRELATION BETWEEN RETURNS AND QUALITY OF ESG POLICY, EUROZONE

Source: Amundi (2018)
Shareholder versus stakeholder approach

A major sign that markets are becoming more ESG-oriented involves the following dynamic. In the past, the dialogue regarding what aims a company should pursue centered on financial performance. This is to say, the driving force of policy should be to deliver on a firm’s responsibilities to shareholders; i.e., the Milton Friedman approach to business. Later, the dialogue involved and began to encompass other interests which were designated as stakeholders. In short, the new logic stated that a firm could not afford to fail to take into account the broader societal impacts of a company’s business model; especially in terms of deciding whether or not to invest in said firm’s stock. This view of the market is what is known as the stakeholder approach.

In terms of the shareholder versus stakeholder dynamic, Graph 2 also shows the evolution of investor thinking and behavior. A real-world example of this paradigm shift involves an American multinational which focuses on e-commerce, AI and cloud solutions. This company has warehouses throughout France. In order to optimize inventory turnover, they proposed that either unsold goods were returned to the manufacturer or simply destroyed. As this company also stipulated that vendors foot the bill for return shipment, manufacturers located extremely far from the firm’s French storage facilities opted with economic rationality for destruction. Recycling plants were set up near the company’s warehouses, however – in practical terms – true recycling of the products involved was impossible due to the fact that plastic is extremely difficult to deal with in an ecologically-viable way. Any unprocessed plastic takes between 400 and 1000 years to completely break down. Clearly, once the situation was made known to the public, the inventory policy of this company became extremely controversial. Therefore, this company learned a valuable lesson in terms of the shift from shareholder to stakeholder-focused inventory policies and procedures. The example perfectly illustrates the manner in which issues which were once considered to be somewhat peripheral now have the potential to severely impact the bottom line. This is because, in addition to impacting investor thinking, ESG also has the potential to affect consumer behavior.

The UNPRI data presented in Graph 3 demonstrates how ESG public policy has evolved in response to the aforementioned shift in societal views on business. The European regulatory framework has clearly taken the lead in terms of international efforts to address environmental, social and governance issues within firms. Furthermore, the graph is ostensibly indisputable evidence that the ESG-returns dynamic has not gone unnoticed by States – and even entire regions of the globe – wishing to optimize their potential for economic growth.
If we return to the data presented in Graph 2 and expand the analysis to include the period 2016-2017, it is clear to see that the collective impact of ESG factors has consistently increased over time (see Graph 4). The dynamic can be seen even more clearly on both ends of the spectrum with firms who have chosen to address the issue achieving approximately 5% more in returns. The penalty for failing to generate reasonable ESG policy has also increased in scale, with firms taking an approximately 3.5% average drop in returns. The gap has even grown in terms of the second and fourth ESG quintile, which leads many to believe that the inertia is fairly high and widespread.
In terms of comparing the constituent components of ESG, graphs 5, 6 and 7 show the respective impact of these three aspects on company returns within the euro currency zone. Clearly, the issue of governance is extremely relevant within the Eurozone; and logic dictates that the other two factors cannot be far behind. In fact, as the Social graph clearly illustrates, the relative impact of this ESG component has exponentially increased since 2016. The potential benefits of the Environmental component are fairly self-evident. One would expect that the concomitant penalty will soon catch up with the available benefits.
CHAPTER V
NEW INVESTMENT TRENDS

GRAPH 5
PAYOFF OF SORTED PORTFOLIOS WITHIN EUROZONE, ENVIRONMENTAL COMPONENT


GRAPH 6
PAYOFF OF SORTED PORTFOLIOS WITHIN EUROZONE, SOCIAL COMPONENT

North America

In relative terms, ESG risks within North America are a bit lower in terms of potential penalties. However, Graph 8 illustrates an extremely promising trend in terms of this market’s willingness to reward firms who take a proactive approach to ESG issues. Additionally, the graph demonstrates how the entire dynamic has been completely inverted since the period comprising 2010-2013.
As one delves further into the North American ESG question, it becomes apparent that the Environmental aspect of things has become an increasingly relevant factor for issuers in North American markets (see Figure 1). We can also see that Social is tracking similarly, and that Governance involves a substantial penalty when firms refuse to adequately address ESG issues.
At first glance, the potential benefits of focusing on the E in ESG seem surprisingly high within North American markets. But if we take into account the fact that US firms are a part of many global equity portfolios, it becomes easier to understand why Environmental is tracking similarly to the trajectory observed within the Eurozone and in terms of global trending. Therefore, said increases in benefits are ostensibly attributable to European institutional investors who are impacting the manner in which assets are appraised within North America.

Graph 9 shows the relative performance of the best and worst sorted portfolios in terms of their ability to achieve an acceptable ESG score.
Amundi also performed an analysis involving an incremental increase in ESG exposure in order to track potential increases in returns achieved by ESG-optimized portfolios. The major point here is that, as firms endeavor to increase ESG exposure, the line in Graph 10 demonstrates that such moves involve an inherent level of risk. Therefore, if a firm were to increase ESG exposure by 0.6%, there is a minimum yet measurable level of risk involved. As firms contemplate their approach to ESG, their asset allocation policy needs to take the concomitant level of risk into account. To clarify, this means that a non-ESG asset allocation policy will not suffice when a firm decides to begin to pursue a focused ESG policy; i.e., an asset allocation policy which does not contain an ESG component will prove insufficient once the firm begins to pursue ESG goals. This is especially the case in terms of equity and credit, of course. The entire asset allocation framework needs to be reviewed vis-à-vis ESG.
The phrase “optimized portfolios” is utilized in terms of the previous scenario in which ESG policy was not particularly rewarded within the market. Large institutional managers assumed an incremental level of risk, but normally shied away from making huge commitments to an ESG framework. Through diversification of the portfolios, the negative effects of ESG were limited in said market conditions.

Therefore, during the period prior to 2014, low-level risk was a viable option that did not incur penalties. However, once a firm moved into the mid-level risk category they were penalized. As a result, there was basically no incentive to undertake ESG measures other than expressly altruistic ends. After 2014, as Graph 11 shows, firms taking ESG risks began to be rewarded on a scale commensurate to the magnitude of risk involved; this is to say, within practical limits.
As one might deduce from the following graphs, we found that ESG is a strong candidate to become a beta strategy throughout the European Union, whereas it will probably remain an alpha strategy in North American markets during the near and midterm.

In the case of the Eurozone, ESG proved to be a highly relevant factor in an active management approach (see Graph 12 - factor intensity between zero and 0.4). Even though the period of analysis is fairly short in terms of length, the Eurozone values ESG and ostensibly views it as being on par with the other four factors included in the graphs.
In terms of North American markets, ESG proved to be the least relevant factor in the regression model (see Graph 13 – situation on the right hand side with a factor intensity of 1). In the active management context, managers in the North American market could think in past years in terms of a growth at a reasonable price strategy, better known as GARP. In a context where GARP would have been a favorable strategy we would have expected to see both value and growth factors as drivers in the low factor intensity space (factor intensity between zero and 0.4 for example).

In the current scenario, for North America, optimal active strategies will be focusing on quality and ESG. Active management postures which attempted to utilize the now outdated method (i.e., strictly limited to valuation) have proven inferior to strategies which combine the new and the old approaches. ESG is a valuable pillar within an active management strategy.
In general, a beta strategy is basically just an alpha strategy which has proved extremely successful. Therefore, given ESG’s track record within the European market, we believe that it has earned the title of beta strategy. To clarify, the time periods which we analyzed are fairly limited in nature, but ESG involves dynamics which cannot be fully addressed by classical 20-year data sets. For example, when one looks at the environmental aspect of ESG, issues such as emissions and energy use involve higher levels of relevance and importance in the short-term horizon. Clearly, the concomitant role that these factors play in questions such as intergenerational solidarity and pension systems is fairly self-evident. They are changing the parameters and must be taken into account on both sides of the equation: issuers, as well as investors. The investor behavior patterns outlined in Graph 4 are fairly indisputable evidence of the exigencies involved. The message from investor to issuer is that firms to fail to implement acceptable ESG policies will be penalized in the financial markets.

When Amundi released its results, several entities inquired as to whether this trend might eventually reverse itself. The trend illustrated in Graph 3 would seem to indicate that this is definitely not the case, as public policy has been put into place to ensure that ESG is here to stay. Therefore, given the posture of EU investors and EU public policy, our firm’s position is that issuers would do well to incorporate this
new reality into their respective business models. In fact, it is reasonable to assume that we are actually at a tipping point within the global market at which, from here on out, the ESG issue will only accrue increasingly more inertia. To clarify, it will become the primary criteria for pricing assets. In this scenario, it is easy to ascertain how an energy sector asset could morph into a liability over time; i.e., due to issues such as emissions (coal, petroleum). Thus, even under fairly simple logic parameters, ESG components must be addressed by pricing models in terms of investment choices.
TRANSFORMING INSURANCE ASSET MANAGEMENT FOR THE INSTITUTIONAL MARKET

THOMAS METZLER

1 Thomas Metzler is a Managing Director in the Institutional Client Group of MetLife Investment Management (MIM). Metzler is a senior relationship manager and is responsible for the business development of MIM’s investment strategies. He works primarily with corporations and public entities. Prior to joining MetLife in July 2016, Metzler was at J.P. Morgan Asset Management for twenty-one years working across several lines of business. Most recently he served as head of the America’s Corporate Sales Team for J.P. Morgan Asset Management’s Global Liquidity business. Thomas and his team were responsible for advising on and delivering investment solutions to multinational corporations and public entities for their operating assets. Prior, he was working with institutions and individuals within J.P. Morgan’s Debt Capital Markets and Private Bank businesses. Metzler holds an MBA in Finance from Fordham University and a B.S. in Finance from Rutgers University. Mr. Metzler is licensed with FINRA.
MetLife investment management overview

In order to provide a brief overview of MetLife investment management, I would like to share some remarks on our insurance asset management BUSINESS. As we have transitioned into the 3rd party investment management BUSINESS, we have approached the task from an insurance perspective, thereby capitalizing upon decades of investment expertise, risk management culture and industry leadership. All this experience has served us well as we have moved into the institutional asset management sector. It has certainly helped me personally in my role providing services to institutional-level investors such as corporate and public pension plans, endowments, and foundations.

Additionally, I will be sharing the various ways in which MetLife approaches innovation. To date, we have been working with outside parties in order to boost our innovative capacity for several years. And we have already begun to reap the rewards within our organization. Therefore, the firm feels that this would be an ideal opportunity to share some of the dynamics and factors we have seen at work during this effort to drive original ideas and approaches to both old and new scenarios.

In order to provide a bit of context, MetLife is a large-scale investor. The firm currently has USD 600 billion in assets under management, of which USD 156 billion is currently invested with third-party investors. MetLife has been investing for over 100 years, so it is the definition of a long-standing investment platform. Additionally, it has long maintained a network of offices throughout the world. Here again, this is a major differentiator in terms of our ability to remain aware of market trends in an increasingly interconnected, global economy. For instance, we have a solid track record here in Chile and just last week I met with our team here in Santiago in order to address issues related to the local market which may impact our broader global strategy.

In practical terms, we employ a network of 900 professionals throughout the world
who work alongside credit-research experts in all major investable sectors; i.e., those sectors in which MetLife is invested in or wishes to invest in, as well as those which may be of interest to our institutional investors and third-party clients. One of the benefits of undertaking such a large-scale effort to generate a presence in so many economies has been the generation of SCALE across an extremely wide variety of asset classes. In short, our international network drives our sector-specific expertise, which in turn optimizes our ability to manage portfolios.

Assets under management

In terms of where MetLife is investing currently, Table 1 provides an excellent overview. We have significant assets under management in nearly every major asset type. For the purposes of this discussion, I will focus on two.

**TABLE 1**

**METLIFE ASSETS UNDER MANAGEMENT, BY ASSET TYPE**

<table>
<thead>
<tr>
<th>By Asset Type</th>
<th>$588.7 Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Corporates</td>
<td>$122.8</td>
</tr>
<tr>
<td>Mortgage Loans</td>
<td>$95.1</td>
</tr>
<tr>
<td>Structured Finance</td>
<td>$72.0</td>
</tr>
<tr>
<td>Foreign Government</td>
<td>$67.3</td>
</tr>
<tr>
<td>U.S. Government and Agency</td>
<td>$57.0</td>
</tr>
<tr>
<td>Private Corporates</td>
<td>$51.6</td>
</tr>
<tr>
<td>Cash and Short-Term Investments²</td>
<td>$24.6</td>
</tr>
<tr>
<td>Real Estate Equity</td>
<td>$21.4</td>
</tr>
<tr>
<td>Private Infrastructure</td>
<td>$19.0</td>
</tr>
<tr>
<td>Municipals</td>
<td>$16.3</td>
</tr>
<tr>
<td>Common and Preferred Equity</td>
<td>$15.7</td>
</tr>
<tr>
<td>Emerging Markets Debt</td>
<td>$11.3</td>
</tr>
<tr>
<td>High Yield</td>
<td>$9.7</td>
</tr>
<tr>
<td>Alternatives</td>
<td>$6.7</td>
</tr>
<tr>
<td>Bank Loans</td>
<td>$6.2</td>
</tr>
</tbody>
</table>

SOURCE: THE AUTHOR.

The first asset class which I would like to focus on is real estate equity. Across debt and equity, as a real estate investor we managed over USD 100 billion. Thus, real estate is a crown jewel in terms of our broader investment platform.
Another major focus for us is within structured finance. A USD 72 billion allocation positions us as a world-class actor, and we have consequently placed a significant amount of resources into managing this asset class in order to ensure we are able to operate responsibly and capitalize upon sector opportunities for our firm and its clients.

The aforementioned third-party business was begun in 2012. This effort (see Graph 1) was essentially a reaction to reverse inquiries which MetLife received from other investors. At the outset, most of these inquiries were coming in from small-scale insurance firms who were seeking to leverage our platform. This area of our business simply grew from there. After noting such a high degree of interest on the part of many firms, our CEO at the time – Steve Kandarian – expressed a keen interest in capitalizing upon existing MetLife CAPABILITIES in order to drive this area OF the firm. These two factors drove our strategy to move in to the 3rd party asset management business, and our story is similar to that of many insurance companies who have transitioned into providing services to outside clients. another contributing factor has been the investment capacity of our asset classes as a result of our liabilities remaining constant.

As stated, MetLife began in private debt and real estate in 2012 and then reached another strategic milestone in 2017 when it acquired a boutique fixed-income manager called Logan Circle Partners, LP. The acquisition opened the way for the firm to pursue total-return fixed-income in tandem with a partner who possessed a proven track record in the asset class universe.
As a firm, and particularly in terms of its role as an asset manager, MetLife is a market thought leader. It has fulfilled this role in a number of different capacities. For example, it is not uncommon to see Drew Matus, our head of global economic and market strategy for investment management, on CNBC. He helps frame the overarching, top-down view within our firm, and provides a great deal of perspective to the investment management sector as a whole.

