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PENSION SYSTEM

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This Technical Note was prepared in the context of a joint IMF-World Bank Financial Sector Assessment Program (FSAP) mission in Chile during April 2021 led by Charles Cohen, IMF and Miquel Dijkman, World Bank, and overseen by the Monetary and Capital Markets Department, IMF, and the Finance, Competitiveness, and Innovation Global Practice, World Bank Group. The note contains the technical analysis and detailed information underpinning the FSAP assessment's findings and recommendations. Further information on the FSAP program can be found at www.worldbank.org/fsap.

CONTENTS

Glossary	3
Executive Summary	4
RECOMMENDATION TABLE	7
I SECTOR BACKGROUND	8
II REGULATION	19
A. Regulatory Framework & Governance	19
B. Competition and Efficiency	22
C. Performance	31
III RECOMMENDATIONS	33
A. Systemic reforms	33
B. Reform of the AFP system	38
C. Supervisory Reforms	42
ANNEXES	44
Annex 1: Summary of Reform Proposals Passed by House of Representatives	44
Annex 2: Pension Savings, Economic + Capital Market Development	45
Annex 3: AFP Industry Statistics	48
Annex 4: IOPS PRINCIPLES ASSESSMENT	50
Annex 5: Public Pension Governance	51
Investment Practices	52
ATP	54
Annex 6: UK National Employment Savings Trust (NEST)	57
Annex 7: Target Date Fund Implementation Considerations	58

GLOSSARY

AFP	Administradora de Fondos de Pensiones (Pension Fund Administrator)
APS	Pension Solidarity Complement
DB	Defined Benefit
DC	Defined Contribution
ESG	Environmental, Social & Governance
GDP	Gross Domestic Product
IOPS	International Organization of Pension Supervisors
MoLSS	Ministry of Labor and Social Security
MoF	Ministry of Finance
MPG	Minimum Pension Guarantee
NEST	National Employment Savings Trust
NSP	New Solidarity Pillar
OECD	Organization of Economic Cooperation and Development
PASIS	Assistance Pension
PAYG	pay-as-you-go
PBS	Basic Solidarity Pension
PMAS	Maximum Pension with Solidarity Subsidy

EXECUTIVE SUMMARY¹

The pension system in Chile is known for the 1980 establishment of a defined contribution, individual account system managed by private pension funds (AFPs). The system is funded by a 10% contribution (centrally collected) made from wages of formal sector employees who are free to choose their own provider and investment within a life-cycle, 'multifondos' system. There are currently 7 AFPs managing funds (competing to act as the default provider for new entrants through an auction process). They are overseen by the Superintendencia de Pensiones (SP), which provides strong oversight of the sector.

In 2008 a major reform of the system took place to address issues of low coverage and low pension rates. The system is financially sustainable but has struggled historically with issues of adequacy and coverage. Before the 2008 reforms, around 80% of pensions received were below the poverty line. A Solidarity Pillar was introduced, paid for through general taxation, covering the poorest 60% of workers who had made no or low contributions into their pension funds. Additional benefits for women, youth and the unemployed were added, along with (gradual) mandatory coverage for the self-employed. In 2017 further reforms were proposed but were not approved by Congress – including an employer contribution rate of 5%², part to be directed to individual accounts, part to a further redistributive solidarity fund.

In 2019 the Solidarity Pension rate was raised to the poverty rate following severe social unrest which included protests against the pension system, whilst in 2020/2021 large emergency withdrawals have been allowed from the funds in the context of the COVID-19 pandemic. Although the AFPs are widely blamed for the low level of pensions, these are actually caused by low contribution rates and density linked to the structure of the labor market (the retirement age has also not been raised since the system was introduced). During the 2020/2021 COVID-19 pandemic, 3 rounds of emergency withdrawals³ have been allowed from pension funds (efficiently administered with liquidity support from the Central Bank), removing at least 25% of assets (>US \$50bn) and leaving almost 4 million of the 12 million individual accounts empty, which will significantly lower pensions even further in future. A fourth withdrawal is under consideration by Congress. Additionally, a reform bill, largely based on 2018 proposals, is currently being negotiated. The 2022 Constitutional Commission may impact the pension system.

The funded pension system has made a significant contribution to financial sector diversification and stability, while promoting sustained economic growth and

¹This Technical Note has been prepared by Fiona Stewart, Lead Financial Sector Specialist, WBG, Mark Davis, Senior Financial Sector Specialist and Beulah Chelva, Economist

² The former government proposed a 5% employer contribution rate in 2017; this was followed by a proposal from the government of 4%. As of the writing of this technical note, status of the bill in the Senate was a 6% level discussed later in this note.

