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THE PRIVATIZATION OF SOCIAL SECURITY IN CHILE

1980-PRESENT

Ryan Baber and Edward Taufer

Johns Hopkins Institute for Applied Economics,
Global Health, and the Study of Business Enterprise

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By Ryan Baber and Edward Taufer

About the Series

The *Studies in Applied Economics* series is under the general direction of Professor Steve H. Hanke, Founder and Co-Director of the Institute for Applied Economics, Global Health and the Study of Business Enterprise (hanke@jhu.edu).

This working paper is a standalone on the topic of the Chilean Private Pension System first implemented in 1980. The authors are students at The Johns Hopkins University in Baltimore who have conducted their work at the Institute as undergraduate researchers.

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Abstract

The following paper is an analysis of Chile's pension reform from 1980 to today, in 2019. The paper analyzes the structure, implementation, and transition process of the reform, while also highlighting strengths and identifying weaknesses that can be improved upon. This information can be used to assist Chile in its current pension reform, as well as be used as a potential model for future countries looking to overhaul their pension system.

Acknowledgements

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Background

Jose Piñera, the mind behind the monumental pension reform in Chile, is a true scholar. He studied the works of John Locke, Adam Smith, Karl Popper, and of course, the great Milton Friedman. It was in Friedman's 1962 book, *Capitalism and Freedom,* that Piñera discovered the concept of a privatized social security system. Piñera believed that to resurrect Chile from a state of poverty and oppression, sweeping economic and political reforms based on individual freedom must occur. In his essay, "Empowering Workers: The Privatization of Social Security in Chile", he writes:

> *My ideas for pension reform were then part of an overall vision of a free market and a free society in Chile. At the ministry, I assembled an excellent team to help me design not only the new system but also a transition strategy. For decades in Chile, those striving for pension reform had failed, because their plans were partial and flawed. I decided that we should "take the bull by the horns." My motto was that we needed a "radical reform with a conservative execution." I remember often reiterating to my team that there was nothing as satisfying in life as to do something others deem impossible. We were bound together by our faith in the power of ideas and by the conviction that we could make a difference for millions of Chilean workers.*

Chile's Pension Reform

The Foundation

On November 4th, 1980, Chile enacted its Pension Reform program, which has since become the gold standard for private social security systems around the world. With this new program, Chileans who were previously under the old pay-as-you-go system, could opt out of the government run public pension system and put their money into a privately managed Personal Retirement Account (PRA). "Since 99% percent of the employed workers are now in the PRA system, the end result was a 'privatization from below', that is reflecting worker's wishes, of Chile's pension system" (Piñera 1996).

Every month, the employer deposits 10% of a worker's wages tax-free into his or her PRA; the worker then has the option to make up to an additional 10% tax-deductible deposit into the PRA. Private pension fund companies manage these PRA's. The worker has the freedom to choose which company he or she wants to manage their PRA. These private pension fund companies (known as AFPs, or "Administradora de Fondos de Pensiones") exist in an industry purposefully designed to be competitive. Both domestic and foreign companies have the right to apply to the Superintendency of the AFPs (officially La Superintendencia de Pensiones de Chile) to enter the AFP industry. The worker also has the right to move his or her PRA to another AFP at any time. This competition benefits the account holder through the encouragement of better returns, better service, and lower commissions. Each AFP manages a mutual fund family with five funds, each with different allocations of stocks and bonds. Workers may choose which funds he or she wants to invest in based on his or her risk preference, within limits. For example, older workers must own more stable funds with primarily bonds, while younger workers may have up to 80% of their holdings in equities. AFP managers have the ability to invest the funds' money in any asset of their choosing. There is no requirement to invest any money in Chilean bonds or equities. Furthermore, AFPs are subject to government oversight. "Legally, the AFP companies and mutual funds are separate entities. The AFPs are subject to strict and technical oversight by the Superintendency of AFP, a government organization" (Piñera 1996).

Upon retirement, a person has access to all the funds that have accumulated in their PRA. The retiree pays taxes on withdrawals according to their tax bracket at that time. A key difference between the new pension reform program and the last is more flexible access to the accrued retirement benefits. The former pay-as-you-go system required men to work until 65 and women to work until 60. Under the new system, workers can choose to retire at any age, giving workers the option to continue working longer than what may be deemed necessary. The

retiree has the ability to access their funds when he or she is ready, whether that be before or after the previously mandated "retirement age." Workers could opt to have more of their salary diverted tax-free by their employers in order to accelerate their retirement plans or to create larger nest eggs.

"Safety nets" exist for workers whose accounts perform especially poorly. As long as a worker contributed to a PRA for a minimum of twenty years and has reached the minimum age, he or she is eligible for a "minimum pension," also known as a solidarity pension, funded by general government revenues once their PRA is depleted (Piñera 1996). Note a minimum age requirement exists for a solidarity pension, but not for those whose pensions have performed adequately. This system has since been updated which is visited in future sections.

"In the PRA system, workers with sufficient savings in their accounts to buy an annuity equal to 70 percent of the average salary of the previous 10 years, as long as it is higher than the 'minimum pension', can cease working at any time, begin withdrawing their money, and stop contributing to their accounts. Of course, workers can continue working after beginning to retire their money. A worker must reach the legal retirement age to be eligible for the government subsidy that guarantees the minimum pension. But in no way is there an obligation to cease working, at any age, nor is there an obligation to continue working or saving for retirement benefit purposes once you have assured yourself the benefit described above" (Piñera 1996).