MetLife is also active with a number of advocacy groups that operate within the markets in which we participate; i.e., in terms of the insurance industry, as well as the broader fixed income sector. The firm is also firmly committed to maintaining open channels of communications with regulators, in the hopes of providing valuable input during times of crises. For example, during the economic crisis of 2008 MetLife was extremely proactive in terms of apprising regulators of what was occurring and, perhaps more importantly, what could potentially occur. MetLife was also able to play a decisive role in the generation of solutions such as rating agencies and risk-retention measures introduced in the wake of the international financial crisis.

MetLife is also a leader in terms of driving innovative perspectives within the insurance industry. As a result, it is an active participant in industry panels and conducts client-education seminars designed to educate investors across the globe. The firm also produces educational material in response to technical inquiries from national regulators on topics such as Dodd-Frank, variable annuities, securitization, housing finance, and LIBOR reform.2

MetLife Investment Management (MIM) organizes its annual Secular Conference, which provides industry professionals with an opportunity to exchange viewpoints on issues impacting the future of the investment environment. The firm also provides regular market updates, as well as valuable research papers and analyses on a wide variety of subjects; tax reform; capital advocacy; relative value; and asset allocation.

**Insurance asset management**

As stated, MetLife has of over 100 years of experience within insurance asset management. the firm currently has 56 unaffiliated insurance clients from around the globe. These firms include life insurance companies, property and casualty firms, multi-line, as well as health insurers. Collectively, they represent over

---

2 *The Dodd-Frank Wall Street Reform and Consumer Protection Act regulates financial markets and protects consumers. Comprised of eight components designed to prevent a repeat of 2008 financial crisis.*
USD 100 billion in assets under management. Therefore, they clearly represent a significant part of the firm’s mission.

Insurance asset management involves much more than simply managing portfolios. It also entails the value-added capabilities which go along with said portfolio-oriented portfolio services. Our ability to provide strategic asset allocation, portfolio optimization and advisory services which go well beyond the traditional limits of insurance asset management is what sets us apart within markets throughout the world.

The ability to provide the aforementioned services is fundamentally important in terms of achieving MetLife’s Investment Management’s investment goals. The basic premise within insurance asset management is the following: we seek to responsibly invest the insurance premiums we receive from customers and invest them in order to meet the long-term promises we make to those customers. As Figure 1 demonstrates, this objective is basically comprised of the intersection between the broader mission of an insurance firm with the constant need to innovate the manner in which said firm interacts with other institutional clients within a given set of sector parameters. It is a major undertaking, and is basically defined as asset-liability management.

FIGURE 1
ASSET-LIABILITY MANAGEMENT

Liability Driven  Guidelined Shape Portfolios  Strategic Allocation and Relative Value  Execution and Tactical Investing  Evaluate and Manage Risk

SOURCE: THE AUTHOR.

After nearly two decades working for a bank owned asset manager, when I arrived at MetLife I was able to have answered my one of my first questions, “how does an insurance company invest for their general account?” at the end of the day, the answer is fairly simple. An insurance provider collects premiums from their clients, which are then invested in a manner so that when the day comes for the firm to provide coverage, the resources are available for the provider to make good on its promises. in short, the sector makes big promises that it must keep.
Of course, asset-liability management is also a major issue for the pension sector; especially when it comes to defined-benefit schemes. Additionally, many other sectors of the economy involve asset-liability dynamics. The investment sector, home and automobile sales, as well as educational savings plans, also involve liabilities which are addressed using the same processes outlined in Figure 1. The steps we take in order to accrue enough resources to cover the expenses of a child’s education are an especially appropriate example. In this case, the child’s future comprise the liability we must cover by first recognizing the approximately 18-year timeline involved, and then ensure that the issue of strategic allocation and relative value are properly addressed. Then one moves into the execution and tactical investment phase, which involves evaluating and managing the concomitant investment risks in such a way that we are able to fulfill our responsibilities as a family. Clearly, one would hope that individuals opt for working with a qualified professional in order to iron out vital details such as how often money will be set aside (weekly, monthly or annual contributions), as well as in order to take advantage of the asset sectors available. Therefore, although we most often tend to associate the asset-liability management process with the insurance sector, it is applicable to a variety of investment scenarios.

Key considerations in portfolio management

In terms of analyzing the manner in which insurance firms are investing, as well as in terms of their asset allocation, society often overlooks one major component. For instance, in my own case, before I begin to work within the sector my impression was that it was a simple a relative value question. However, experience has shown me that – as I have attempted to demonstrate in Figure 2 – the portfolio management dynamics at play within even a small-scale insurance firm are fairly complex. Companies must be able to blend market strategy, portfolio strategy and asset sectors in such a way that they properly match their liabilities and capitalize appropriately on asset sectors. Additionally, firms must allocate their resources in such a way that relative value is optimized. As one can ascertain from the table, this is an intricately balanced undertaking which in many ways resembles the inner workings of a clock. Therefore, the intensity with which an insurance company pursues a given end must constantly take into account the broader synergies and interactions of the ends involved. For instance, if market strategy becomes too large, the entire portfolio management dynamic may begin to lose its accuracy. Of course, there is also a danger that an outsized or undersized component will result in a complete breakdown of the firm’s entire portfolio management framework.
Asset allocation is a highly complex task because it must be executed vis-à-vis a wide variety of extremely determinant factors: type of insurance product being offered; region in which a given instrument is on offer; relevant regional regulatory framework; regulatory entity involved; and market factors which impact relative value. In fact, the dynamic has always reminded me of a Rubik’s cube. This is because our team is constantly focused on balancing all of these factors in unison.

In terms of providing a bit more detail with regard to asset allocation, the main drivers of portfolio strategy are assets, constraints and liabilities. As noted, these inputs are complicated in and of themselves, especially in terms of the insurance sector which serves as our case study for this text. For example, assets encompass an extremely wide variety of factors: investable cash flow; sector supply; relative value; relevant economy, market and/or sector outlook; fundamental outlook; corporate initiatives; derivatives; book yield; diversification; asset liquidity; collateral requirements. Typical portfolio management constraints include taxes, operating income, liquidity, rating agencies, laws and regulations, income stability, economic capital, regulatory capital, and the issue of gain and losses. Liabilities are comprised of factors such as cash flows, optionality, liquidity, maturity, mortality/morbidity, operating income, return on investment and currency. Of course, one must constantly factor in whether a given liability is growing or declining.

As one would expect, it takes a highly skilled, experienced team of industry
professionals to generate a successful strategy; especially when one refers to the scale of assets involved at MetLife. Here again, the entire culture of the insurance sector is risk management. Our firms are charged with protecting our clients against downside scenarios: fires, floods, loss of life and the entire spectrum of life’s vicissitudes to which an individual is exposed. Therefore, risk management is simply a core foundation within our company. If we fail to address it appropriately, we eventually go out of business. Therefore, as the following org chart illustrates, risk management is not simply a task within the asset management group. It is the task. Consequently, responsibility for decision-making and strategic planning falls directly on individuals in key positions (see Figure 3). It is a top-down approach which is carried out through regular meetings between those in leadership positions who are charged with monitoring risk for MetLife portfolios, as well as third-party assets under management.

FIGURE 3
DECISION-MAKING LEADERSHIP

Innovation

In terms of MetLife’s ability to respond to the ever-changing dynamics of institutional asset management, our firm has taken an extremely aggressive approach to the transition. We have an entire team of experts assigned with the task of ensuring we are taking concrete steps to innovate in response to a wide variety of national and global opportunities. Fortunately, they have the freedom – as well as expertise – to move across business lines and impact every single business unit within the firm. The aim is not only to improve our internal processes, but to improve the manner in which we serve our clients. And, here again, the overarching aim of the innovation team is to ensure initiatives are not limited by lines of business.
We had a conversation with the data scientist who was working with our private placements group. There was a lot of negative press on the problems which beset military families and on-base housing. The Department of Defense was attempting to address a wide variety of issues such as mold. One of the major challenges of attempting to address said factors was the sheer scale of the problem involved. How does one go about addressing change when such a huge amount of assets are involved? We refer here to millions of units of family housing located in every region within the US, and a whole slew of nations abroad. How were DoD and/or MetLife inspectors to go about generating a procedure for inspecting all of these units of housing for existing, as well as potential mold threats? MetLife utilized natural language techniques which were overlaid across our holdings in order to pinpoint potential risks and then perform the concomitant site visits to inspect and ascertain what condition a given housing unit was in. Of course, then we needed to ascertain what adjustments needed to be made to a given environment in order to ensure the mold problem did not recur. This is just one example of risk mitigation, but it is a great example of the scale and variety of problems we face. It also illustrates how flexible such a large insurance concern needs to be in order to carry out even the most practical aspects of its operations. At the end of the day, firms unable to respond in a timely fashion are eventually overtaken by such events. Thus, within the insurance sector the inability to generate – and then execute – a well-designed, flexible response strategy is, in and of itself, a massive liability which will eventually destroy a company’s bottom line. In addition to being flexible in nature, responses also need to be innovative nowadays.

As a result, MetLife invests across all the major subclasses which comprise structured finance. Our 22-person investment team includes experts who are focused on portfolio management, research and trading. therefore, we have a major investment in terms of people and resources which is designed to address a pillar of what our mission statement is. In fact, we are also involved in evaluating what innovation areas of opportunity are available within structured finance. Most recently, this has involved the use of big data within the residential, whole-loan sector. As one would expect, this is an extremely data-intensive asset class to invest in. Firms are charged with evaluating every single mortgage before including them in a given portfolio. This is a monumental task and makes this a very time-consuming asset class. Another area where efficient data processing is determinant involves evaluating collateralized loan obligation (CLO) transactions. At times, our team has to sift through hundreds of pages of a given CLO transaction before it comes to the conclusion that it is an unviable investment. Here again, natural language processing proved an extremely useful technique. And it was our innovations group which came up with the idea to employ it. The technique converted a four-hour task into something we were able to address within 10 minutes.
Thus, the firm-wide innovation group – which was ostensibly begun as a way to improve MetLife’s ability to improve its processes – has paid major dividends in terms of improving the quality of services provided to our clients (see Figure 4).

The financial crisis of 2008 proved an opportunity for MetLife to inform our response to the mortgage crisis which grew into a much broader financial crisis. Through their due diligence, our team was able to anticipate – and fortunately mitigate – the eventual impact of events which took place in the US and global economy. When individuals from our investment management group were meeting in California with several mortgage underwriters, they notice ED that these firms were utilizing call scripts which laid out what a salesperson should reply should a potential client refuse to take out a mortgage. The typical “here is what you say when a client does not want a mortgage” spiel. What they read in the scripts was a huge red flag. They also began to note that individuals with extremely low income, or even no income, were being signed up for mortgages. Clearly, many were also talked into properties which were well beyond their means. Upon returning to New York, team members began to take steps to remediate risks within the respective portfolios. This anecdote is important, on the one hand, because the actions of these individuals safeguarded our bottom line. It obviously also serves our clients’ interests. However, their greatest achievement was their ability to know exactly when MetLife needed to get back into the mortgage sector. given the confidence that team members have developed with management and other decision-makers within the firm, they had the courage to re-engage into the asset class and capitalize upon available opportunities. Once again, benefits and results transcended specific business lines.

**FIGURE 4**

**Firm-Wide Innovation:**

- **Pre-Crisis 2005-2007:**
  - Overweight AAA and A-rated CDOs
  - Underweight A-rated CDOs
  - Underweight fixed rate

- **Great Financial Crisis 2007-2008:**
  - Overweight AAA CMBS
  - Underweight 2006 to 2007 mortgages

- **Post-Crisis 2009-Present:**
  - 2011-2015, entered UK RMBS
  - In June of 2014, began purchases of discount Non-Agency RMBS
  - Overweight non-Agency RMBS

**Source:** The Author.
AFORE market allocation to CKD/CERPI is growing

Another example of the benefits reaped from a proactive posture on innovation is the case of servicing the Mexican AFOREs. On January 28, 2019 MetLife launched its first CKD within MEXICO. This was an important milestone for our firm because we believe we achieved a truly innovative product which was essentially unprecedented. Whereas most of the products available to THE AFOREs are comprised of high-risk asset classes such as equities and alternatives, MetLife took a different approach and created a high-quality, commercial mortgage loan structure. We felt this was the best strategy to achieve our objective of providing a better, higher risk-adjusted return option for their fixed income allocation. MetLife had excellent expertise in its Mexican office which it leveraged to create this CKD, which is ostensibly the first in a series of many such products.

The CKD in question is a US dollar and Mexican peso-based portfolio. From a return standpoint, it is currently tracking at approximately 8.6% unlevered. Were we to add leverage to it, it is expected to reach double digits; which is to say, within the range of 10-12%. Another major aspect of this scenario in terms of innovation is the fee component. MetLife is convinced that this is a truly disruptive product, which will prove to drive competition within the market place. The CKD does not involve any promotes, preferred returns or catch-ups. Therefore, by introducing a portfolio which involves an attractive fee and addresses a fairly large opportunity area within the market, MetLife is excited to see how well this CKD does within the Mexican pension sector (see Graph 2).
It is definitely an excellent time to make such a move, because as many FIAP members know, the Mexican individual capitalization sector has undergone a great deal of growth in recent times. As one can ascertain from Graph 3, in a period of only 12 months sector-wide allocation to instruments such as the CKD and CERPI rose by approximately 30%. Therefore, MetLife will definitely continue to underwrite such products and offer them to the pension fund administrators in Mexico.
Another important aspect of the insurance sector which could intentionally drive innovation in the investment sector ARE long-duration products. For example, in terms of the US corporate pension market many plans are de-risking; which is to say, pension fund administrators are moving out of equities and other high-growth asset classes, in order to pursue fixed-income alternatives. The first step in their de-risking activities is long duration fixed-income. Table 2 lists a few of the client benchmarks which MetLife currently manages portfolios for, many of which are custom.
TABLE 2

CLIENT BENCHMARKS, BY DURATION

<table>
<thead>
<tr>
<th>Client Benchmark</th>
<th>Benchmark Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custom Liability Benchmark (PPA Curve)</td>
<td>7.45 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays LDI Series</td>
<td>9-14 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Custom Corporate: 50% 5-10 Year / 50% 10+ Year (30% BBB Cap)</td>
<td>10.11 yrs</td>
</tr>
<tr>
<td>ICE BofAML Custom Corporate: 62.5% 10+ Year AAA-A 3% Constrained / 17.5% 7-10 Year</td>
<td>12.99 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Credit</td>
<td>13.57 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Corporate 2% Capped</td>
<td>13.76 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Corporate</td>
<td>13.76 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Corporate ex Insurance (Min. 500mm Amount Outstanding)</td>
<td>13.80 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Custom Corporate: 70% Long A+ / 30% Long BBB</td>
<td>14.02 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Custom Corporate: 75% Long A+ / 25% Long BBB</td>
<td>14.08 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Credit A+</td>
<td>14.09 yrs</td>
</tr>
<tr>
<td>ICE BofAML 10+ Year AAA-A US Corporate 3% Constrained</td>
<td>14.26 yrs</td>
</tr>
<tr>
<td>ICE BofAML 10+ Year AAA-A US Corporate (EUR Hedged)</td>
<td>14.26 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Custom: 75% Long Credit / 25% Long Government</td>
<td>14.44 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Long Government/Credit</td>
<td>15.07 yrs</td>
</tr>
<tr>
<td>Bloomberg Barclays Custom: 70% Long Government / 30% Long Corporate</td>
<td>16.05 yrs</td>
</tr>
</tbody>
</table>

Pension plans have an entire litany of constraints; especially in terms of a given pension fund’s specific set of parameters and their related liabilities. Therefore, there are an equally large amount of approaches that MetLife uses to tailor a portfolio to the needs of a client portfolio.