³ These were legislative initiatives that in two of the three cases required constitutional changes

development, and should be maintained. Further withdrawals should be avoided, and the contribution rate increased.⁴ Having borne the transition costs of moving from a pay as you go (PAYG) to a funded system, it should be preserved in the face of rising demographic challenges of an aging population. The long-term, domestic capital which rests with the pension funds and insurance companies in Chile has fostered capital provision to local investment projects and corporates and made affordable long-term wholesale financing available to the banking sector and to corporates. It will also be needed to build a sustainable recovery from the pandemic and meet the funding needs of the Sustainable Development Goals (SDGs) and Paris Accords.

An employer contribution of at least the proposed 6% is needed to improve pension levels and could be managed by a public entity with strong governance in a way which complements the AFP system. Given the considerable reduction in pensions which will result from the recent withdrawals, the gradual introduction of an employer contribution of at least the proposed 6% will be needed to raise the pension replacement rate of middle-class workers to around the minimum wage. Increasing contribution density alone will not be sufficient. Maintaining the current privately managed individual account system and combining with some central management of funds would allow for a balance of risk between public and private provision. Funds should be invested by this 'universal owner' on a long-term basis. Adopting a 'collective Defined Contribution (DC)' approach (as opposed to introducing a defined benefit (DB) element to the system as proposed) could be considered. Unfunded benefits, such as increases to current pensions, should be covered within the general tax funded Solidarity Pillar. The proposed increase of coverage of the Solidarity Pillar to the lowest 80% addresses absolute poverty risks for the elderly. Further parametric reform, including increasing retirement age in line with life expectancy, and converging the retirement ages of men and women, is required to raise pension rates and improve the relative value of pensions for women.

A non-profit AFP could be established to compete with and act as a standard setter for the private funds managing the existing 10% employee contributions. Given the AFP system is operating effectively (based on limited centralized administration and costs having been reduced considerably over time) and is delivering reasonable returns, maintaining the current system is recommended. That said, confidence in the system has clearly been lost and needs to be restored. To do so, a non-profit AFP could be introduced to compete on the same terms with the private AFP managers for the 10% employee contributions, setting low-cost, high service quality standards for the industry.

To contribute to long-term investment and financial stability, the multifondos investment regulation should be replaced with a 'target date' default, delineated by retirement age, along with a limited number of investment options, with switching contained and some access to funds for specific purposes strictly controlled. Given the level of development in the Chilean markets in the last 20 years since the multifondos system was introduced, a more up to

⁴ The following recommendations are made noting the uncertainty surrounding fund withdrawals and the status of the current reform proposals, with further modeling and analysis of the potential impacts needed.

date approach to investment risk management is recommended. A Target Date approach, whereby each cohort is invested in a portfolio which is designed to optimize returns over a targeted period (the target being the expected retirement date), could be used. These funds could be set as the default for individuals, with a limited number of other investment options offered to those who still wish to make a choice. Switching between managers and investment options should be contained. Some access to funds could be allowed but strictly controlled (e.g., for defined hardship needs and/or separation of accounts into short-term and long-term savings).

The risk-based supervision model of the SP should be recalibrated to further transition from a compliance approach. The SP has provided robust oversight of the pension system. Though the move to a risk-based supervision approach has been successfully introduced, it continues to generate multiple inquiries requiring action on the part of the AFPs that may signal a need for recalibration of the model. For this to be successful, however, it will require the proposed changes in fund structure and legal framework described above. Additionally, the Ministry of Labor should take on a stronger role in enforcing compliance as employer contributions are introduced.