Retirees have three basic payout options. Under the first payout option, the retiree may use the funds that have accumulated in his or her PRA to purchase an annuity from any private life insurance company. The purchased annuity must pay a monthly income for the remainder of the retiree's life, indexed to inflation. It must also provide survivors' benefits for the retiree's dependents. In the second payout option, the retiree may leave the accumulated funds in the PRA and regularly withdraw money, subject to limits based on the retiree's life expectancy and dependents. If the retiree passes away, the funds left in the PRA are given to heirs as a portion of the retiree's estate. The third option consists of any combination of the first two.

The PRA system is entirely supported by employees. Because employer contributions are viewed as part of one's gross wage, all PRA contributions are paid by the worker, thereby giving him or her complete control of his or her future retirement savings. Since the PRA is not provided by an employer, workers have the opportunity to leave a firm and have their retirement savings transfer with them. This contrasts with some pensions systems that punish workers who leave the company before a given number of years. Not only is it easy for workers to transfer retirement funds across companies, it is also easy for PRAs to be transferred from

one AFP to another, due to the fact that each PRA is invested in securities. The PRA system is intended to promote labor market mobility and flexibility.

One of the major problems with pay-as-you-go systems is unfunded pension liabilities. Current workers pay taxes to support the retirement of the retired population. This creates a conflict when the number of retirees grows larger than the working population. Unchecked, this could lead to future bankruptcy problems, such as those currently faced by the United States. The PRA system seeks to eliminate the possibility of intergenerational conflict caused by unfunded or underfunded pension liabilities.

The Transition

One of the main challenges in fully implementing a PRA system is managing the transition from a traditional pay-as-you-go system. Chile completed the transition by adhering to three rules.

1. The government promised to honor previous agreements made to older citizens. Those who had been guaranteed pension benefits or who were already receiving benefits would not be affected by the change.
2. Current adults in the labor force had the option to remain in the pay-as-you-go system or transition to the PRA system. Those who made the switch to the PRA system received a “recognition bond” that was deposited in their new PRA. The bond earned four percent interest and was indexed to inflation. The recognition bond matured at retirement; however, it could be traded in secondary markets to allow workers to build capital. The issuance of these bonds ensured that workers who already contributed to the pay-as-you-go system did not start with zero Chilean pesos in their PRA.
3. All new adults entering the labor force were automatically enrolled in the PRA system. This guaranteed that the pay-as-you-go system would slowly be phased out and would completely end when the final pay-as-you-go system worker entered retirement.

Through the transition, the establishment of the AFP industry was heavily regulated. For a six-month period, no AFP could begin operations. This grace period attempted to give all parties the opportunity to establish an AFP. Unlike many new industries, the AFP industry had a clear conception and birth date.

Because fiscal costs would be incurred during the transition, five methods were used to finance the costs of the PRA system’s implementation:

1. Issuing debt:

By using debt, the system could share costs across generations. Debt also created interest bearing securities that could be added by AFPs to PRA portfolios.

2. Implementing a "transition tax":

   Under the PRA system, retirement savings were actually taxed less than the amount paid in payroll taxes under the old system. A portion of the difference was used as a temporary transition tax.

3. Selling government assets:

   The Chilean government sold off large government owned enterprises. The government used funds from the purchase of these companies to finance the PRA, while the workers benefited from more efficient, privatized companies.

4. Reducing government expenditure:

   A consistent government budget surplus, coupled with strict limits to increasing government expenditure, helped finance the transition.

5. Tax revenue from economic growth:

   The economic stimulus from the new PRA system substantially increased tax revenue.