This is an important aspect of the broader investment management question because – although vast – the investible universe is finite. For instance, while the aggregate market is comprised of USD 20 trillion in assets, the long-duration only represents approximately 10% of said total. As the de-risking trend continues to gain momentum, long-duration assets will become increasingly scarce. This begs the question regarding what options are available once this asset class matures. While clearly other alternatives exist, there are additional solutions that are available within the insurance sector: annuities; partial-risk transfers; complete-risk transfers. These alternatives basically allow pension funds to transfer existing liabilities to insurance firms. Logic dictates that insurance companies already possess the skill sets to either manage said risks or buy said risks. And clearly, the insurance sector has a wide spectrum of proven solutions capable of pursuing either strategy.
TABLE 3
MATURITY DISTRIBUTION

<table>
<thead>
<tr>
<th>Maturity Segment</th>
<th>$ Billions</th>
<th>% Market Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 7 years</td>
<td>3,325</td>
<td>52</td>
</tr>
<tr>
<td>7 – 10 years</td>
<td>1,007</td>
<td>16</td>
</tr>
<tr>
<td>10+ years</td>
<td>2,016</td>
<td>32</td>
</tr>
</tbody>
</table>

SOURCE: THE AUTHOR.

In light of the foregoing, MetLife views its potential contribution to the area of investment management in terms of what it does extremely well, how it can differentiate itself from competitors – and most importantly – how can it solve problems for clients. We believe that our proven leadership in terms of this investment-insurance convergence is the bridge that will help other insurance companies, other institutional investors, and other pension investors to optimize their respective approaches to investment management. And with the backing of a Fortune 50 parent firm, which is driving innovation in a variety of ways, we feel that MetLife is especially well-positioned to serve as a conduit to other institutional investors as they seek to achieve their respective portfolio objectives.
A PASSIVE APPROACH TO RISK PARITY

RUPERT WATTS

1 Rupert Watts is originally from the United Kingdom and earned a Bachelor’s degree in Business and Finance from the University of the West of England, Bristol. Rupert is both a Certified Financial Analyst (CFA) and a Certified Alternative Investment Analyst (CAIA). Rupert is Director of Strategy Indices at S&P Dow Jones Indices. His field focuses on alternate beta strategies, including factor-based indices, dividends, and volatility, as well as quantitative, thematic, and asset-allocation strategies. In his role, Rupert works closely with the sales, marketing, and Global Research & Design departments to bring new ideas to market. Prior to his current role, Rupert worked at Deutsche Bank for almost 11 years, with the majority of this time dedicated to research and product development within quantitative investment strategies (QIS), with stints on the buy side and sell side. While in QIS, Rupert played a lead role in the successful launch of a risk premia platform, developing strategies across multiple asset classes and managing portfolio mandates for institutional clients.
As a member of the Product Management and Development team at S&P Dow Jones Indices, I develop new indices with the goal of meeting the needs of the asset-owner community. My hope is to share remarks which are both interesting and informative to the Latin American pension industry, specifically the FIAP membership.

This presentation will address risk parity, an investment approach which is fairly well-known within North America and Europe. I will introduce the concept of risk parity, describe how to construct a risk parity portfolio, and then touch on how asset owners are using it. Lastly, I will discuss how risk parity can be employed within a passive framework.

What is risk parity?

While there are a number of approaches and methods of implementation, risk parity can be broadly defined as an asset allocation strategy that attempts to balance the risk contribution across complementary asset classes. The primary goal is to generate stable returns over a range of defined economic regimes, and thus create a portfolio that – over the long term – possesses attractive risk-adjusted return and is less vulnerable to market downturns. The size of the risk parity market has grown to between USD 150 billion and USD 175 billion in assets² which is spread across active and passive products. Risk parity attracted a lot of headlines and grew substantially in popularity following the 2008 Financial Crisis as it posted notable outperformance relative to traditional allocation approaches. This has led increasingly more investors and asset owners to take note of its attractive long-term performance potential.

To understand why a risk parity approach makes sense, it is first necessary to consider the drawbacks of traditional asset allocation approaches (see Graph 1) which often assign fixed weights to complementary asset classes. For example, a 60/40 policy portfolio – which has proven popular within the US market – advocates

² Source: IMF.
investing in equities and bonds in a 60:40 ratio. While this approach may appear diversified from an asset-class perspective, when viewed through a risk-based lens it is very concentrated as equity has a higher weight and tends to be a lot more volatile than bonds. Equities end up dominating the overall risk/return characteristics of the portfolio and the bond component is essentially muted, especially during sharp market downturns.

This point is clearly illustrated by Graph 2 below which shows the five worst drawdowns in the S&P 500 since 1980 and their corresponding 60/40 portfolio return. As illustrated below, the 60/40 portfolio tends to suffer when stocks fall and experiences large drawdowns. The risk parity approach attempts to mitigate these losses through the use of different weighting across a range of asset classes.
Constructing a risk parity portfolio

I have identified three core objectives that risk parity strategies attempt to satisfy: generating stable returns across economic regimes (via appropriate asset class selection); maximizing benefits of diversification (via appropriate weighting schemes); and, achieving a stable risk profile (via risk targeting).

In terms of appropriate asset selection, risk parity is predicated upon the notion that asset classes behave in understandable ways based on the relationship of their cash flows to the economic environment. By balancing assets based on these structural characteristics, the impact of economic surprises can be minimized. Furthermore, when seeking to maximize diversification benefits, it is important to weight asset classes such that each is given sufficient voice to meaningfully influence the overall portfolio.

Asset class selection

The asset classes which comprise a risk parity portfolio should fulfill three basic criteria. First, each asset class must offer positive expected, long-term performance. Second, asset classes should exhibit low or negative correlation to each other – it is very important that asset classes are unique and there is no doubling up on risk exposures. Last, each asset class should seek to diversify across a range of economic
environments, specifically growth and inflation. Thus the pool of asset classes should have the potential to perform well or outperform traditional approaches across rising and falling growth and rising and falling inflation.

Complementary characteristics

The aforementioned asset class selection criteria leads to the selection of three core asset classes: equities, nominal bonds, and commodities (or other inflation-hedging securities). In terms of the growth dimension, equities and bonds are clearly complementary. As growth is rising or is better than expected, stocks tend to rise due to better earnings whereas nominal bonds perform less well. The opposite is true when growth is falling or is weaker than expected, as stocks will tend to fall but nominal bonds offer potential downside protection as yields fall (and prices rise). In terms of the inflation dimension, equities and bonds are less complementary as both are expected to perform well during periods of low or falling inflation and less well during periods of rising inflation. Hence, the inclusion of commodities is can provide protection.

Balanced across growth and inflation

Graph 3 shows the average asset class risk-adjusted performance during the four defined economic environments since 1973. Unsurprisingly, equities perform strongly during a growth up environment, and nominal bonds perform strongly during a growth down environment. With respect to inflation, commodities provide that natural hedge to equities and nominal bonds during rising inflation and vice versa. Thus within each environment, one or more asset class serve to remediate any underperformance.
Weighting scheme

As mentioned, risk parity utilizes a weighting scheme that is quite different from traditional asset allocation techniques. A risk balanced approach is employed that seeks to equalize the risk contribution of each asset class, where weights are dynamic over time. In this allocation process you work backwards to determine your asset class weights. First you start by measuring the risk of each asset class; this can be performed by simply calculating the realized volatility or by using more sophisticated techniques to forecast risk. Once the risk of each asset class has been determined, the weights are solved for that equalize the risk contribution. As one would expect, a natural consequence of this technique is that low-volatility asset classes tend to receive a much higher weight (and vice-versa for high-volatility asset classes).

According to modern portfolio theory it is possible to construct an “efficient frontier” of optimal portfolios offering the highest expected return for a defined level of risk. Given a risk parity portfolio seeks to balance asset class risk contribution and hence maximize their diversification benefits it is very reasonable to assume it would sit on or close to the efficient frontier (see Graph 4).
If we take this logic one step further and assume asset class Sharpe ratios are equal — an assumption which is somewhat supported empirically over the long-term horizon — it is reasonable to assume that risk parity would prove to be the most optimal portfolio; this is to say, it would comprise the portfolio with the highest risk-adjusted return.

Regardless of an individual’s stance on the foregoing statements, risk parity portfolios tend to be efficient and offer the potential to outperform their traditional asset-allocation counterparts.

**Need for leverage**

A natural consequence of allocating higher weights to less volatile assets is that the unlevered risk parity portfolio tends to realize at a much lower volatility than a 60/40 portfolio. This dynamic can be addressed by levering up the portfolio (see Graph 5) in order to increase the volatility and make the return more meaningful. Risk parity approaches typically involve investments in liquid instruments such as futures which can be efficiently levered.
CHAPTER V
NEW INVESTMENT TRENDS

Risk targeting

As Graph 6 shows, the risk parity portfolio with no volatility targeting fluctuates quite considerably over time which runs contrary to the objective to provide a more stable risk profile. This dynamic is usually addressed using some form of risk targeting, where the leverage is periodically adjusted to meeting the target. As illustrated in Graph 7, when a portfolio is volatility targeted, the risk profile is much more stable.
A PASSIVE APPROACH TO RISK PARITY
RUPERT WATTS

PENSION REFORMS: ADDRESSING NEEDS IN A CHANGING WORLD

Graph 6
SIMPLE RISK PARITY WITH NO VOLATILITY TARGETING

Source: S&P Dow Jones Indices LLC. Data from January 1980 to April 2019. Simple risk parity is constructed by allocating equal risk, rebalanced monthly, across three asset classes (stocks, bonds, and commodities) based on each asset class’ previous 12-month realized volatility. Charts are provided for illustrative purposes.

Graph 7
SIMPLE RISK PARITY WITH A 10% VOLATILITY TARGET

Source: S&P Dow Jones Indices LLC. Data from January 1980 to April 2019. Simple risk parity is constructed by allocating equal risk, rebalanced monthly, across three asset classes (stocks, bonds, and commodities) based on each asset class’ previous 12-month realized volatility. Charts are provided for illustrative purposes.

Drawdown analysis

Graph 8 below shows the performance of a simple risk parity portfolio versus the S&P 500 and the 60/40 portfolio across the same five worst equity market drawdowns seen earlier. The simple risk parity portfolio allocates to equities, nominal bonds and commodities, and weights the asset classes such that the volatility contribution of each asset class is equalized (using 12M realized volatility), targets a 10% volatility, and rebalances monthly. The simple risk parity strategy outperforms the S&P 500 as well as the 60/40 counterparts in each of the cited downturns.
CHAPTER V
NEW INVESTMENT TRENDS

GRAPH 8
TOP FIVE S&P 500 DRAWDOWNS, SINCE 1980 WITH CORRESPONDING RISK PARITY RETURNS

Performance analysis

The foregoing begs the following question: does risk parity outperform in every environment? As we can ascertain from Table 1, the answer is no. The first scenario in which it fails to outperform is during very strong bull markets. This is unsurprising given traditional portfolios tend to have a much higher equity allocation. Another environment in which it tends to underperform is during a rapidly-raising rate environment. However, it is important to note that when rates are rising gradually over time, risk parity has historically performed fairly well.
TABLE 1

RISK PARITY PERFORMANCE

<table>
<thead>
<tr>
<th>Period</th>
<th>Simple Risk Parity</th>
<th>60/40 Portfolio</th>
<th>Outperformance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1982 Bull Market, Sep 1982 - Mar 1984</td>
<td>29.0%</td>
<td>35.1%</td>
<td>-6.1%</td>
</tr>
<tr>
<td>Black Monday, Oct 1987</td>
<td>-3.2%</td>
<td>-10.3%</td>
<td>7.0%</td>
</tr>
<tr>
<td>Surprise Fed Rate Hike, Feb - Mar 1994</td>
<td>-10.0%</td>
<td>-9.8%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Tech Bubble, Jan 1999 - May 2000</td>
<td>13.1%</td>
<td>23.9%</td>
<td>-10.8%</td>
</tr>
<tr>
<td>Tech Bubble Burst, Apr 2000 - Feb 2003</td>
<td>50.7%</td>
<td>-6.6%</td>
<td>57.3%</td>
</tr>
<tr>
<td>Easy Credit, Aug 2002 - Mar 2004</td>
<td>49.6%</td>
<td>36.4%</td>
<td>13.3%</td>
</tr>
<tr>
<td>Global Financial Crisis, Jul 2007 - Mar 2009</td>
<td>-10.1%</td>
<td>-21.6%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Europe/Greek Debt Crisis, Apr - June 2010</td>
<td>-1.3%</td>
<td>-7.6%</td>
<td>6.3%</td>
</tr>
<tr>
<td>2016-2018 Bull Market, Mar 2016 - Jan 2018</td>
<td>59.6%</td>
<td>68.9%</td>
<td>-9.3%</td>
</tr>
<tr>
<td>Fourth Quarter 2018, Oct - Dec 2018</td>
<td>-12.9%</td>
<td>-17.0%</td>
<td>4.1%</td>
</tr>
</tbody>
</table>

THE 60/40 EQUITY/BOND PORTFOLIO IS A HYPOTHETICAL PORTFOLIO. SOURCE: S&P DOW JONES INDICES LLC. DATA FROM JANUARY 1981 TO MARCH 2019. SIMPLE RISK PARITY IS CONSTRUCTED BY ALLOCATING EQUAL RISK, REBALANCED MONTHLY, ACROSS THREE ASSET CLASSES (STOCKS, BONDS, AND COMMODITIES) BASED ON EACH ASSET CLASS’ PREVIOUS 12 MONTH REALIZED VOLATILITY. TABLE IS PROVIDED FOR ILLUSTRATIVE PURPOSES.

Range of implementation approaches

What has been presented so far has been a somewhat simplified version of risk parity – the reality is there are a number of active and passive implementation approaches. The risk-balancing component can be performed in a variety of ways, e.g. equal volatility contribution, equal risk contribution, or by risk balancing across economic environments. There are a variety of methods to allocate to individual instruments within each asset class, e.g. market-cap weighting, risk-weighting, or volume weighted. Lastly, risk can be measured in a variety of ways, e.g. historical vs. forecasted, static vs. dynamic.