RECOMMENDATION TABLE

Recommendation	Responsible authority ⁵	Time ⁶
Systemic		
Maintain the funded pension system + avoid further rounds of emergency withdrawals from the pension funds	MoLSS/ MoF	I
Begin phase in employer contributions of at least 6%	MoLSS	I
Consider managing employer contributions via dedicated public entity – with strong governance arrangements – as a new ‘universal owner’	MoLSS	ST
Avoid unfunded commitments within the funded system (cover increases in current pensions and increase redistribution within the Solidarity Pillar)	MoLSS	ST
Harmonize retirement age across pension system + by gender + automatically link future increases to life expectancy	MoLSS	ST
Reform of AFP system		
Consider establishment of a non-profit AFP to compete on same terms as existing managers for 10% employee contributions	MoLSS/ MoF	ST
Replace multifondos investment regulation with target-date default + limited number of investment options with incentives to reduce switching	MoF + SP	ST
Adjust auction mechanism for new entrants to consider costs and returns	MoF + SP	ST
Allow limited access to funds on strictly controlled basis	Relevant Ministries + SP	ST
Incentivize voluntary savings through reformed tax incentives for matching employer contributions	MoF + SP	ST
Supervision		
Continue migration from compliance-based supervision approach to include recalibrating some aspects of current RBS approach	SP + MoF	ST
Restructure Risk Classification Commission (CCR)	MoF	MT
Transition responsibility for enforcing contributions from AFPs to authorities	MoLSS	MT

⁵ In many cases these are political decisions, but the agenc(ies) responsible for implementation if enacted are shown here

⁶ 1 I-Immediate” is within one year; “ST-short-term” is 1–3 years; “MT-medium-term” is 3–5 years.

I SECTOR BACKGROUND

1. The Chilean pension system is renowned for the introduction of a defined contribution (DC), privately managed individual account-based system in 1980.⁷ The original reforms replaced the pay as you go (PAYGO), tax funded pension system with a fully funded system,⁸ with individual workers contributing 10% of their wages into pension funds managed by competing, private *Administradoras de Fondos de Pensiones* (AFPs).⁹ Individuals chose between managers and, since 2002, have also been able to choose between investment options through a 'multifondos' system (see investment section below). Contribution collection (and switching between AFPs) is handled by a central agency, PreviRed, which is owned collectively by some AFPs.¹⁰ AFPs also collectively contract (via an auction) with insurance companies to provide disability and survival insurance for members (paid for via employer contributions).¹¹ Voluntary contributions (up to a tax incentivized ceiling) can be made into separate accounts. At retirement – which has been set at 65 for men and 60 for women since the

⁷The military police and certain other categories of workers still have a separate pension system with different parameters. The schemes are in deficit covered by fiscal funds - IMF estimate the deficit as close to 0.8 percent of GDP, expected to grow to close to 3 percent of GDP by 2100 (Figliuoli et al., 2018). Two notable systems are the national defense provisional fund (CAPREDENA) for the military and the provisional fund for the Carabineros police force (DIPRECA. These schemes are not covered in detail in this Technical Note.

⁸ The original reforms were designed to replace an inefficient, unsustainable social security scheme, which was seen as negatively impacting the labor market and general economic development. For a history of the Chilean pension system see: <https://www.ssa.gov/policy/docs/ssb/v68n2/v68n2p69.html>

⁹ Those in employment at the time of the reforms (except for workers within 5 year of retirement) were given the choice to remain in the old system pay-as-you-go (PAYG) or to transfer to the new individual account system. The government transferred an equivalent amount to the benefits accrued under the PAYG system into the individual accounts through issuing 'recognition bonds'. The PAYG system is managed by the Instituto de Prevision Social (IPS) and is expected to be phased out by 2045 (there are only 26,000 active contributors left in the scheme). For a discussion of transition financing see: 'Paying for a shift from pay-as-you-go financing to funded pensions', World Bank Pension Primer <https://openknowledge.worldbank.org/bitstream/handle/10986/11242/333900rev0PRPNoteTransition.pdf?sequence=1&isAllowed=y>

¹⁰ PreviRed is the online platform for social security payments providing business process outsourcing and transaction and information services. Owned by 5 of 7 founding AFPs, the company offers the same prices to all AFPs including new entrants <https://www.previred.com/web/previred/>

¹¹ Employers must contribute a specific percentage (1.94% currently) of the employee's remuneration for disability and survival insurance (SIS). The minimum monthly disability pension is 138,585.79 pesos if younger than age 70; 151,532.91 pesos if aged 70 to 75; or 161,680.50 pesos if older than age 75. The guaranteed minimum disability pension is being phased out and replaced by the disability solidarity top-up benefit (APSI) by 2023. Until then, there is a choice between the two benefits for persons who received the guaranteed minimum disability pension before July 1, 2008, and those aged 50 or older and affiliated with an AFP on July 1, 2008.