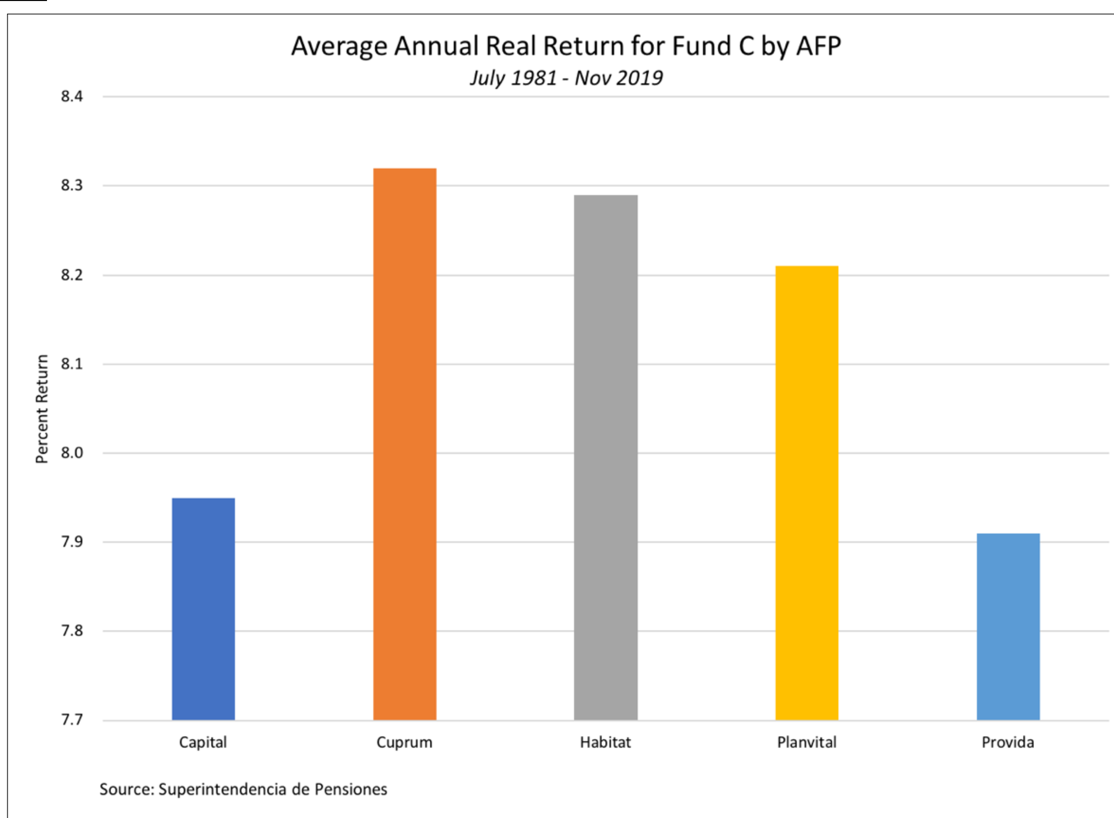
A History of the AFPs

Currently, there are seven AFPs in the system, five of which have existed since the inception of the system in 1981: AFP Capital, Cuprum, Habitat, PlanVital, and Provida. AFP Modelo was created in February of 2007, and AFP Uno, the newest fund in the system, began operations on October 1st, 2019.

At the time of the establishment of the AFPs in 1981, funds were only allowed to invest in "low-risk domestic instruments" including but not limited to government bonds and highly rated corporate bonds. In fact, 100% of funds could be invested in government bonds. As time passed, the proportion of a fund that could be invested in government securities decreased, and higher exposure to stocks and other securities were gradually ushered into portfolios. In 1996, AFPs began to invest in foreign securities. By being able to invest in foreign securities, funds could chase higher returns while taking pressure and reliance off of domestic markets (Kritzer 2008).

In 1981, only one type of allocation was permitted, today known as Fund C. The returns for Fund C for each of the original five AFPs is depicted below in Figure 1.

Figure 1



In August of 2002, a law was passed that "requires each AFP to offer four different types of funds —called Funds B, C, D, and E—with varying degrees of risk. AFPs may also offer a Fund A with up to 80 percent of its assets in equities" (Kritzer 2008). The fund equity limits are outlined in the table (Figure 2) below.

Figure 2

Fund Type	Limits on Investments in Equity	
	Minimum (%)	Maximum (%)
A	40	80
B	25	60
C	15	40
D	5	20
E	n/a[1]	n/a[1]

Source: SAFP 2007

[1] Fund E consists of primarily fixed income.

The Superintendency of the AFPs regulates each fund such that it has minimum and maximum rates of return it must meet over a 3-year period. The AFP originally had to maintain fluctuation funds, comprised of any returns over the maximum rate of return, to cover any future shortages. According to Law 3500, if an AFP missed its minimums and did not have enough saved in the fluctuation fund, the government "makes up the difference, dissolves the AFP, and transfers the accounts to another AFP" (Kritzer 2008). The 2008 reform (covered in a later section) eliminated all fluctuation funds and distributed the monies among the AFPs.

The average annual real rates of return for each fund type for the original five AFPs are shown in Figure 3. The return rates are shown since the multifund law passed in 2002.