Institutional approaches to risk parity

Some asset owners have adopted risk parity as part of a core / satellite approach. Given risk parity exhibits relatively attractive long-term risk / return characteristics it is well positioned to comprise the core component. It is then supplemented with satellite positions that are uncorrelated or that seek to capitalize on tactical opportunities.
It is also common to see risk parity utilized within the alternatives bucket which makes sense given it employs leverage and derivatives. Furthermore, given risk parity tends to have a moderate overall correlation to equities, it is then used as a diversifier and to help control overall portfolio volatility.

Regardless of how risk parity is classified, it should be viewed as a useful tool to help improve the risk / return characteristics of an overall portfolio. It is best interpreted as a means to equalize risk by allocating funds to a wider range of asset categories such as stocks, government bonds, and inflation hedges. In theory, it is a fairly straightforward approach which ostensibly does not merit a great deal of controversy or debate.

**Risk parity for Latin American investors**

While a different set of restrictions exist across asset classes within this region, risk parity is a viable alternative due to its ability to be tailored to a specific environment. At the end of the day, the approach simply comprises a set of principles and a specific asset allocation technique which can be aligned vis-à-vis Latin American parameters. Clearly, the key objective is to ensure one selects asset classes which behave differently across economic environments. Additionally, it is vital to pursue an appropriate weighting scheme which ensures, from a risk perspective, asset classes are on an equal footing.

**Indexing risk parity**

As is the case with a number of multi-asset strategies, there is a growing realization that the efficacy of many active risk parity products can be captured passively in a low cost and transparent manner. S&P Dow Jones Indices launched a series of risk parity indices in late 2018. These indices invest across equities, fixed income and commodities, and are 100% futures-based, which means they are liquid and scalable. The weighting scheme seeks to equalize the volatility contribution through the use of a very long look-back window (15 years). This serves to capture risk across at least one complete economic cycle and has the additional benefit of ensuring allocations are fairly stable over time. There are three versions of the index available, each differentiated by a separate volatility target (i.e., 10%, 12% and 15%).

**S&P Risk Parity Indices**

In terms of the performance of the 10% target volatility index versus its 60/40 and HFR counterparts over the long term, Graph 9 delineates the manner in which the S&P Risk Parity Index has outperformed the 60/40 portfolio and has achieved similar results compared to the fund-based composite tracking active managers within the space.
Table 3 further compares the S&P Risk Parity Index to the 60/40 equity-bond portfolio and the HFR Risk Parity Vol 10 Index. The S&P Risk Parity exhibits attractive long-term risk-adjusted performance and outperformed in most of the select drawdown periods (although this represents simulated performance). Lastly, the index has a fairly low tracking error vis-à-vis the HFR index.
### TABLE 3

<table>
<thead>
<tr>
<th></th>
<th>S&amp;P Risk Parity 10% Target Volatility</th>
<th>HFR Risk Parity Vol 19 Index</th>
<th>60/40 EQUITY/BOND PORTFOLIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Return</td>
<td>7.08%</td>
<td>7.06%</td>
<td>6.14%</td>
</tr>
<tr>
<td>Annual Volatility</td>
<td>8.26%</td>
<td>8.34%</td>
<td>10.05%</td>
</tr>
<tr>
<td>Sharpe Ratio</td>
<td>0.707</td>
<td>0.694</td>
<td>0.606</td>
</tr>
<tr>
<td>Maximum Peak-to-Trough Drawdown</td>
<td>-29.17%</td>
<td>-22.43%</td>
<td>-36.42%</td>
</tr>
<tr>
<td>Return to Maximum Drawdown</td>
<td>26.12%</td>
<td>31.47%</td>
<td>16.93%</td>
</tr>
<tr>
<td>Annualized Trading Error</td>
<td>3.93%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Select Periods: Cumulative Returns**

<table>
<thead>
<tr>
<th>Event</th>
<th>S&amp;P Risk Parity 10% Target Volatility</th>
<th>HFR Risk Parity Vol 19 Index</th>
<th>60/40 EQUITY/BOND PORTFOLIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Financial Crisis, Oct 2007 - Feb 2009</td>
<td>-23.6%</td>
<td>-20.6%</td>
<td>-36.4%</td>
</tr>
<tr>
<td>Europe/Greece Debt Crisis, Mar - June 2010</td>
<td>0.9%</td>
<td>1.5%</td>
<td>-7.2%</td>
</tr>
<tr>
<td>Downgrade of U.S. Debt, Aug - Nov 2011</td>
<td>-1.4%</td>
<td>-0.8%</td>
<td>-2.2%</td>
</tr>
<tr>
<td>China’s Black Monday, May - Sept 2015</td>
<td>-5.7%</td>
<td>-8.2%</td>
<td>-6.1%</td>
</tr>
<tr>
<td>Inflation Fears, Jan 2018 - Mar 2018</td>
<td>-2.0%</td>
<td>-2.4%</td>
<td>-3.4%</td>
</tr>
<tr>
<td>Fourth Quarter 2018, Oct 2018 - Dec 2018</td>
<td>-4.4%</td>
<td>-5.7%</td>
<td>-7.0%</td>
</tr>
</tbody>
</table>

Source: S&P Dow Jones Indices LLC., HFR Index LLC. Data as of March 29, 2019. Index performance based on monthly total return in USD. Past performance is no guarantee of future results. Chart is provided for illustrative purposes and reflects hypothetical historical performance. Please see the performance disclosure at the end of this document for more information regarding the inherent limitations associated with back-tested performance.
Performance Disclosure

The S&P Risk Parity Index – 10% Target Volatility, S&P Risk Parity Index – 12% Target Volatility, and S&P Risk Parity Index – 15% Target Volatility were launched on July 11, 2018. All information presented prior to an index’s Launch Date is hypothetical (back-tested), not actual performance. The back-test calculations are based on the same methodology that was in effect on the index Launch Date. Complete index methodology details are available at wwwspdji.com.

S&P Dow Jones Indices defines various dates to assist our clients in providing transparency. The First Value Date is the first day for which there is a calculated value (either live or back-tested) for a given index. The Base Date is the date at which the Index is set at a fixed value for calculation purposes. The Launch Date designates the date upon which the values of an index are first considered live: index values provided for any date or time period prior to the index’s Launch Date are considered back-tested. S&P Dow Jones Indices defines the Launch Date as the date by which the values of an index are known to have been released to the public, for example via the company’s public website or its datafeed to external parties. For Dow Jones-branded indices introduced prior to May 31, 2013, the Launch Date (which prior to May 31, 2013, was termed “Date of introduction”) is set at a date upon which no further changes were permitted to be made to the index methodology, but that may have been prior to the Index’s public release date.

Past performance of the Index is not an indication of future results. Prospective application of the methodology used to construct the Index may not result in performance commensurate with the back-test returns shown. The back-test period does not necessarily correspond to the entire available history of the Index. Please refer to the methodology paper for the Index, available at wwwspdji.com for more details about the index, including the manner in which it is rebalanced, the timing of such rebalancing, criteria for additions and deletions, as well as all index calculations.

Another limitation of using back-tested information is that the back-tested calculation is generally prepared with the benefit of hindsight. Back-tested information reflects the application of the index methodology and selection of index constituents in hindsight. No hypothetical record can completely account for the impact of financial risk in actual trading. For example, there are numerous factors related to the equities, fixed income, or commodities markets in general which cannot be, and have not been accounted for in the preparation of the index information set forth, all of which can affect actual performance.

The Index returns shown do not represent the results of actual trading of investable assets/securities. S&P Dow Jones Indices LLC maintains the Index and calculates the Index levels and performance shown or discussed, but does not manage actual assets. Index returns do not reflect payment of any sales charges or fees an investor may pay to purchase the securities underlying the Index or investment funds that are intended to track the performance of the Index. The imposition of these fees and charges would cause actual and back-tested performance of the securities/fund to be lower than the Index performance shown. As a simple example, if an index returned 10% on a US $100,000 investment for a 12-month period (or US $10,000) and an actual asset-based fee of 1.5% was imposed at the end of the period on the investment plus accrued interest (or US $1,650), the net return would be 8.35% (or US $8,350) for the year. Over a three year period, an annual 1.5% fee taken at year end with an assumed 10% return per year would result in a cumulative gross return of 33.10%, a total fee of US $5,375, and a cumulative net return of 27.2% (or US $27,200).
INTERNATIONAL ECONOMIC OUTLOOK VIS-À-VIS LATIN AMERICA

RICARDO HAUSMANN

1 Holds an undergraduate degree in engineering and applied physics, as well as a PhD in economic sciences from Cornell University. Currently serves as director at Harvard’s Center for International Development (CID), and professor of economic development at the John F. Kennedy School of Government. Former chief economist at the Inter-American Development Bank (1994-2000), founder of IADB Research Department. Former Minister of Planning, board member at Central Bank (Republic of Venezuela), and chairman of IMF-World Bank Development Committee. Primary research areas at CID fall into two categories: determinants of macroeconomic volatility, financial-sector fragility and crises; and, determinants of long-term growth. Publications address a wide variety of issues, including causes of growth acceleration and collapses; causes and consequences of original sin; growth diagnostics; structural-transformation processes; the Product Space; international disequilibriums; and, dark matter.
In the following article, it is my intention to share some thoughts on long-term growth and its determinants in terms of Latin America. Additionally, the text addresses an issue of paramount importance for the Latin American pension sector: informality. Thirdly, I have provided an evaluation of the causes, solutions and potential role that pension fund administrators within the region might play in terms of remediating said informality through the use of assets under management (AuM).

In my view, it is important to analyze long-term growth because, at the end of day, pension funds are comprised of long-term savings, as well as long-term liabilities. As a result, the long-term horizon is extremely relevant in terms of generating a sector-wide strategy for the Latin American pension fund sector.

**So many causes for concern**

While the world’s economy is not currently in the midst of a crisis, its economic growth has undergone a considerable degree of deceleration. The recent US-China trade war, for its part, has only served to damper hopes in terms of the prospects for international growth. In terms of Latin America, growth has been decidedly disappointing. All of the economies which comprise the region have registered growth levels which vary between mediocre and completely unsatisfactory. The most disappointing national context, in this sense, has been my nation: Venezuela. According to International Monetary Fund (IMF) projections, its GDP has fallen by 56% during the period 2012-2018. Unfortunately, in 2019 the IMF expects this indicator to fall by another 26%, which is an unprecedented scenario. To clarify, the current Venezuelan crisis is four times worse than the worst recession in Chilean history, and goes far beyond that which we saw in the Colombian recession of 1998.

Latin American nations currently face a significant degree of informality. This situation comprises a significant impediment to a nation’s ability to operate a funded social security system, and also has a major impact on individual capitalization frameworks. As such, I wish to put forth an alternative explanation
of why informality is so high within the region, and also share an agenda outline intended to enable nations to remediate their informal sector challenges.

As might be expected, such high levels of informality have resulted in major pension-contribution gaps during an individual’s work history. These gaps are determinant in terms explaining why low pension payouts are generated. They are also, as a result, extremely relevant in terms of identifying the root causes of the high levels of pension dissatisfaction which nations such as Chile are currently attempting to address. It is important to emphasize that lower pension payouts do not expressly correlate to low yields, or even low contribution rates. Another major cause is an individual’s inability to achieve the monthly contribution levels required to generate decent pensions.

Whereas the aim here is to address long-term growth, let me begin by providing a bit of historical context. Adam Smith penned his magnum opus, entitled The Wealth of Nations, in 1776. At this point in history, the richest nation on earth was Holland. However, it was only about four times wealthier than the poorest country of the 18th century. According to data from the World Bank, the poorest nation on earth is currently Malawi, where per capita income only reaches USD 226. Were one to multiply this figure by four, they would arrive at the per capita income of Haiti, which is USD 819. If we multiply Haiti’s per capita income by four, we would be closest to the levels seen in Morocco, which is USD 3108. If we extend this process one more step, the figure would be approximately USD 13,500 per capita, which is the levels seen in Poland and Argentina. Multiplying this figure by four word lead us to the income level observed in Singapore, which is currently USD 55,182 per capita.

Thus, whereas the entire international per capita income spectrum once consisted of a 4 to 1 ratio, it has grown exponentially to an abysmal 256:1 in the 21st century. Thus, one might be tempted to assert that the ability to recite lines from Adam Smith’s book does not necessarily correlate to an ability to adequately address the world’s economic problems. This may definitely be the case, at least in modern times. I attach this caveat because all available evidence on the subject points to per capita income having remained fairly stable for nearly 1800 years; which is, incidentally, no mean feat. As Graph 1 would seem to suggest, it is extremely possible that Smith’s remarks served us fairly well – for about 100 years.
However, as we begin to analyze the last two centuries of this 2000-year timeline, an enormous divergence occurred in terms of the enormous spike in the per capita income levels of some nations vis-à-vis the negligible growth in said income which occurred on the rest of the planet. As graph 2 demonstrates, the per capita income levels observed in 1800 were vastly lower than the current levels being generated within the developed world.
An explanation of the great divergence

The foregoing begs the following question: what factors explain the differences in worldwide income levels? There is a fair amount of consensus among economists in terms of the root causes of the per capita income gap. In general, it is thought that the economies which have achieved such exceptionally high levels of said income possess a demonstrated ability to employ technology. What is even more exceptional – if not miraculous – is that we economists issued such a unanimous verdict on any subject.

Unlike economists, diplomats are known for their acumen in generating consensus; which they frequently seem to conjure out of what can only be described as thin air. As such, I have always felt that a diplomat must have invented such a wonderfully nebulous term such as technology. Individuals practiced in the art of diplomacy need such terms, because it is they lead who enable nations to reach accords; and more importantly, to sign treaties. Nebulosity serves diplomatic corps so well because each signatory ostensibly interprets such terms as they deem fit.

Furthermore, the term in question – technology – has an innately positive ring to it. Additionally, it has almost never fallen out of fashion. However, for better or worse, economists seldom endeavor to delineate exactly what is meant by such a
perennially fashionable word. Our collective unwillingness or inability to define technology has complicated the task of explaining why nations such as Malawi failed to adopt and then absorbed technologies. This is to say, it impedes our ability to delineate what steps a nation need take to achieve economic success.

As such, one must first define the term technology in the clearest language possible. I am going to take what some might term a Judeo-Christian approach to the task. This is to say, while the notion is decidedly singular in nature, it is made up of three inseparable constituent components.

A useful approach for understanding technology is to compare the two scenarios illustrated in Image 1. At first glance, the dichotomy at work here is that, on the one hand, the individual operating the harvester possesses more capital, education, land and knowledge; whereas the farmer behind his plow and team of oxen necessarily possesses less. However, economists have come to the conclusion that the difference between these two individuals cannot be completely explained by the foregoing set of factors. Were this the case, one could simply create an NGO which would deliver tractors to nations throughout the Third World and that would be the end of it. Furthermore, the World Bank would comprise the most successful undertaking in the history of mankind.