For a discussion of the insurance auction system, see Reyes, G., (2010), 'Market Design for the Provision of Social Insurance: The Case of Disability and Survivor Insurance in Chile', *Journal of Pension Economics and Finance*, Volume 9, Issue 3, July 2010, pp. 421-444 <https://www.cambridge.org/core/journals/journal-of-pension-economics-and-finance/article/market-design-for-the-provision-of-social-insurance-the-case-of-disability-and-survivors-insurance-in-chile/3FDFA187E00CE87B4D311EC684129CAC>

start of the system¹² – members have the choice of purchasing a life annuity, opting for a series of programmed withdrawals, managed through a central quotation system known as SCOMP since 2004, or postponing their retirement.¹³

2. A major reform to the pension system took place in 2008, which, amongst other changes, introduced a ‘Solidarity Pillar’ to the system providing coverage for those who had made no or low pension contributions. Several decades after the initial reforms, it was recognized that the savings system was failing to cover a large percentage of the workforce who either remained in or came in and out of informal employment. The 2008 reform created the *Sistema de Pensiones Solidarias* (SPS) - a non-contributory Basic Solidarity Pension (Pensión Básica Solidaria, PBS) funded from general taxation with a flat rate benefit covering the poorest 60% individuals (by 2012). A top-up benefit (Aporte Previsional Solidario (APS)) was also introduced for those individuals who contributed to an individual account, but their self-financed monthly benefit fell below a certain amount. In order to encourage individuals to continuing saving, the APS amount gradually tapers out.¹⁴ The 2008 reforms gradually introduced mandatory coverage for self-employed workers,¹⁵ as well as a subsidy for women to cover periods of time out of workforce when having children and subsidies for young workers.¹⁶

¹²Both men and women only become eligible for the Solidarity Pension at age 65. Early withdrawal of AFP funds is possible at any time as long as the capital accumulated in the account is sufficient to finance a pension that (1) starting from August 2010, replaces 70% of the worker’s average earnings in the 10 years prior to drawing the pension, and (2) starting from July 2012, equals 80% of the Maximum Welfare Pension (PMAS). The normal retirement age (NRA) is reduced by one or two years for each five years of work in certain specified, arduous occupations, with a maximum reduction in the NRA of 10 years.

¹³Pensioners with enough savings to buy an annuity above the Basic Solidarity Pension (Pensión Básica Solidaria, PBS) can choose among that payout option (annuity), programmed withdrawals and a combination of them both. Otherwise, they will receive their pension through programmed withdrawals (PW). SCOMP was launched in order to address high transaction fees, which decrease payouts; and, the asymmetry of information between future pensioners and sales agents. Morales and Larraín (2017) and SURA (2015) document the positive impact of the system.

¹⁴ The APS value depends on the base pension (PB: sum of all self-financed pensions including survivorship benefits) and on two parameters: the PBS and the Maximum Welfare Pension (Pensión Máxima con Aporte Solidario, PMAS). Pensioners can claim this benefit if they meet all of the following requirements: they belong to the poorest 60% of the population; they are 65 years old or older; they meet a residency requirement; and their PB is lower than the PMAS. The initial value of the APS is calculated as: $APS = PBS \times \left(1 - \frac{PB}{PMAS}\right)$.

¹⁵ A 2019 law introduced mandatory social security contributions for certain self-employed persons with annual incomes of at least five times the legal monthly minimum wage. Until 2028, covered self-employed persons can choose to make partial contributions for access to a reduced benefit package.

¹⁶ The Government provides a woman aged 65 or older with a bond equal to 18 monthly contributions based on the minimum wage, for each child she has had. Other measures to increase women’s pensions relate to survivors and disability insurance and individual account ownership after divorce. A monthly subsidy is provided to low-income workers (those who earn less than one and a half times the minimum wage) between ages 18 and 35 and their employers for the first 24 months of employment after they first enter the labor force.

3. Despite reducing elderly poverty,¹⁷ discontent with the system remained due to the low pension amounts being delivered to the middle class, culminating in a further increase in the Solidarity Pension in 2019 in response to significant social unrest. Despite the 2008 reforms, 80% of pensioners were receiving less than the minimum wage each month (PBS and APS are indexed to prices not wages which made the replacement rate hard to keep up).¹⁸ Even those contributing with some regularity to the system received less than the often anticipated (though never guaranteed) 70% replacement rate¹⁹ as the 10% contribution rate was never raised, despite a systemic reduction in investment returns since the 1980s.²⁰ The retirement age also remains the same despite increases in longevity and the labor market structure (with many middle-class workers moving between self and formal employment) persisting, making contribution density also low. The privately managed AFPs were widely criticized as charging high fees and delivering poor returns, despite costs having declined considerably since the start of the system, and returns being reasonable (see later section on investments). A further package of reforms was proposed in 2017 following the work of the Bravo Commission - notably introducing an employer contribution rate of 5%, part to be directed to individual accounts, part to a further redistributive solidarity fund - but was never approved. Following civil protests, for which the pension system was a key focus, an emergency bill was passed in 2019 which further raised the Solidarity Pension to 177,000 pesos (by 2022), approximately the poverty line.²¹