Figure 3

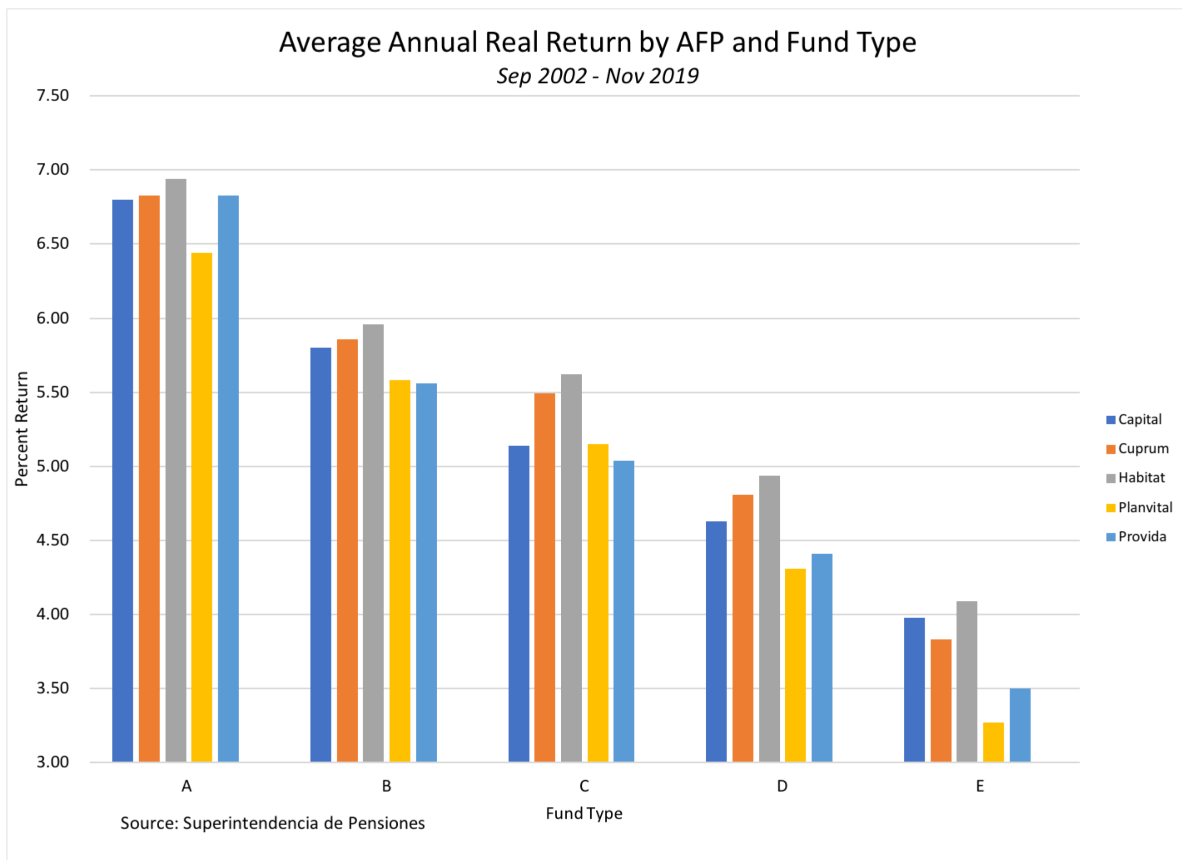


Figure 4 below displays the total annual returns for each fund type. This was calculated by finding the average return of each AFP's specific fund.

Figure 4

System Returns by Fund Type Since Inception	
Fund Type	Average Return (%)
A	6.85
B	5.78
C*	8.12*
D	4.65
E	4.64
Source: Superintendencia de Pensiones *Note: Fund C was established in 1981. All other funds were established in 2002.	

To properly analyze AFP returns, it is necessary to compare the returns to a benchmark. One can compare the AFP system returns to the real returns of the Santiago Stock Exchange, Chile's domestic stock market. The following analysis uses the IGPA Index as its benchmark. The IGPA is a market capitalization-weighted index that measures prices of a majority of the Santiago Exchange's listed securities. According to Bloomberg, from August 2002, when funds A through E were established, to October 2019, the Chilean stock market has seen an average annual nominal return of 9.5507%. To calculate real returns, Chilean year-over-year inflation over the same period (08/01/2002 - 10/30/2019) was subtracted from the nominal rate of return. According to the EHPICL Index, Chile's inflation index, year-over-year inflation for that period was 3.2%. This demonstrates that the Chilean stock market, from August 2002 to October 2019, has seen an average annual real return of 6.3507%.

Remarkably, this real rate of return is in line with the real profitability of the Fund A system since its inception (Figure 4). This is of note due to the fact that Fund A was able to match these returns while still maintaining a less risky portfolio comprised of at least 20% fixed income. More fixed income reduces total risk. In addition to an asset-diversified portfolio, Fund A achieved these results while having international, not just domestic, market exposure. This is a unique feat for the AFP system and, one could say, a success to Dr. Piñera's initial goals of giving citizens superior money management and independence under a PRA private pension system.

Further AFP Fund Analysis

To fully understand the AFP fund types and their returns, it is important to analyze each fund's average geographic allocation. To conduct this analysis, the percent of each AFP's Fund "X" investment in Chilean and foreign holdings was computed. Then, an overall system average was calculated using the individual allocations of each fund. This analysis is important because with

the allowance of international diversification in 1996, AFPs could change each portfolio's domestic market exposure, allowing the AFPs to manipulate each fund's risk and returns. Below is a series of pie charts showing the average geographic allocation of each fund type.