The absorption of technology by a given nation is a much more complex process than it appears at first glance. Additionally, the aforementioned trinity of technology is needed to properly assess said dynamic. Firstly, technology is essentially comprised of tools, machinery and materials. Secondly, the notion implies the use of protocols, codes, formulas and manuals which users utilized to perform a given technological task. Whereas machinery is a decidedly physical asset, the aforementioned protocols
and methodology which users need materialize through the use of symbols; i.e., the latter are of a much more conceptual nature.

**Know-how**

The third member of the triumvirate is hugely important whereas it constitutes a determinant factor in terms of a society’s ability to absorb technology. This is to say, if an individual is faced with a concrete challenge such as a toothache, they need to visit an expert who possesses the necessary tools and knowledge of the relevant protocols for filling a cavity. Thus, an expert mixes the knowledge which they possess with the tools and procedures at their disposal in order to provide professional dental care. The expertise which these professionals possess in terms of their brains, eyes and hands comprises the third component of technology. This facet of the notion is often described as know-how. At the end of the day, know-how involves the ability to correctly employ technology.

In light of the foregoing, we might describe tools as incorporated knowledge, codes as codified knowledge, and the ability to utilize technology as *tacit knowledge*. Tacit knowledge is an extremely relevant factor of technology absorption because it involves a very clear dichotomy: technology users who possess said knowledge are able to proceed, whereas technology users who lack it will never overcome this impediment.

Therefore, while it is possible to assert that tacit knowledge (know-how) does in fact reside within the human brain, we are not necessarily able to deconstruct, analyze and share it with others. For example, while human beings know how to walk, no one would expect every human being on the planet to be able to explain all of the related anatomy and physics issues that are involved. That would be a completely irrational expectation. However, humans are able to walk even though they lack the ability to delineate every dynamic involved in said activity.

Professional athletes are a number ideal example of this dynamic. When a tennis player is reacting to a serve, they did not have time to think about how to respond to a ball which is at times moving up to 200 kilometers per hour. In fact, when scientists have studied the behavior of many players in slow-motion, they have observed that players often began moving towards the spot on the court where the ball is going to hit before their opponent has even made contact with the tennis ball. Clearly, their brains are somehow able to anticipate the movement of their opponent. Holding a conversation with a tennis player regarding this dynamic will probably not generate any major improvements in the game of tennis, but this aspect of life is exactly what makes the two foregoing examples of know-how so illuminating.
Teams

Apart from users possessing the requisite expertise, technology also requires the presence of teams in order to spread throughout a given society. Said teams must possess a variety of skill sets, or know-how, which they then combine in order to drive and then capitalize upon all of the available benefits technology offers.

For instance, no one on the planet is capable of operating a commercial airliner on their own. This is simply not practicable because in order to operate an airline jet one needs other professionals with whom they must interact (e.g., flight crew, aircraft mechanics, air-traffic controllers and security teams).

Another excellent metaphor for modern technology is a symphony orchestra. Although each musician plays a different instrument (tool), and each has their own sheet music (code), these individuals are not required to know how to play every instrument in the orchestra. Wind instruments require a completely different skill set than that required to play a string instrument. Thus, the teamwork aspect is illustrated by the manner in which these tools and codes are brought together in an extremely precise convergence which generates the musical quality produced by a symphony orchestra.

This would seem to beg the following question: How much technical expertise, inter alia, needs to be approved in order to reach the critical mass necessary for a society to absorb and then properly employ technology?

Image 2 shows the first step on the ladder of expertise. An Ecuadorian family, involved in subsistence farming, is able to produce all of the products arranged on the floor of the dwelling. We can safely say that they depend very little upon markets, due to the fact that they possess all of the necessary knowledge to produce what they need to survive. At the end of the day, this photograph is an excellent metaphor for the informal sector.
The more specialized workers shown in Image 3 operate at a higher production complexity level, and would be unable to produce a finished product such as a hamburger and deliver it to consumers. For instance, the butcher would not be able to make bread, and the baker would be unable to produce ground beef. Additionally, individuals operating at this level are limited to producing fairly small quantities.
Lastly, there is no family or small business on earth capable of producing the components required to assemble the finished products which appear in Image 4; that is, without the help of hundreds or even thousands of extremely high-skilled employees.

Nor should a family-run business be able to produce the commercial airliner shown in Image 5. This product requires collaboration at a corporate level; which is to say, efficient interaction between a huge variety of world-class firms. These partners collectively possess the ability to perform a wide spectrum of manufacturing tasks. For example, the image shows how Boeing’s role in the 21st century is largely limited to managing the production of the aircraft’s subassemblies by other firms. The Boeing 787 is essentially a symphony of production in which each firm involved has an equally important part to play. The high degree of technical expertise required means that firms are now much more limited in terms of manufacturing scope. Therefore, in order to quantify the level of know-how involved, one would need to multiply the number of manufacturers involved by the almost infinite number of cognitive technical abilities required to produce a single 787. Clearly, manufacturing in a globalized world means that the aforementioned teamwork is more relevant than ever; and, here again, the technology factor only serves to exponentially multiply said relevance. At the end of the day, this is the best way to view technology: it is a factor which multiplies the significance of other determinant factors in an economy. This is why technological know-how is completely intertwined with potential for economic progress.
The Scrabble theory of economic development: an alternative approach to explaining technology absorption within societies

An especially useful method for understanding the dynamics of modern economics is to analyze production in terms of a Scrabble game. In this paradigm, the words one generates on the Scrabble board represent finished goods or production sub-assemblies, whereas the tiles represent the separate units of technological know-how which currently exist on the planet. Thus, in order to produce a given finished good, one must first bring together the necessary tiles needed to string together that particular word.

In these circumstances, if a player is limited to a single tile, their respective production capacity is extremely limited. In fact, one could not be more limited if they tried. The beauty of what one might characterize as the technological multiplier is that if a producer only adds three tiles to their production capacity, they are then able to string together four words. Although this level of technological complexity limits manufacturers to generating 3-letter words, one need only accrue a fourth tile in order to exponentially expand their production capacity. Having four tiles translates into being capable of generating a total of nine, 4-letter words. Thus, in these circumstances only one additional tile is needed to convert a society capable of producing four exports into one that possesses nine, more complex exports.
When an economy manages to accrue 10 tiles, its productive capacity takes a quantum leap up to the ability to export 595 products. This aspect of modern economics explains, in large part, the conditions that generate the aforementioned enormous gap in per capita income which exists in the world.

Of course, a society which possesses all 26 letters of the alphabet possesses the necessary productive capacity to string together every word in the dictionary; i.e., hundreds of thousands of terms. Another interesting aspect of this dynamic is that longer words achieve a much higher price within the marketplace than their shorter counterparts.

**Ubiquity versus diversification**

Much of the foregoing is informed by the fact that to determinant factors dictate the dynamic of modern economics: production diversity, on the one hand; and production ubiquity, on the other. This is due to the fact that, if a word contains many letters, there is a much lower probability that other production sites will possess all the tiles needed to spell it out. This is to say, products which require a more varied set of know-how units (tiles) are much more difficult to produce. Thus, it is possible to view the world in terms of how many tiles each production center possesses. If one begins to classify nations in terms of the quantity of tiles which each possesses, the following graph is generated (see Graph 3).
To clarify, the horizontal axis of Graph 3 correlates to the degree of production diversity that is achieved by a given nation, whereas the vertical access represents how many other nations possess the exact same production capacity. One can ascertain that wealthier nations tend to be located below the horizontal and to the right of the vertical axes, due to the fact that they are able to produce things which very few other countries can also produce. For their part, poorer nations are located above and to the left, whereas their extremely limited production diversity is matched – export for export – by nearly every other nation on earth; this is to say, the few goods that they are able to produce are also produced by a huge amount of other nations.

The dynamic between diversity and ubiquity seen at the international level is also present at the municipal level in Chile, as one can ascertain in Graph 4. We can clearly see how wealthier communities are located below and to the right, due to their ability to produce a greater number of products which are not produced within other areas of the nation. Additionally, whereas poorer communities produce goods which are produced in the rest of the nation, they are located above and to the left.
The same dynamic has been observed through analyses of cities in Turkey, the results of which are illustrated in Graph 5.
Furthermore, evidence of the dynamic has been identified in Mexico at the state level, in Colombia at the departmental level, and in Sri Lanka at the district level (see Graphs 6-8).
GRAPH 6
MEXICAN STATES

SOURCE: AUTHOR.
GRAPH 7
DEPARTMENTS IN COLOMBIA

Average Ubiquity vs. Diversity
2012 - Total Wages

SOURCE: AUTHOR.
In practical terms, one can infer that the quantity of tiles a production center possesses by determining the number of products it is capable of producing and in terms of the relative production complexity of said products.

**Economic complexity index**

Together with my colleague, Chilean economist Cesar Hidalgo, I developed a method for determining the quantity of tiles a location possesses. We call it the *Economic Complexity Index* and it is useful at the municipal, state and national level of a given economy.

As one can ascertain from Graph 9, we found that the number of tiles which a country possesses correlate strongly to the wealth of said nation. The vertical axis represents per capita income controlling for initial income and proportion of per capita natural resource exports. For its part, the horizontal axis represents the index of economic complexity controlled for by said factor.
Put in simpler terms, the horizontal axis indicates how many tiles a society possesses, while the vertical axis tells us how wealthy it is. As indicated above, the correlation between wealth and complexity is extremely significant. By the same token, it is not a perfect correlation because nations such as India find their way far below the regression line despite having such a strong and diversified production capacity. One would expect that, given the fact that this economy has accrued the necessary quantity of tiles, India will eventually begin to generate more and more wealth. In fact, we believe that this is exactly why we have seen so much growth in the Indian economy. National expectations are running so high that many within Indian society were even a bit disappointed by a projected annual growth rate of 7% for 2019.

Conversely, at first glance one might think it strange to see wealthy nations who possess such a limited production capacity. It is rational to expect that these societies will begin to move towards the regression line over time; which is to say, that their income level will begin to correlate more to their respective production complexity level.
The diversity-ubiquity dynamic constitutes good news for Mexico, whereas this nation possesses all the tiles a society needs to achieve economic progress. Clearly, the dynamic portends extremely poor outcomes for the Republic of Venezuela.

In light of the foregoing, many would be tempted to focus on simply beginning to accrue more tiles. This is normally a good approach, whereas economic development is achieved through the accumulation of more tiles in order to, in turn, increase national production capacity. The only problem with this approach is that, quite frequently, it is difficult to undertake a new production activity when one lacks at least a modicum of experience within said production sector. For instance, how would one begin producing watches in a society which has no watchmakers? Here again, if a society lacks even the most rudimentary tiles, it is unable to even take the first step towards economic growth. Thus, if it lacks the ability to reach this critical mass, it is completely irrational to expect that it will be capable of generating significant economic progress in the near to medium term.

In order to illustrate the varying degrees of economic complexity which exist in the world, our team then developed a tool which contextualizes national economies vis-à-vis what we term the Product Space (see Image 6).
Each color represents a given export sector, whereas the specific circles refer to a specific product within said sector. Clearly, all of the circles within a specific color group involve approximately the same variety of tiles to produce. Furthermore, the proximity of one color to another color within the product space denotes the fact that only one additional tile is required for a nation to begin producing an export product within an adjacent sector. The relative distance between one color and another indicates that a gap exists which is comprised of several tiles; a gap which must be bridged before a production center begins producing products within said color group.

It is also important to always remember that, at the end of the day, a nation’s economy is comprised of a group of teams – or, more to the point, firms – which have the ability to utilize different types of technology; this is to say, economies are made up of a group of production teams who are capable of undertaking a variety of production activities.

In light of the foregoing, Venezuela is an interesting case study. Graph 10 demonstrates how it completely lacks production diversity. The colored circles indicate the export sectors in which Venezuela is currently active. The size of the circles is proportional to the amount of exports involved. The enormous circle at the top of the graph represents petroleum, which essentially comprises its sole export. However, when we begin to view the scenario in Chile, it is extremely easy to ascertain that there is a huge difference between the two economies (Graph 11).
As one moves on to the case of Colombia, a bit more production diversity is noticeable. Additionally, when we compare Graph 12 to that of the Venezuelan scenario, the production-capacity gap is enormous. This is to say, Colombia possesses more tiles than Venezuela and, as a result, can string together a wider variety of even longer words. Here again, the multiplier effect of technology is astounding at times; especially as one remembers that longer words command a better price in world markets.
Graph 13 is a superb illustration of the scenario in Mexico in terms of production diversity. One can fully ascertain the formidable production capacity that this nation – as stated, seemingly on the brink of a significant amount of economic growth – possesses in such a wide variety of export sectors.
To even the most untrained eye, Italy is clearly a major standout in terms of production diversity. It surpasses even the finest examples of production capacity such as Mexico. At the end of the day, it Italian firms are active in almost every production sector on the planet.

**GRAPH 14**

**ECONOMIC COMPLEXITY OF ITALY**

![Graph showing economic complexity of Italy]

*Source: Author.*

**Economic growth outlook**

Utilizing the foregoing parameters, our team generated its projections for national growth. In my view, these are especially well-founded projections due to a preference for evaluating a nation’s capacity for economic growth in terms of this somewhat unique perspective on technology.

It is important to mention that, as stated, a nation’s relative proximity to the regression line in Graph 9 in no way reflects its potential production capacity; which is to say, whether or not said society possesses the tiles it needs to achieve economic growth.

The next task we faced was determining how capable a nation was – in terms of existing production capacity – of moving into adjacent production sectors. Graph 15 processes data a bit differently than the methodology used to generate the Product
Space. However, it is especially effective in terms of its ability to generate a highly intelligible method for comparing several national economies on a single graph. More importantly, it indicates how much potential a nation has for achieving economic diversity.

GRAPH 15

RELATIVE PRODUCTION PROXIMITY

For instance, it is easy to see how well positioned India is in the wider scheme of things. The graph shows that as the clear stand out in terms of the rest of the world. This nation possesses the tiles which it needs to undertake a number of production activities in several export sector color groups within the Product Space.

Furthermore, it is interesting to note that the nation which is located directly underneath India is Greece. Although the two were essentially positioned as polar opposites on Graph 9, in terms of production proximity, they are close neighbors. This is due to the fact that both economies have a tremendous capacity for moving into new color groups and undertaking production activities.
Another dimension of production proximity is that nations who have managed to produce within all of the available color groupings within the Product Space are left with a single alternative in terms of their collective ability to drive economic growth: focusing on innovation. This is to say, these nations utilize innovation within the global economy in order to ensure that their products are truly unique. There primary challenge, as one would expect, is to constantly push the technological envelope and pursue production strategies which ensure their position within the innovation vanguard. This is to say, they essentially have to position themselves as world leaders within almost every production sector in which they participate. For example, Austria is another excellent example of an economy which has achieved almost universal coverage within the Product Space, while constantly striving to excel in terms of innovation.