Figure 5

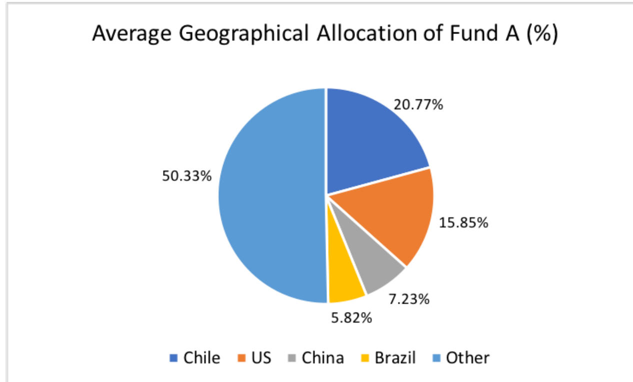


Figure 6

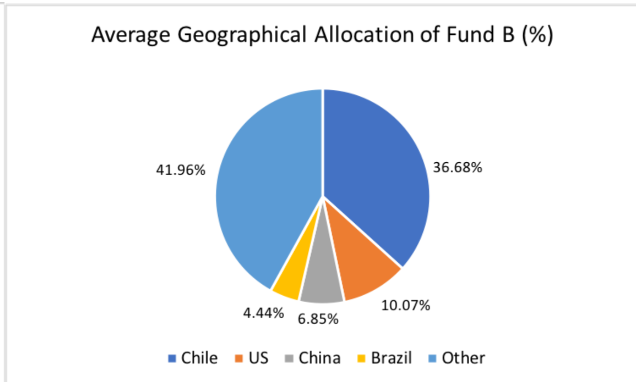


Figure 7

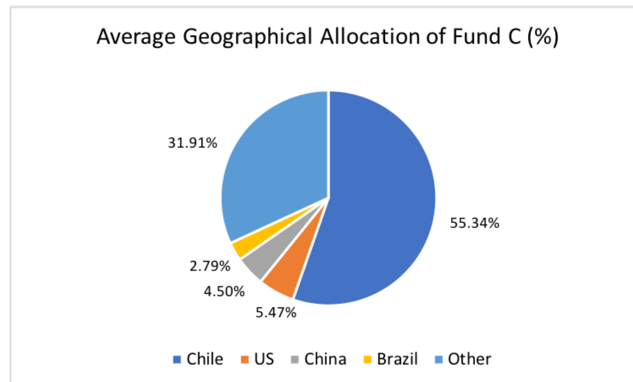


Figure 8

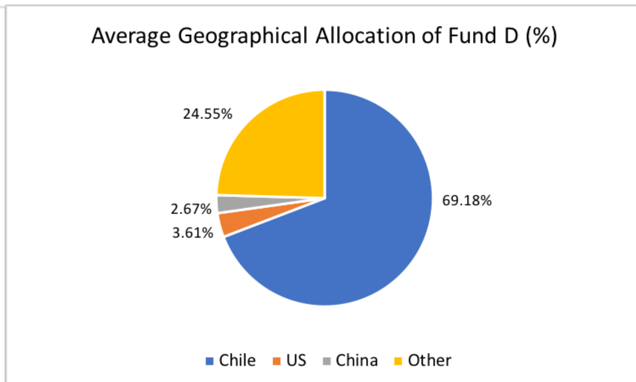
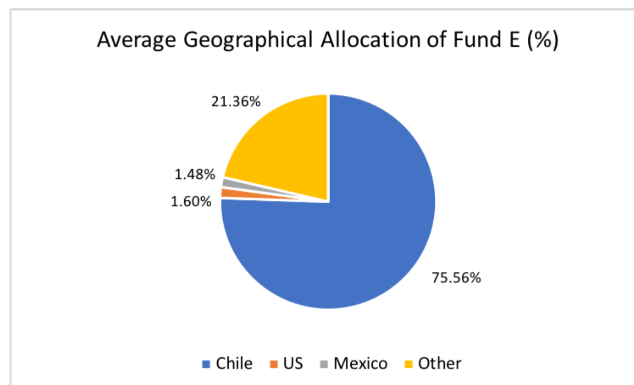


Figure 9



Source: Bloomberg

As seen in Figure 3, Fund A has consistently had the highest rate of return since 2002. While this fund may be less risky than a Chilean stock market index fund due to equity and fixed income diversification, Fund A is still the riskiest of the five types of AFP funds. Though Fund A has the highest share of equity investments, this geographic analysis concluded that Fund A also has the smallest allocation of Chilean holdings. As the funds get less risky and decrease their holdings in equities, the share of holdings in Chilean investments increases from 20.77% of Fund A (Figure 5) to 75.56% of Fund E (Figure 8).

Regardless of the fund type, the largest proportion of holdings are Chilean. However, there is no requirement for AFP funds to hold Chilean stocks and bonds. With that said, Chile is one of the strongest economies in Latin America with highly rated debt, so holding Chilean instruments is a valid investment. Other countries with notable geographic allocations are the United States, China, Brazil, and Mexico.

The Results

Within one month of inception, a quarter of the labor force signed up for the PRA system; today, over 99% of Chilean workers are enrolled in the PRA system.

According to Piñera, "since the system began to operate on May 1, 1981, to September 2014, the average real return of the balanced Fund (Fund C) has been an extraordinary 8.6 percent per year (during 33 years). Of course, the annual yield has shown the oscillations that are intrinsic to the free market-ranging from minus 3 percent to plus 30 percent in real terms, but the important yield is the average one over the working life of a person (say 40-45 years) or the full working plus retired life (say 55-60 years) if a person chooses the programmed withdrawal option" (1996).

Total assets under the PRA system were 70% of total Chilean GNP in 2014 and are forecasted to equal GNP in the future. Economists have attributed Chilean economic growth over the last several decades to such long-term capital investment. The Pension Reform of 1980 has decreased overall poverty numbers due to an increase in old age, survivors', and disability benefits. Additionally, pension and welfare changes lowered Chilean government expenditures by several percentage points between 1981 and 1990. According to Piñera, "the Pension Reform of 1980 was the single most important structural change that contributed to the doubling of the growth rate of the economy in the 1985-1997 period (from the historic 3% to 7.2%)." Private pensions allow Chilean workers to contribute to the growth of the economy and reap its benefits. However, this also comes with enduring the consequences of domestic market volatility and market crashes, which is why foreign diversification became inevitable.

Pension Reform in 2008

In March of 2008, a major round of Chilean pension reform took place when Law 20.255 was passed. The reform was pushed due to low rates of replacement—the percent of a workers full time income that was covered under the pension upon retiring—in addition to estimates that "more than 50% of them [individuals in the pension system] would not meet the requirement of 20 years of contributions for access to the state guarantee of the minimum pension," among other things.