Unfortunately, Graph 15 also shows how far Venezuela has fallen in relative terms. Additionally, it is also positioned on the left-hand side of the graph, which means that it has failed to demonstrate a measurable degree of production proximity. Of course, this means that even if it were to attempt to increase its economic diversity, the challenge of permeating other color groups in the Product Space would be almost insurmountable due to its extremely limited national production capacity.

**Complexity outlook index**

One can also categorize nations in terms of the two axes and four quadrants included in Graph 16. The horizontal axis indicates the current level of production complexity achieved within a society, whereas the vertical axis represents its capacity to incorporate new production sectors into its economy.
As one can see, there is one quadrant in which nations have an outstanding Economic Complexity Index (ECI), as well as an extremely positive Complexity Outlook Index (COI). Thus, the economies located in the upper right-hand quadrant have demonstrated a high degree of production capacity and production proximity. The nations in the lower right-hand quadrant have achieved a high degree of economic complexity but lack the ability to acquire more tiles. Due to their negative COI, it is of paramount importance to begin to leverage existing production capacity with an eye to driving the innovation they will need to create new products. The economies located in the upper left-hand quadrant have demonstrated an extremely high degree of production proximity (i.e., the ability to acquire more tiles), however their inability to achieve an acceptable level of economic complexity – due to their relatively low levels of production capacity – has hampered their ability to achieve sustainable growth. The fourth quadrant, located on the lower left-hand side of the graph, involved nations which have failed to achieve an acceptable level of production capacity, and who have also failed to develop a measurable degree of production proximity. These nations need regional or international cooperation in order to take their first steps towards developing a positive COI and an acceptable ECI.
When we apply the generalized complexity parameters included in the previous graph, we can estimate the propensity for growth which a given nation possesses. The results of said evaluation are included in Graph 17, which is an outstanding tool in terms of its capacity to generate a clear panorama of the world vis-à-vis economic complexity parameters.

**GRAPH 17**

**COMPLEXITY QUADRANTS, 2016**

As indicated on the graph, the vertical axis includes the COI spectrum, whereas the horizontal access allows us to understand a nation’s relative position on the ECI spectrum; this is to say, ECI controlling for per capita GDP and natural resource exports. Graph 17 clearly demonstrates not Brazil, Mexico, Guatemala and Panama are very well positioned in terms of production proximity and capacity. Colombia is facing a measurable, yet manageable, degree of difficulty in terms of its ability to acquire new tiles. For its part, Peru clearly needs to take action in terms of both proximity and capacity; inter alia, it needs to focus on driving mining sector growth due to the fact that it possesses a great deal of production capacity within said sector. Argentina is unable to cover even the shortest of distances; a situation which limits its concomitant ability to gradually build up production and economic
inertia. Clearly, Venezuela is in an especially difficult position in terms of OCI, and even more so in terms of ECI.

An explanation of Latin America’s high level of informality

As one endeavors to explain the informality dynamic which seems to pervade the entire Latin American region, in my judgment the Scrabble metaphor again proves particularly expedient. And in terms of delineating some general parameters, a comparative study of Colombia and Spain is just as apropos. These two nations are extremely similar in terms of demographics. Additionally, they provide us with an equally useful high degree of contrast in terms of their respective labor markets.

GRAPH 18
DEMOGRAPHICS AND LABOR MARKETS: COLOMBIA AND SPAIN

Firstly, the national population of these two nations is basically identical. The working-age population, as well as the economically-active population, is also extremely analogous. In fact, Colombia actually has more employed individuals then Spain. Graph 18 clearly demonstrates that the divergence begins at the point in which we compare the relative scale of the formal sector within the two nations, and increases when their respective statistics on the amount of income-tax filers are evaluated. Spain possesses nine times more workers in terms of the latter indicator. This equates to the nation having 900% more contributions into its social security system then Colombia.

This type of scenario has major implications for the size, as well as the economic viability, of social well-being frameworks. Therefore, it is critical we determine what factors are driving such high levels of informality within Latin America.
The traditional response is that the relative magnitude of the informal sector within the region is due to distortions within Latin American labor markets. However, this approach is akin to inferring that the cause of a flat tire is limited to the portion of the tread in contact with the asphalt when one finally stops their vehicle to take a look. Clearly, there is a major possibility that a nail has punctured the entire on the portion of tread under the fender. Therefore, it is reasonable to infer that informality can be driven by factors generated within any market within a given economy. It is simply not reasonable to assume that determinant factors are limited to the labor market.

Additionally, one often hears that high minimum wages (i.e., as a proportion of the average or median wage) may be driving informal-sector growth and inertia. Others point to high taxes or high labor cost rates, which are ostensibly aimed at funding a plethora of social programs – e.g. health care, pensions, vocational training, job-related benefit programs – as being the culprits. Another usual suspect is the implicit subsidizing of informality via social programs which, while offered free of charge to informal-sector workers, formal-sector workers are forced to pay for. Furthermore, some point to the ability of informal sector employers to pay lower wages than formal sector firms, a situation which severely lowers labor costs for the informal sector. Lastly, others indicate that informality creates a scenario in which informal sector firms – that are often less productive than their formal sector counterparts – are able to survive due their innate ability to sidestep the tax hikes and regulatory restrictions that formal sector firms face.

At the end of the day, one thing is clear. From an international perspective, Latin American informality rates are relatively high. This is especially the case in Colombia, where 60% of the total workforce is involved in formal sector employment. As Graph 19 demonstrates, levels are a bit lower in Mexico, which tends to tracking at around 40%.
However, when one evaluates the legal minimum wage vis-à-vis the median wage, as occurs in graph 20, the minimum wage is relatively high in Colombia and relatively low in Mexico. Therefore, there is no apparent basis for asserting that the minimum wage is a determinant factor; which is to say, at least in the case of Mexico. There is also no basis for a correlation between legal minimum wages and such high levels of informality at the regional level.
All the available evidence points to the following issue being the most important challenge in terms of Latin American informality levels: identifying strategies which drive a nation’s production diversity. This is to say, if we can determine how nations can improve their ability to acquire new tiles, we can help them increase their ECI. Solving the ECI riddle will necessarily provide us with an explanation of why informality levels are so high within the region.

Firstly, one must first understand that informality is generated within the small business sector; in other words, within a context where a firm’s production capacity is limited to stringing together very few tiles. This dynamic is due to the fact that small firms use small staffs to spell out small words. As such, Latin America has a long history of operating economies which are principally comprised of small businesses.

Unfortunately, in order for a firm to generate an appropriate response to the technological demands of the modern age, it needs to have a team of professionals capable of addressing at least the most rudimentary parameters involved; which is to say, an accountant, a finance expert, someone to cover the HR department, and operations manager, a marketing expert, a contracts specialist, and a sales staff. When firms fail to meet this minimum standard, they are unable to compete at a national level; and they definitely should not try to do so in regional or international markets.
In order to ensure a firm possesses the tiles it needs to compete at an international level it is first necessary to guarantee that individuals are able to arrive at the workplace. This is an old, yet highly significant aspect of work. Workers travel on the streets and highways of a nation in order to get to their workstations. As such, national infrastructure strategies will never become completely irrelevant. On the contrary, everything points to their becoming increasingly relevant over time. This begs the question of whether or not the current Latin American infrastructure is capable of driving the change we need to see in terms of remediating the root cause of informality within the region. This correlation is not what many would characterize as inherently self-evident. However, a great deal of empirical evidence points to its existence and influence upon the informality which has marked the history of Latin America throughout nearly three centuries.

Lately, many urban centers have begun to address the issue. For example, Bogotá is an exemplary case. Santiago is another major metropolitan area which has completely restructured its public transportation system through a program known as TranSantiago. Despite major efforts in a number of Latin American nations, no significant gains have been made in terms of overcoming the difficulties which commuters face as they struggle to arrive at their workplaces each day. As Graph 21 demonstrates, the commuter issue is an international problem of monumental proportions. Additionally, whereas a two-way commute is involved, one should multiply the figure listed on the graph by two. Another relevant factor is that, while many drive to work in an automobile, others are forced to undergo a commute which is 2 to 3 times longer due to the inefficient public transportation systems which are so prevalent in Latin America. As such, even these incredibly lengthy commutes are – in real terms – much longer for a significant proportion of the population in many of the cities.
Another important aspect of this question is the fact that something very important is driving individuals to undergo such an extremely long work weeks. For example, most Chileans who hold the job are required to work six days a week. When one adds 12 to 15 hours per week on the subway or bus to an already 50-hour work week, it is easy to understand why so many are forced to work 65 hours per week. What would drive an individual to such lengths? What are they trying to achieve?

Economies demand that workers comply with these employment conditions because, at the end of the day, it is the only manner in which they are able to accumulate the tiles they need in order to compete with the developed world in a globalized economy.

In light of the foregoing, it is easy to see why so many Latin Americans opt for working out of their homes. They often do so out of a desire to ensure they do not have to spend up to three hours a day on public transportation. This is a good illustration of the dichotomy which exists at a societal as well as worker level in our economies: we can choose to string together long words or short words. Clearly, infrastructure can play a highly determinant role in deciding which option we choose.

In a study currently underway at Harvard’s Center for International Development, Michele Coscia, Frank Neffke and I are utilizing SISBEN data – provided by the Bogota Chamber of Commerce and the Office of the Mayor – in order to identify
where formal-sector jobs are available within the city. The telecommunications firm Telefónica provided six months of cellular-phone data in order to determine where the phones were located at night. Additionally, cell phone towers were pinged during the entire 24-hour cycle. We have successfully utilized this data in order to identify commuter patterns within the Bogotá metroplex. Google Maps was also employed, in order to determine trip times. We also performed a commuter survey that has proved useful in explaining informal-sector dynamics within Bogotá.

According to SISBEN data, Graph 22 is a map of Bogotá in terms of socioeconomic strata. On the one hand, we are able to ascertain where people live. We can also quickly determine where formal-sector jobs are located through the use of the data provided by the Bogotá Chamber of Commerce. Therefore, we faced no major obstacles in terms of determining how well a given sector of the city is situated in terms of access to formal-sector work. In this manner we were able to determine the accessibility levels included in Graph 22, which measures commute times to and from the various sectors of the metropolitan area.

---

2 Sistema de Selección de Beneficiarios para Programas Sociales, or SISBEN, is the system by which the Colombian government determines whether an individual is eligible to participate in its social programs.
As a result, we now possess a model for predicting the preference of an individual prefers for commuting to downtown Bogotá in order to secure formal sector employment, or work at – or closer to – home in income-generating activities which require an extremely limited degree of production diversity. Graph 24, shown below, demonstrates the strong correlation which exists between informality and accessibility to the aforementioned formal sector employment.
It is also possible to utilize this model in order to simulate what occurs, in terms of formal sector dynamics, when societies lower commuter costs; which is to say, formal sector employment becomes physically more accessible. We found that improvements in transit systems correlate strongly to decreases in informality. This dynamic is illustrated in the four panes which comprise Graph 25. The first, 25 a), illustrates the relationship between projected informality and increases in transportation costs. The second, 25 b), demonstrates the relationship between gains in accessibility and social stratum. The third pane, 25 c), describes the correlation between relative informality and stratum, while the fourth, 25 d), addresses the number of cell phones and the accessibility logarithm.
Graph 25

What occurs when cities address commuter problems?

Why are commuter costs so high? Nations have failed to provide the needed level of investment in infrastructure. Of course, this only leads us to another question: What explains the absence of investment in transportation infrastructure? We have failed to generate effective urban housing and development policy which addresses sent shortfall.

Colombia is an ideal case study, because it involves an especially eccentric dynamic. The South American nation divides society into six strata. These strata are then physically disaggregated on the basis of location. This does not necessarily mean that a neighbor who lives on the first floor has a lower income or worse view than his neighbors – or that an individual living on the fifth floor lives on another social stratum. In Colombia, this policy simply translates into an entire building often being categorized as, for example, Stratum 3. In other instances, an entire sector of a city is categorized as falling within a specific stratum. As a result, human beings are physically segregated into separate sectors of the city, which only serves to exacerbate the challenges which Colombian society already faces in terms of
stringing together the critical mass of tiles required to achieve sustainable economic growth.

Furthermore, dividing our cities into sectors which are predominantly populated by laborers only serves to reinforce the barriers which prevent our societies from accruing the necessary amount of tiles they need to achieve economic diversity. This is due to the fact that, as stated above, it is difficult to launch even a midscale business without the presence of a talented manager or finance professional on the team.

The INFONAVIT in Mexico utilizes a policy which is quite similar to the Colombian scenario. It basically relegates the poorest individuals in society to low-value real estate. These sectors of Mexican cities are also the most separated from optimal commuter routes.

These types of policies lead to the lowest paid workers within a society paying the highest commuter costs. It is clear to see why individuals within such nations have such a high propensity for pursuing self-employment, regardless of whether it is at home or elsewhere. This trend, in turn, leads to an erosion of a society’s ability to achieve even a modicum of economic diversity, and for its individual inhabitants to be involved in more productive enterprises. It is simply too difficult to accrue tiles within these types of urban scenarios.

The most efficient solution to the commuter problem is to situate workers closer to production centers. However, a long hard look needs to be taken at urban development, housing policy, and land-use in order to avoid the unnecessarily circuitous commuter routes which characterize so many nations within the region.

Why aren’t our nations investing more in infrastructure? On the face of it, the primary cause is the fact that our fiscal situations are so constrained. Of course, one immediately asks why, in turn, this is the case. This scenario is ostensibly owing to the fact that the transport sector, unlike its telecommunications counterpart, is not a strictly private, formal-sector affair. This is why it has outstripped other sectors of the economy by leaps and bounds: cellular phone penetration in India is 200%, whereas drinking water is only 40%. In most nations, one needs a public budget and outlays to provide water. Clearly, this is not the case where cell phones are concerned.

3 Instituto del Fondo Nacional de la Vivienda para los Trabajadores: federal entity charged with addressing work or housing issues in Mexico.
Why haven’t public-private partnerships proved more expedient in addressing our infrastructure issues? The answer is simple. Within most national regulatory contexts, they are complex undertakings. Another challenge is effectively utilizing pension fund resources to finance a nation’s ability to arrive to work in the morning. Minister Cardenas has announced some ideas on how to utilize retirement fund savings to undertake public-private partnerships (PPPs). I think there are a number of factors which have complicated the process. We have spent all of our time determining whether or not PPPs are the best way to finance highway construction, instead of simply breaking down the investment cycle into its component parts.

The first stage is the pre-investment phase, when one is essentially addressing the broader design aspects of the project, and issues such as feasibility studies. Although this stage involves costs, nations have no assurances that a given project will eventually be undertaken. Clearly, it will be impossible to attract investment unless an extremely high internal rate of return is involved; preferably, something along the lines of 20%.