"The Pension Reform Act of 2008 contains about 100 measures, which can be classified into seven categories: i) solidarity pension system; ii) gender dimension; iii) policies for the most vulnerable youth; iv) policies for independent workers; v) improvement of the individual capitalization system; vi) public institutions, and vii) fiscal sustainability.

The Chilean pension reform of 2008 had three main objectives. The first was to create a solidarity pension system (SPS) that combated poverty among the elderly of 65 years and older (and people with disabilities). This meant that the state assumed the role of guarantor of the pension system for the population belonging to the first three income quintiles (60%), in addition to establishing a universal rights perspective around social protection for those who will develop their working life in Chile. The second objective was to increase the coverage of both assets and liabilities from vulnerable groups, specifically young people, women and independent workers. The third objective of the reform was to contribute to the improvement of the individual capitalization system through the promotion of competition, the regulation of investments, and the cost reduction and strengthening of voluntary pension savings" (Arenas de Mesa, 2019).

The creation of the SPS was focused on increasing overall coverage of workers under the pension system. Between March of 2008 and December of 2018, it is reported that nearly three times the number of workers were covered under the SPS than had been previously covered under the old welfare pension system as coverage increased from 610,000 to about 1.5 million individuals.

Pension Reform in 2019

Over the last several years, starting primarily in 2017, political tensions have stirred up talks of another pension system reform in Chile, the largest since 2008. According to Allan Brown of BNAmericas, "regarding AFPs, for some time now there has been a high level of discontent among workers because of the small pensions they tend to provide and the size of the fees the

AFPs charge. People are also generally aware of the healthy profits that AFPs make even when the returns are negative or weak. Few people really understand how the system works and what their rights are. Among the many grievances that have given rise to the current protests in Chile, the private pension system is one of them" (November 2019).

Current president Sebastián Piñera submitted a bill in 2018 that would dramatically change the current system layout. Major proposed changes include "strengthening the social safety net for the elderly, supporting the middle class - particularly women - and increasing the size of pensions." Additionally, an important component is requiring employers to contribute 4% to their employees' pensions. The latter proposal would create a total of 14% mandatory contributions of wages to an employee's PRA before any additional contribution is made by the employee, in an effort to increase overall payouts.

Much time has been spent on debate over whether taxes or additional contributions should go towards funding solidarity (non-contributory) pensions. Regardless of the means of funding them, "they are deemed to be insufficient. The government said it will increase the size of solidarity pensions by 20%. In general, the government has been reactive, only acting when pressured by massive street protests" (Brown November 2019).

As of November 2019, the major protests currently ongoing in the country have led to "a landmark victory [for protesters]... as lawmakers agreed to hold a referendum on the nation's dictatorship-era constitution… the agreement, which calls for a plebiscite in April [2020], was signed after two intense days and nights of negotiations between opposing parties in the National Congress" (Krygier 2019). Regardless of the 2019 movement's outcome, major changes are bound to take place in Chile in the near future. A key driver behind protester aggression is the current pension system, which is now expected to see serious revisions.

Positive Takeaways

When compared to the original pay-as-you-go system that existed in Chile prior to 1980—as well as similar public pensions and social security funds worldwide—there are several key goals that the Chilean Pension Reform of 1980 sought to achieve that led to positive results.

The current system allows contributing workers to choose the risk allocation of their invested funds, compared to the government having full control over this choice. In addition, unlike the old system in which males had to reach the age of 65 and women had to reach the age of 60 before being eligible to receive benefits, the current system has no set minimum retirement age. As long as a person is able to accumulate a minimum value in their PRA, they can retire at

the earliest age possible. Alternatively, they can continue to work however long they desire before being forced to take benefits. For those who are unable to reach the minimum pension threshold to retire, whether that was due to low contributions over time or poor investment returns, they are eligible for government subsidies up to a minimally deemed pension value.

While this may change in the future, the PRA system is currently fully employee funded, as the employer directly contributes 10% of employee wages to their PRA. In the Chilean labor environment, retirement benefits are universal from company to company and do not factor into hiring decisions. This policy gives workers complete control of their future retirement savings as they freely transfer from job to job.

Additionally, unlike pay-as-you-go systems, the PRA system allows one to support their own retirement. Pay-as-you-go systems are in danger as the number of retirees grows faster than the working population who supports them and as retirees live longer into retirement. These problems create unfunded or underfunded pension liabilities, causing intergenerational conflict where young people wonder why they are supporting another generation's retirement instead of their own.

Finally, AFPs manage money extremely well. As was examined in the funds section, real profitability is in the 6-8% range for equity-weighted funds and in the 4-5% range for bond and fixed income funds over a 17 year time period (a 38 year period for Fund C). Additionally, since 1996 when foreign investments were included in equity portfolios to wane off domestic market reliance and chase higher gains, returns have remained steady while the funds have become more diversified. As can be seen in the fund analysis pie charts, the geographic breakdown of holdings has become more efficient, diversifying by expanding to more markets. However, this has not been relayed effectively to citizens, as is covered in the shortfalls section.

Shortfalls

While the Chilean PRA system is an improvement over the former pay-as-you-go system, there are still numerous shortfalls that make the system imperfect.