The next phase involves engineering, procurement and construction (EPC). Public works projects executed on this scale normally last between 3 to 7 years, and involve a fairly high degree of construction risk such as geological risks, engineering risks and other extremely-variable factors which arguably merit an internal rate of return (IRR) of between 12% and 18%.

The last component is the operational stage, which involves concessions which can easily extend from between 20 or 40 years. Once a project reaches the operational stage it is capable of generating a fairly stable cash flow. Construction risks are no longer a factor, and geological risks have dropped off dramatically. Therefore, an IRR such as 5% to 7% is feasible.

The main obstacle to progress on the PPP front has been our penchant for seeking to privatize the entire process. The pre-investment phase is clearly much more difficult to privatize. Additionally, EPC contracts tend to be highly complex instruments. These two factors have generated bidding processes which usually and with investors proposing a litany of risk-sharing clauses to the respective treasury ministers throughout Latin America. This dynamic also impedes a firm’s ability to close their books on a given project, which severely bogs down the entire process. Again, this has been a fairly common occurrence throughout our entire region.

In order to remediate this lack of efficiency, I propose we focus on a single issue and utilize PPPs to finance the operational phase of our infrastructure projects. This will allow us to undertake more infrastructure projects, as well as generate a great deal
more pre-investment and EPC plans through the use of State-managed resources. Once the projects are ready for operations, a private firm can be appointed to operate the project. This type of strategy is more effective, whereas the funds received from the sale of a concession allow nations to recoup their entire investment, and then reinvest said resources in more infrastructure if they so desire. The general idea here is, rather than making a division between private-sector projects and publicly-funded projects, we simply assigned the pre-investment and EPC phases to the State, and the operational phase to the private sector.

Such a strategy will generate an asset which is much more easily understood, and which entails a far lesser degree of risk. This will make it an ideal option for long-term investors such as pension funds.

Conclusions

Latin America is informal because it possesses too few tiles. Although the majority of its production is performed by very small-scale firms, the cost of formality is relatively high. Additionally, commuter costs are extremely high due to a lack of investment in infrastructure and problematic housing policy, which only serves to impede its ability to string together enough Scrabble tiles.

Efforts to undertake infrastructure projects via PPP initiatives have been impeded by a tendency to privatize the both pre-investment and EPC phase. The operational phase is best suited to the private sector and comprises an especially appropriate option for pension funds given the long-term, low-risk nature of the conditions involved. We should capitalize upon the potential synergy of investing worker savings in projects which alleviate commuter issues, thus ensuring our national workforces are free to pursue employment at the most productive firms within their respective economies.
CLOSING REMARKS

As I have already commented on the pension reform bill in our panel sessions, my aim here is to share some brief remarks on the following topics: an overview of what we have achieved to date in terms of said reform; concomitant measures that can multiply the impact of the proposed reform; and, our administration’s short-term objectives.

Our team of professionals at the Pension Superintendency is very cognizant of the fact that Chile is undergoing a major demographic shift, which was brought about by a series of major increases in our life expectancy levels. We are also aware of the fact that investment yields, contribution rates, and contribution density rates have declined significantly in recent years. These setbacks have led to significant decreases in the level of retirement wealth being generated by workers within our nation, and has clearly been a determining factor in terms of our low replacement rate. The tendency of the Chilean economy to provide low wages to the majority of workers during the last four decades has only exacerbated the problem, and all these factors have converged to generate a single major problem: low pension amounts which have, in turn, generated a significant degree of adverse public opinion.

The Superintendency is also concerned that two major segments of the population face exceptionally worrisome levels of pension inadequacy: self-employed workers,
who generally fail to generate even limited amounts of retirement wealth; and women, who face a variety of challenges. In my judgment, female retirement-wealth insufficiency in Chile exhibits a direct correlation to four factors: women tend to live longer than their male counterparts; they also tend to retire at an earlier age than men; given their tendency to attend to family needs, women generate lower density rates; and, women tend to enter and exit the workforce more frequently than male workers.

Lastly, our team is of the opinion that there is space for more competition within the pension sector. We feel Chile could be doing much more to raise the retirement wealth IQs of its citizens. And by this I mean that something must be done to contextualize the issues being debated, as well as in terms instructing everyone about the foundational principles of our AFP model.

Allow me to add that our team’s assessment of the situation is shared by many within the Chilean pension fund industry, as well as nearly every major actor within the public sector. Fortunately, all of the foregoing issues have been addressed in the pension reform bill currently before Congress.

One of the most fascinating aspects of this FLAP forum has been the discussion that the membership had on the issue of declining fund yields. Fortunately, and according to the subject-matter experts who presented at this session, there is a wide variety of investment products which are available within the Chilean capital market. Furthermore, more than 40% of pension fund assets are invested abroad, and said resources are invested in a wide variety of different issuers and financial instruments. As a result, I am convinced that we have achieved a more than acceptable level of diversification and – at least in my judgment – the fund-yield issue is not as determinant as one might suspect. While our society does need to address the latest wave of yield decreases, I do not feel that the issue – in and of itself – is an indictment of the entire pension model.

Our government recently enacted a policy which allows funds to invest in alternative assets. This legislation has permitted fund managers to invest in infrastructure projects, commercial real estate and other nonliquid assets. Once the new regulation was enacted, the pension industry responded by adjusting its investment policies utilized by the AFPs. Furthermore, our administration has observed that pension funds have adopted an extremely proactive approach to the new challenge by hiring teams of professionals who are experienced with alternative-asset management, who can help them to pursue productive investment strategies. As of May 2019, more than 3% of all pension fund assets in Chile are invested in this new asset class. Our team at the Superintendency feels that these types of long-term investments are especially well-suited to the Chilean pension fund industry, whereas they
provide Chilean workers with an opportunity to invest in the aforementioned infrastructure projects, commercial real estate and investment projects carried out abroad. Therefore, we have been extremely satisfied with the industry’s approach to the appearance of this new asset class, and expect it to be a win-win for all involved. Chile also enacted a new regulation which addresses the derivative market. The legislation allows portfolio managers to optimize their assets; which is to say, it allows them to execute options on the underlying assets which they have within their investment portfolios. This new scenario has allowed managers to streamline the entire process with which they manage said portfolios on behalf of fund participants.

In terms of the increases in life expectancy which our nation has undergone in recent decades, I wish to point out an interesting aspect of this situation. The mortality tables utilized by Chile comply with the highest international standards available. This has occurred thanks to efforts by the OECD team and experts such as Pablo Antolin, who was kind enough to join us at this FIAP forum. One should never underestimate the importance of dependable data, because it comprises an issue of paramount importance in economies with such strong insurance sectors as Chile. For example, our annuities market is one of the most advanced in the world. We also have disability and survivors’ insurance products. As such, accurate statistics are of paramount importance, whereas they comprise the foundation of the entire insurance sector; especially in terms of ensuring that it is as solvent as it is competitive. Were we to lack accurate data, Chilean insurance firms would be unable to accurately evaluate risk levels. Furthermore, regulators clearly need to remain abreast of the issue of these types of demographic data in order to ensure that the insurance sector is provided with the information it needs to structure itself accordingly. As noted, this is the only way our society can ensure that our insurance industry is competitive and financially viable.

In terms of the current level of pension payouts in Chile, we are clearly missing the mark. Something must be done immediately to begin to address this issue. We feel that the current reform bill is a step in the right direction. It is time to make the needed adjustments.

I wish to now turn to the subject of measures that our society can take to ensure it is fully capitalizing upon all the opportunities available in the current reform package. There are a number of opportunities available in terms of improving the ways in which we manage the contribution issue. In the past, regulators have identified instances in which a fund participant was unable to allocate funds to their account due to a typographical error (i.e., name, account number). Clearly, these are instances which are completely correctable through the proper use of available technology. Our Superintendency team introduced a series of measures aimed at
remediating these types of errors, and thankfully we have found that the number of cases has dropped off steeply in recent months. The plan is to simply continue identifying opportunity areas and begin generating economically-viable solutions to same – on a permanent basis.

In terms of ensuring individuals are actively contributing to their retirement accounts, a great deal remains to be done to address are low contribution rates. Apart from generating the necessary penalties for tax evasion, we also need to ensure that the entire contribution-collection process is optimized. Regulators and labor-law courts need to ensure that worker interests are protected in Chile, and the state needs to ensure that we have an efficient contribution collection system in place which is capable of efficiently allocating worker funds into retirement accounts the of the latest generation of technology available. The Chilean financial sector is extremely adept at introducing IT solutions. Therefore, we need to leverage this know-how in order to simplify the processes involved. With an eye to achieving these ends, the Superintendency as authorized pension funds to generate a centralized clearinghouse in charge of collecting outstanding retirement account contributions which are owed to workers by their employers. This type of approach simplifies, centralizes and optimizes the way in which our society ensures workers are generating retirement wealth. And, clearly, a centralized hub approach is far superior to forcing each pension fund to duplicate the costs of said debt collection. The other major advantage of this centralized entity is that it works hand-in-hand with our court system in order to expedite these tax evasion cases. From our standpoint at the Pension Superintendency, the entire effort has been a clear success in terms of optimizing the efficiency with which our pension sector operates here in Chile.

Currently, only 6% of self-employed workers within our nation actively contribute to a retirement account. Although these individuals represent 30% of the national workforce, they were previously not required to allocate up proportion of their income to said accounts. In 2019, Chile passed a law which forces every individual who issues a receipt for services rendered to actively contribute. This portion of the self-employed workforce constitutes 7.5% of the national workforce, and 25% of the self-employed workforce. Therefore, it is a major step towards eventually remediating the huge gap which exists in terms of pension adequacy among our nation’s independent contractor population. It is hoped that it will serve to generate better pension payout amounts for these individuals, many of whom had previously generated little to no retirement wealth.

In terms of generating pension industry competition, in my view Chile has achieved a great deal of progress in terms of this important sector issue. Furthermore, everyone is aware that Chile has consistently pushed the envelope in terms of the
international pension industry. For example, in 2019 we had our sixth public bid process for the default enrollment fund. As one might expect, this default AFP is the fund in which individuals entering the Chilean workforce for the first time are enrolled into. The bid process is extremely straightforward: the pension fund capable of charging the lowest commission carries the day. New workers are signed up with the default AFP for a period of two years, at which time they have the ability to move their retirement wealth to another AFP. The latest bid war speaks for itself: the winning AFP charges 0.69% of taxable income. By any standard, this is an extremely low fee. Furthermore, during the latest public bid process a new AFP was allowed to join the industry. It is the first AFP in nine years to the allowed in, and brings the total number of fund managers to seven in Chile. In October 2019, a new round of bidding will take place in order to collect our next national default pension fund, and it will doubtless generate an even higher level of competition within the sector.

An issue which the superintendency has identified in recent years is that the average fund participant does not have a very high retirement wealth IQ: which is to say, they don’t understand the general parameters of the Chilean pension model. A failure on the part of regulators and the industry, as well as many of our national think tanks, has led to a situation in which no one is aware that we have what many consider the finest pension model in the world. We need to explain, in layman’s terms, that the Chilean model has outperformed funded systems and the like, decade after decade. Overly eloquent explanations will only ensure that the status quo becomes even more entrenched. Better informed workers make better retirement wealth decisions. Here again, although the industry has generated amazing results, Chilean society is a bit unaware of the major factors involved. Improvements must be made to the model; however, it would also be advisable to ensure that our collective retirement-wealth IQ is as high as possible. The industry, as well as the State, requires the consent of the Chilean people to keep the AFP model operating.

Additionally, we must never forget that the Chilean AFP model is not self-explanatory. In fact, our particular approach to retirement wealth generation requires a fairly strong foundation of knowledge in order to fully comprehend its inner workings. As a result, we need to approach the issue with the creativity that it merits: it is an extremely complex issue and will require an extremely innovative solution.

With an eye to raising our collective retirement-wealth IQ, the Superintendency has generated a series of initiatives. Firstly, it recently launched a pension-payout amount calculator which helps individuals to see how well they are doing in terms of retirement wealth generation. The tool also provides them with an opportunity to see how their monthly pension amount will increase should they choose to put
off retirement for a given amount of years. They can also see the tangible effects of increasing their monthly contribution rate to voluntary savings accounts. Nearly 1 million Chileans have utilized the tool to educate themselves about their particular pension adequacy level. On the one hand, this just goes to show how much interest there is among Chileans to educate themselves about their retirement situation.

Our team also recently launched a retirement wealth education webpage, which provides the public with a quick and easy way to compare pension fund administrators vis-à-vis a variety of factors. Consumers have the ability to evaluate how long a fund administrator takes to process a disability or old age pension, how many times it has been fined by government regulate, how much it charges for managing assets, and what type of yields it generates. The webpage also has a tool to calculate management costs and yields. During the 24 months since it was launched, over a quarter million Chileans have visited our site. Here again, everything points to the Chilean public been extremely interested in the pension sector. Therefore, now is definitely the time to act, and to continue fomenting a culture of financial education within our nation.

The website also provides the public with the ability to ascertain whether a given employer is behind on their contribution payments to employee retirement account. Workers can also determine whether they qualify for a basic pension via the solidarity pillar, and can even apply to receive said benefits on the website.

The data we have compiled via the website has been used to generate a sizable number of reports and studies generated by experts working on behalf of the State, the pension industry and academia. In my view, the entire scenario is only served to increase the transparency of the pension debate within Chilean society, and the super in tendency will continue generating a high volume of working papers designed to increase the financial IQ of the populace. In short, the website comprises a major evolution in terms of improving the manner in which our superintendency interacts with the Chilean public. It has paid dividends in terms of providing extremely valuable and accurate data to every major actor within the sector, even as it has been of great benefit to retirement account holders in terms of providing low-cost, highly effective financial education.

Our team of professionals has also carried out a series of public forums designed to share our findings and information regarding the debate agenda with our target audience: sector professionals; trade unions; older adults; and, university students. The response, in terms of interest and participation, has been somewhat astounding. As a result, we plan to leverage this widespread degree of interest and utilize it to begin to impact the pension IQs of every segment of our population. It may take time; but given Chileans’ interest in participating in the debate, we know the objective is achievable.
Our administration also recently approved a new regulation which involves a notification which is sent out to all new retirees. Individuals receive a certificate which indicates what pension benefits they qualify for, and in what amounts. The format utilized is extremely straightforward and easy to understand.

In terms of face-to-face contact, the Superintendency has opened offices within every region within Chile. Here again, the public’s response to our efforts have been overwhelming in terms of individuals contacting our staff of professionals in order to clarify their doubts about pension adequacy. Almost 40% of all Pension Superintendency contact with Chileans has involved individuals coming into these offices, which leads us to believe that the effort to open these branches was money well spent.