The Superintendency, tasked to regulate AFPs, has laws in place to enforce minimum rates of return; however, an AFP dissolution has never occurred under Law 3500. It is unclear exactly how the government would make up the difference if a significant market correction occurred that caused many or all of the AFPs to miss their minimums. According to Brown, "we know that no AFP has ever been dissolved because of poor returns. Proposals, such as prohibiting AFPs from charging fees for months when returns are negative, have been put forward. It could

become a reality; it has been part of discussions." It is unknown how the Superintendency would fund this gap, either through the Chilean government or other means [tax hikes]. What is known, however, is that nothing is set in stone, and the Superintendency is ill prepared to act on such a situation.

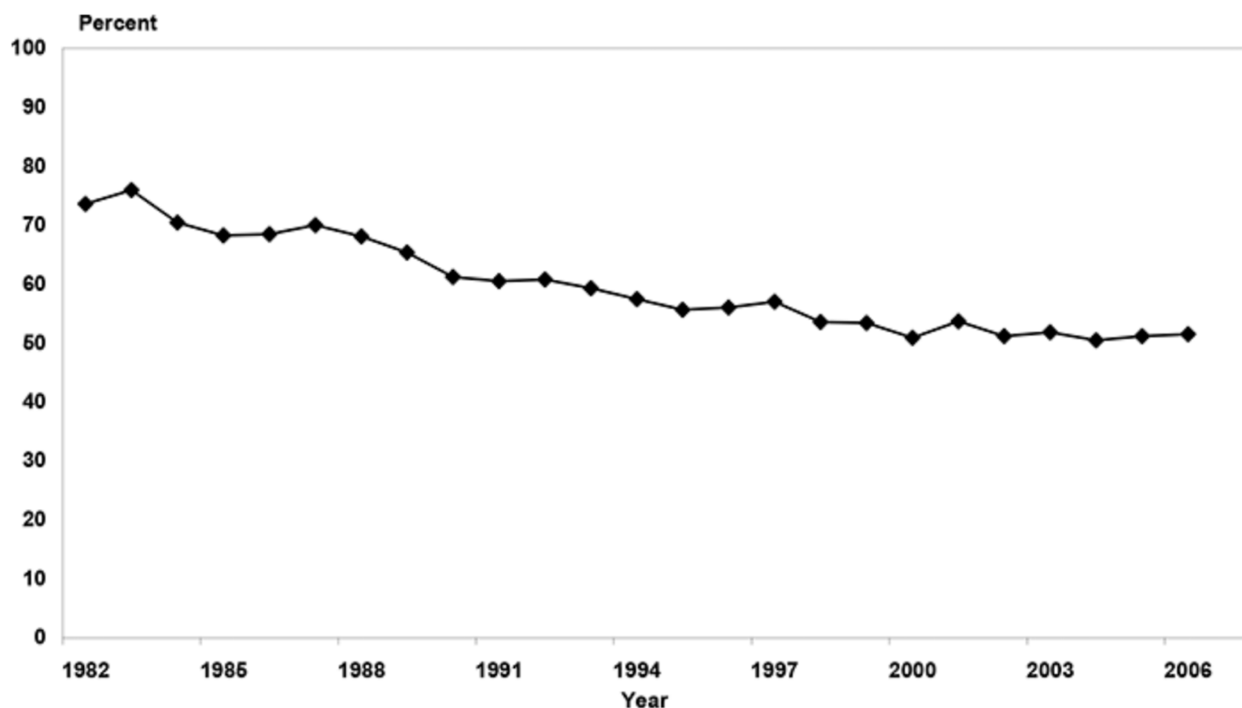
Flaws in the PRA system emerge when the market underperforms as well. Citizens are familiar with the profits AFPs make, regardless of fund performance. Additionally, AFP managers do not bear the same risk as PRA holders. AFP managers are incentivized to chase the highest possible returns, as higher returns would guarantee higher commissions. If the AFP manager makes a risky investment that does not materialize, the manager does not receive his or her commision, but the Chilean worker loses his or her retirement. A great risk tolerance mismatch exists between the two parties.

The AFP system was established with the intention of simulating a free market environment. This environment would spur competition among funds to provide individuals with more competitive service, management fees, and returns. The system currently has only seven AFPs, with AFP Modelo beginning operations in February of 2007, and AFP Uno beginning operations in October of 2019. Brown says, "there's no real general sense that there is corruption in that only 7 AFPs exist...the entry barriers to start an AFP in Chile are very high, however...for some time now there has been a high level of discontent among individuals because of the small pensions they [AFPs] tend to provide and the size of the fees the AFPs charge. " It appears the screening process is rather exclusive, and workers could benefit from a larger volume of AFPs in the system.

According to the July 2006 President's Pension Advisory Commission Report (Marcel Commission 2006), "the capitalization (privatized) system is geared toward workers with stable jobs who regularly contribute to an individual account for their entire working lives" (Kritzer 2008). Thus, those who participate in the informal labor market, part time workers, or the temporarily unemployed, etc. cannot regularly contribute to their PRA as they have no formal full time employment. This becomes a problem when calculating twenty years of full time labor service for solidarity pensions, as well as giving such workers access to AFP management services. Additionally, as of the 2006 report, just under 40% of workers were not covered by either the public or private pension systems. Figure 10 below shows how PRA contributors have declined as a percent of the formal labor force from 1982-2007 (Kritzer 2008).