Our team has also recently introduced a risk-based oversight model. It is completely in line with the regulatory oversight which has been exercised within this nation for decades: a strategy aimed at the efficient and effective supervision of the retirement wealth sector within our nation. Through the new risk-based approach, we endeavor to identify potential risks, ensure our population that its pension funds are utilizing adequate risk-management systems, and doing everything we can to help the industry strengthened said systems. At the end of the day, the aim is to operate a preventative oversight system which is focused on identifying AFP blind spots. Our team is completely convinced that this oversight system comprises a major advance over what has been done in the previous four decades. Additionally, the entire approach has been years in the making and the current regulatory team owe a great debt of gratitude to the officials who worked on the model in times past. In my opinion, the team has also generated a system which has the capability to constantly make adjustments and improve over time. Therefore, I think it is an especially well-designed solution.

During the remainder of 2019, one of our primary objectives is to improve our data security regulations. The issue of cybersecurity is clearly of paramount importance within our pension fund sector. Therefore, we are approaching the issue with the focus and due diligence which it merits.

Another superintendency focus this year is to perform an in-depth analysis of customer service levels within the pension fund industry. This is an issue which has a great deal of importance for the entire sector, because the negative public opinion which the industry is currently facing has a direct link to this issue. Furthermore, we have a responsibility to ensure that all of our funds are doing the best they can to remediate the retirement wealth IQ gap which I referred to above. If an account holder has a horrible experience at one AFP, someone else within the sector will eventually have to deal with this individual and tend to remediate their potentially
negative outlook. These bad experiences only served to build the aggregate inertia of negative public opinion, therefore what one fund does has a direct impact on every other fund operating within our AFP sector. As such, I think that it is rational to generate a customer service model which can be shared throughout the industry. For instance, we definitely need to establish a tangible set of parameters if we intend to generate customer service indicators. At any rate, we must act now because what we have been doing is clearly not sufficient. While well intended, it has failed to address the broader public opinion issue which, at the end of the day, is a problem that we must begin to remediate immediately.

As Augusto Iglesias indicated to us all at this very FIAP forum, the issue of turning the tide of public opinion is an existential question. Fund administrators need to realize that, left untreated, this problem has the potential to initiate a complete reengineering of the Chilean model. Therefore, while no one is attempting to state that the task is anything but daunting, we must begin to take action to educate Chilean citizens about the efficacy of the AFP model.

The current pension reform bill is clearly a step in the right direction. Fortunately, there is also an entire spectrum of opportunity areas available for fund managers wishing to improve our national framework. For our part, the professionals of the Superintendency will continue to generate solutions vis-à-vis the feedback we receive – and actively seek out – from the citizenry we serve and the industry we seek to perfect.

In closing, I wish to thank all of those of you who have visited us from abroad and encourage you to generate solutions which center on the individual experience within a pension framework. The success of the global pension sector depends, to a great degree, on our ability to inform our populations about what our pension schemes seek to achieve on their behalf.

**Osvaldo Macías**  
Superintendent of Pensions, Chile
PREVIOUS 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 is the organization of seminars and round-tables. As a result of these activities, FIAP has published seventeen books, which summarize the presentations given at said seminars. We are convinced that these publications have contributed towards improving the available literature.

“Regulación de los Sistemas de Pensiones de Capitalización Individual: Visiones de los Sectores Público y Privado” (Seminario Lima-Perú, diciembre 2002).¹

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 enrich 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.
“Results and Challenges of Pension Reforms” (Seminar held in Cancun, Mexico, May 2003).

This publication analyzes the results of the new social security systems, both in Latin America and in Central and Eastern Europe, in terms of how they have influenced improvement in pensions and contributed to the growth and economic development of the countries involved. In order to do this, it reviews the rates of return on investment of social security resources and compares them with the growth of worker wages. The book also measures the impact of reforms on savings and investment, in an attempt to measure the contribution that they represent in terms of national economic development. The publication also includes an analysis of the main challenges in the social security area for the industry, regulators and political systems.

“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 which are undergoing growth. The book then includes an analysis of the challenges for implementing reforms, in terms of the regulation and supervision of pension funds and their fiscal and economic impact. It concludes with an analysis of the conditions necessary to ensure the success of the reforms.

“Pension Fund Investments” (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 improvements to said regulatory frameworks, with a particular focus on multi-funded systems located in Chile, Mexico and Peru. It also provides an in-depth look at the evolution of capital markets and analyses the political risks of pension fund investment in the region. Its most important conclusions vis-à-vis the aforementioned subjects are the role of return on investment as a determinant 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 criticisms and objections being leveled, 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 experiences in terms of voluntary social security saving (third pillar) are described. One of the most important conclusions arising from the discussion is that the criticisms made of the mandatory individual saving systems include issues that, though part of social security, are not caused by contributory systems (for example, coverage).

“Pension Funds Investment Perspectives” (Seminar held in Santiago, Chile, May 2006).

This book addresses what investment alternatives are best suited to the pension sector. Evidence shows that an increase of 1% in returns over the course of the working life of a pension fund participant may result in a pension that is 30% higher. To corroborate this, an in-depth analysis is made of issues such as the historic performance of pension funds in Latin America, the regulation and control of investment risks, the best portfolios for social security funds, the characteristics of multi-fund systems, the strategies for international diversification of pension funds, the financial impact that occurs in the stage just prior to retirement, and the importance of corporate governance in pension funds.

“Funded Systems: their role in solving the pension problem” (Seminar held in Varna, Bulgaria, May-June 2007).

This publication analyzes the political economics of pension reforms, taking into account the experience of countries in Central and Eastern Europe and pension reforms undertaken in Bulgaria and Mexico. Secondly, it analyses the results of pension reforms for workers, separating the effects on the labor market and redistribution of income. The Disability and Survivorship Insurance (DSI), in Chile, is also looked at. Thirdly, it shows how to structure an effective multiple-pillar system in light of the new Chilean pension reform, the public/private ratio in pension reform, the design alternatives for non-contributory pension programs (social pensions), and fiscal effects of pension reform in Chile. A fourth set of issues analyzed concerns investment policies and Pension-fund strategies, experiences and trends in multi-fund systems and regulation and monitoring of investment risk in mandated, defined-contribution pension systems. Finally, the book concludes with a number of different views of the prospects for 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 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 in the near future, and identifies best practices for improving the design of regulations in individual capitalization programs. It examines lessons learned on the issues of pension reform, investment regulation, oversight models, coverage, pension options, pension business management, and disability and survivor insurance in the cases of Argentina, Chile and Mexico. It discusses pension reforms in China, Philippines, Romania and New Zealand. It also analyzes the future of pensions in Peru, addressing the issues of pension coverage, social protection levels, capital markets, and the regulator’s viewpoint. Finally, the book ends with a discussion on whether the battle of public opinion on 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 address the pension accumulation phase, whereas the other five cover issues inherent to the payout phase. The first chapter of the book deals with pension fund investment performance. In the second chapter, the book asks how much financial risk is acceptable within a funded system context, showing the life-cycle risk perspective in the context of pensions. The third chapter delineates the correlation between economic cycles and pension funds. Chapter 4 addresses current trends in pension fund investments and presents the views of three outstanding speakers on infrastructure investment, thematic investing and Exchange Traded Funds (ETF), respectively. Regarding the pension payout phase, Chapter 5 addresses the issue of explaining the optimal pension modes in a mandatory pension system. Chapter 6 analyzes the annuities and programmed withdrawal markets under the commercial and descriptive perspectives. Chapter 7 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 funded pension systems are better suited to address demographic challenges than PAYGO systems. The penultimate chapter deals with the perspectives of the Polish pension system. Finally, the book concludes with a review of the future of mandatory pension funds in Europe and beyond, describing implications of the financial crisis for private pension funds, commenting the lessons derived from the crisis for funded pension systems and stating the medium-term challenges to reforming mandatory pension funds in Europe and other industrialized regions.
“Developing the Potential of the Individually Funded Systems” (Seminar held in Viña del Mar-Chile, May 2010).

The publication provides the reader with several texts 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 individually funded programs be expanded?”, explores different ways in which funded programs can extend their coverage to sectors of the population that are not currently engaged in pension saving. The second section, entitled “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. “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 regulatory 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 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 to pension fund investment (best practice in the design of investment policies; impact of pension funds on the development of infrastructure projects and securitization of assets) and the benefits generated during payout (pension options, advantages and disadvantages; replacement rates and adequacy of contributions). It also presents experiences and proposals that provide an opportunity to continue strengthening and consolidating individually-funded pension systems, in the wake of the recent global financial crisis. The book also analyzes, from the points of view of the industry and international organizations, the topic of the implicit and explicit public debt generated by pension systems, as well as 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 looks into the opportunities and challenges faced by authorities and administrators, in terms of driving the development and stability of individually-funded pension programs and achieving adequate replacement rates in a globalized world, with more volatile financial markets, imperfect labour markets and more demanding clients.

The book is divided into three parts. The first 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 to the development of corporate governance of such companies. The second part evaluates the extent to which the design and characteristics of 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. The second section also examines the contribution that voluntary pension savings can make in terms of funding pensions and meeting defined targets. Finally, in the third and last part of the book are analyzed the basic conditions required to ensure the stability and development of 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 globalized 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 providing the reader with 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 Hernando de Soto, on the topic "Individual Savings and Economic Freedom". The conclusion of the book covers 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 introducing 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 may receive. The book encompasses seven chapters: (i) Multi-pillar pension schemes showing the trends recorded in OECD countries and what initiatives can be adopted for strengthening 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 longevity insurance when it comes to an overall improvement of pensions; (iii) Promotion of relevant pillars for voluntary pension savings; (iv) Securing profitability increases via alternative investments; (v) Communicating with fund participants and financial education issues; (vi) Financial integration of pension fund systems within the Pacific Alliance member countries; and (vii) Regulator viewpoint. At the end of the book there are some noteworthy paragraphs highlighting the work of 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 in the Investment of Pension Funds 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.”

“The Role of Defined Contribution Programs to Pensions: Challenges and Proposals” (Seminar held in Mexico City, Mexico, October 2017).

This book highlights the following topics: (i) Achievements and recent challenges of defined contribution pension systems, presenting observations regarding the status of individual savings pension systems in Latin America; (ii) The challenges of an aging world population, analyzing current and future demographic trends and the social security challenges they entail, decumulation strategies that can be adopted for successful retirement, and the improvements required in the decumulation phase in individually funded systems; (iii) Saving habits in the region, discussing the role of voluntary pension savings in the construction of workers’ pensions and describing the savings habits of Millennials; (iv) The social responsibility of pension funds, responding to the standard criticism of investment criteria based on Environmental, Social and Governance (ESG) factors, and presenting evidence on the advantages of investing in green bonds.
“The Challenges of Aging and Technological Change on Social Security” (Seminar held in Santiago, Chile, April 2018).

This book is divided into 5 chapters: (i) Economic outlook, in which the article on the future of the Latin American economy, by the renowned economist Ricardo Hausmann, stands out; (ii) Pension fund investments, which highlights the issue of behavioral economics and its effect on pension portfolios; (iii) Present and future of demographic trends, which discusses topics related to demography and pensions, funds for socio-health and the non-viability of the PAYGO pension systems; (iv) The future of work and social security, which discusses some elements for a new design of the labor market in Colombia and the way that the changes observed in labor markets affect pensions; and (v) Pension systems, in which the effects of demography on pensions in Chile and the options for a reform of the pension system in Colombia are discussed.

The foregoing publications are available online at www.fiapinternacional.org, in the Publications/Books section. Requests for printed copies of publications may be sent to fiap@fiap.cl.
This book was printed in the workshop of
Imprenta Procolor S.A.
Eduardo Hyatt 572 - Providencia
www.procolor.cl
Phone: (56-2) 28218800
Santiago - Chile
Recently, FIAP has also organized seminars on "Alternative Assets" and "Voluntary Pension Savings," which were attended by experts and regulators from all of the FIAP member countries. FIAP maintains open channels of communication with pension-sector regulators within FIAP member countries, as well as international agencies concerned with pension issues (OECD, ILO, IDB, IMF and the World Bank).

Lastly, FIAP carries out research on the issue of individually-funded systems, and compiles statistics which may be of use to member countries. Sent data is available online at: www.fiapinternacional.org. FIAP's publications include Pension Notes, which are brief documents addressing different matters of interest in the area of pensions.
COUNTRIES WITH REFORMED SYSTEMS (1)

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>1981</td>
<td>Poland (2)</td>
<td>1999</td>
</tr>
<tr>
<td>1983</td>
<td>Peru</td>
<td>1999</td>
</tr>
<tr>
<td>1994</td>
<td>Colombia</td>
<td>2001</td>
</tr>
<tr>
<td>1996</td>
<td>Uruguay</td>
<td>2002</td>
</tr>
<tr>
<td>1997</td>
<td>Mexico</td>
<td>2002</td>
</tr>
<tr>
<td>1998</td>
<td>El Salvador</td>
<td>2002</td>
</tr>
<tr>
<td>2000</td>
<td>Costa Rica</td>
<td>2002</td>
</tr>
<tr>
<td>2002</td>
<td>Panama (*)</td>
<td>2003</td>
</tr>
<tr>
<td>2003</td>
<td>Dominican Republic</td>
<td>2004</td>
</tr>
<tr>
<td>2013</td>
<td>Brazil (*)</td>
<td>2005</td>
</tr>
<tr>
<td>2016</td>
<td>Honduras</td>
<td>2006</td>
</tr>
<tr>
<td>2018</td>
<td>Curaçao (**)</td>
<td>2008</td>
</tr>
<tr>
<td>2019</td>
<td>Romania</td>
<td>2012</td>
</tr>
<tr>
<td></td>
<td>United Kingdom</td>
<td>2017</td>
</tr>
<tr>
<td></td>
<td>Turkey</td>
<td>2018</td>
</tr>
<tr>
<td></td>
<td>Armenia</td>
<td>2019 (3)</td>
</tr>
<tr>
<td></td>
<td>Georgia (**)</td>
<td>2019 (3)</td>
</tr>
<tr>
<td></td>
<td>Czech Republic (**)</td>
<td>2019 (3)</td>
</tr>
<tr>
<td></td>
<td>Australia</td>
<td>1992</td>
</tr>
<tr>
<td></td>
<td>Kazakhstan</td>
<td>1998</td>
</tr>
<tr>
<td></td>
<td>Hong-Kong</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>1997</td>
</tr>
<tr>
<td></td>
<td>India (*)</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>Brunei</td>
<td>2010</td>
</tr>
<tr>
<td></td>
<td>Nigeria</td>
<td>2005</td>
</tr>
<tr>
<td></td>
<td>Ghana (**)</td>
<td>2000</td>
</tr>
<tr>
<td></td>
<td>Egypt (**)</td>
<td>2004</td>
</tr>
<tr>
<td></td>
<td>Malawi (**)</td>
<td>2004</td>
</tr>
</tbody>
</table>

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 2018.

(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) Georgia: As of January 1, 2019, a new mandatory system of individual accounts (compulsory for all workers in the public and private sectors and for self-employed workers under the age of 40) begins, with private administration and State supervision.

(*) Reform for public employees.

(**) Reform approved, but not yet implemented.

INTERNATIONAL FEDERATION OF PENSION FUND ADMINISTRATORS

www.fiapinternacional.org