Figure 10

Chart 2.
Percentage of affiliates that contributed to their individual accounts, 1982–2007



SOURCE: SAFP 2007 and SUPEN 2007–2008

Several issues with the Superintendency hinder the progress of the PRA system as well. The way in which the Superintendency reports data makes it difficult for the average worker to digest. There are also few ways to contact the Superintendency, as there is no email on their website. This lack of transparency creates distrust between the people and authority as It is difficult to recreate or verify the figures published by the Superintendency.

The fact that many Chileans retire with low pensions is not principally linked to returns. As Allan Brown said in an interview, "...pension fund members in Chile are largely unaware that, over the past 17 years, returns have been pretty good on average…this comes down to the issue of financial education." *Encuesta de Previsión Social*, a survey conducted by the University of Chile, questioned 24,000 individuals and found that under half of those surveyed were aware of the required monthly contribution and only 20 percent of those surveyed knew how many fund options existed. Additionally, only 50 percent of those surveyed were even aware of how much

he or she had saved for retirement (Kritzer 2008). A lack of financial literacy and general knowledge of the PRA system hinders the system's progress and effectiveness.

Conclusion

The purpose of this paper is to analyze the PRA system and the reforms that have occurred over time in an effort to identify weaknesses, enhance strengths, and develop proposals for further reform. Accordingly, such analysis could potentially be used as a model for countries facing a pension crisis looking to change their existing systems. "Pension privatization policies, applied in the past in some countries, did not yield the expected results since the coverage and the benefits did not increase, the systemic risks fell on the people and the tax situation got worse. Consequently, several countries are reversing the privatization measures taken and restoring public systems based on solidarity" (Arenas de Mesa, 2019). Without proper reform, the future of the privatized pension system is in danger. It is clear that a privatized pension system is a superior option to a pay-as-you-go system in many instances, but the Chilean system should not be implemented elsewhere in its current form.

Instead of attempting to implement a new privatized pension system from scratch, it is encouraged to implement Chile's pension reform with the following modifications, as Chile's reform included a solid framework and a well-planned transition period.

The question of how minimum return rates will be met in the case of a significant market correction is still up for debate. But, it would benefit Chile and future systems to establish stronger insurance for such instances as the elimination of the AFP fluctuation funds essentially wiped out all of the AFP insurance policies in the case of poor returns.

As for competition, the Superintendency standards while noble, could benefit from some leniency adjustments. While still barring AFPs with poor finances and those that could be fraudulent from entering the system, lower barriers to entry would allow for the creation of more AFPs and benefit individuals with true competitive pricing and service. Other countries could adopt this AFP approval strategy from inception.

While the exact solution to the problem is not entirely clear, the fact that individuals with multiple part time jobs, temporary unemployment, or those that perform informal sector work are not accumulating contributions toward their PRA and years toward their labor timeline—because their situation is not viewed as being a part of the formal labor market—is problematic. While the simplicity of one vehicle for all retirement purposes is efficient,

countries looking to make such a transition must keep people like these in mind and find a way to service them properly without leaving them uncovered.

Despite extensively perusing the Superintendency website during research, it is not easy to navigate or comprehend. Especially for the average worker trying to learn more about the system, it would benefit both parties to have clearer data presentation. For countries looking to transition, creating an easily navigable site would most likely cause less confusion for workers in the system.

A lack of financial literacy is a serious setback for a privatized pension system for two main reasons. A financial illiterate population is unable to comprehend PRA returns, positive or negative. Secondly, the effectiveness of the system is arguably irrelevant if workers do not understand the management or progress of their finances. An educational program must be established to teach workers about topics such as contributions, risk, diversification, and the options that exist under the privatized pension system.

The following pieces of the system have done well for Chile and should be similarly implemented in a future system.

The ability to invest a desired amount based on personal contributions and risk tolerance gives workers increased autonomy and control over their retirement. Additionally, the PRA system gives workers increased freedom through the removal of the minimum retirement age and increased ease of job mobility.

The need for pension reform is not unique to Chile. Countries such as the United States, Brazil, and the Netherlands are on the verge of a pension system collapse. In France, much like Chile, citizens flood the streets protesting for pension reform. Now, more than ever, as unfunded pension liabilities continue to amount, it is important to consider the possibility of a privatized pension system becoming the new norm. It is because of the work of Dr. Piñera that future countries may now have this template for a successful privatized pension system.

Note: only published data and statistics were examined, as much of the data is unavailable for use. Some data may have been missing and, therefore, was not included in this paper. Using such data, if available elsewhere, might provide a more accurate detailing of the Chilean Pension System. The most important aspect of this paper was to highlight successes, identify weaknesses, and provide a comprehensive historical background.

References

Arenas de Mesa, Alberto. “Los sistemas de pensiones en la encrucijada: desafíos para la sostenibilidad en América Latina” *Comisión Económica para América Latina y el Caribe,* October 2019.

Brown, Allan. “Chile Pension Reform: Minister Warns of Voter Disaffection Risk” *Business News Americas*, 4 April 2019.

Brown, Allan. E-mail interview. Conducted by Ryan Baber and Edward Taufer, 14 November 2019.

Kritzer, Barbara E. “Chile’s Next Generation Pension Reform” *Social Security Bulletin, Vol. 68, No. 2,* 2008.

Krygier, Rachelle. “Chile to hold referendum on new constitution” *The Washington Post*, 15 November 2019.

Piñera, Jose. “Empowering Workers: The Privatization of Social Security in Chile” *Cato Journal, Vol. 15, No. 2,* 1996.