4. In response to the COVID situation in 2020-2021 and ongoing dissatisfaction with the pension system, three rounds of exceptional withdrawals were allowed from pension accounts, which will have a significant impact on current and future pension levels.²² Access to the pension funds during the pandemic in Chile has been one of the most generous globally.²³ Although the full amount of COVID-related emergency withdrawals from the pension system is still unknown, the impact on the system is already substantial and will have a significant impact

¹⁷ The OECD's 2015 Outlook for Chile notes that the new 'solidarity pensions' introduced by the 2008 reforms reduced old-age poverty from 23% 2008 to 20% 2011. Benefits stemming from the solidarity pillar were (before the 2020 pension withdrawals) projected to account for approximately 30 percent of total expected pensions at retirement for the average male retiree and 50 percent for the average woman, increasing the expected average replacement rate for those who contributed to the pension system in 2020 by almost 15 percentage points for men, and by close to 20 percentage points for women (IMF Country Report Chile 21/84).

¹⁸ See OECD (Pensions at a Glance 2019) for comparison of basic pension replacement rates.

¹⁹ As referenced in Barr, N., Diamond, P., (2016), 'Reforming pensions in Chile', Polityka Społeczna, No.1, 2016, pp.4-9 <https://www.ipiss.com.pl/?lang=en>

²⁰ For an analysis of investment returns over time see IMF Country Report Chile 21/84

²¹ Following the writing of this note, another update to the Solidarity Pension was passed in February 2022, creating the Guaranteed Universal Pension (Garantizada), covering the bottom 90% of the population.

²² 10% of funds were permitted to be withdrawn tax free from pension accounts in July and December 2020, up to a maximum of US\$ 5,664, with balances under US\$ 1,322 allowed to be fully withdrawn.

²³ Peru has similarly sanctioned three withdrawals (latest allows those over age 40 without contributions in the previous 5 years to withdraw 100%). 75% of balances from the EPF India could be withdrawn. On a more limited basis, around 1% of assets were withdrawn from the Australian superannuation funds (ASD 10,000 – USD\$6,500 – in both 2020 and 2021) and up to \$100,000 tax from 401k accounts in the USA. See OECD <https://www.oecd.org/coronavirus/policy-responses/retirement-savings-in-the-time-of-covid-19-b9740518/>

on current and future pension incomes. USD 37.5 billion has already been withdrawn from the AFPs in the first two rounds of withdrawals in 2020, with up to a further USD 20 billion possible from the third round.²⁴ This would amount to around one-quarter of total pension assets, leaving around one third of individuals with empty balances. Though some of the funds were spent on immediate consumption, part was reallocated to other savings mechanisms, including voluntary pension savings accounts.²⁵ The estimated impact on future pension benefits from the first two rounds of withdrawals range from around 15-25% (with women and lower income workers hardest hit).²⁶ Emergency liquidity support provided by the Central Bank and made available to the AFPs helped stabilize financial markets during the withdrawal period, which was managed with few administrative problems.²⁷

²⁴ The third withdrawal was subsequently approved by Congress (with opinion polls showing 87% public support for the policy) and upheld by the Constitutional Court. As of the time of writing this note, the Senate had passed a Bill to pay 200,000 pesos to those who have less than this amount in their accounts. There are also proposals to allow access to 10% of annuity reserves. A fourth withdrawal was raised by some opposition politicians, but did not pass in 2021. See following articles: <https://www.reuters.com/article/chile-politics/update-1-chiles-president-will-sign-into-law-third-drawdown-on-pensions-idUSL1N2MK2XT> <https://www.bnamericas.com/en/news/chile-insurers-urge-govt-to-fund-annuity-advance-alternative> <https://www.bnamericas.com/en/news/chile-minister-of-finance-highlights-final-approval-of-the-200000-peso-payment-project>. As of May 7, 2021, the pension system has disbursed US \$ 43,954 million across all withdrawals. Regarding the third withdrawal, a total of US \$ 5,693 million has been paid, with an average amount of \$ 1,417,319 per person.

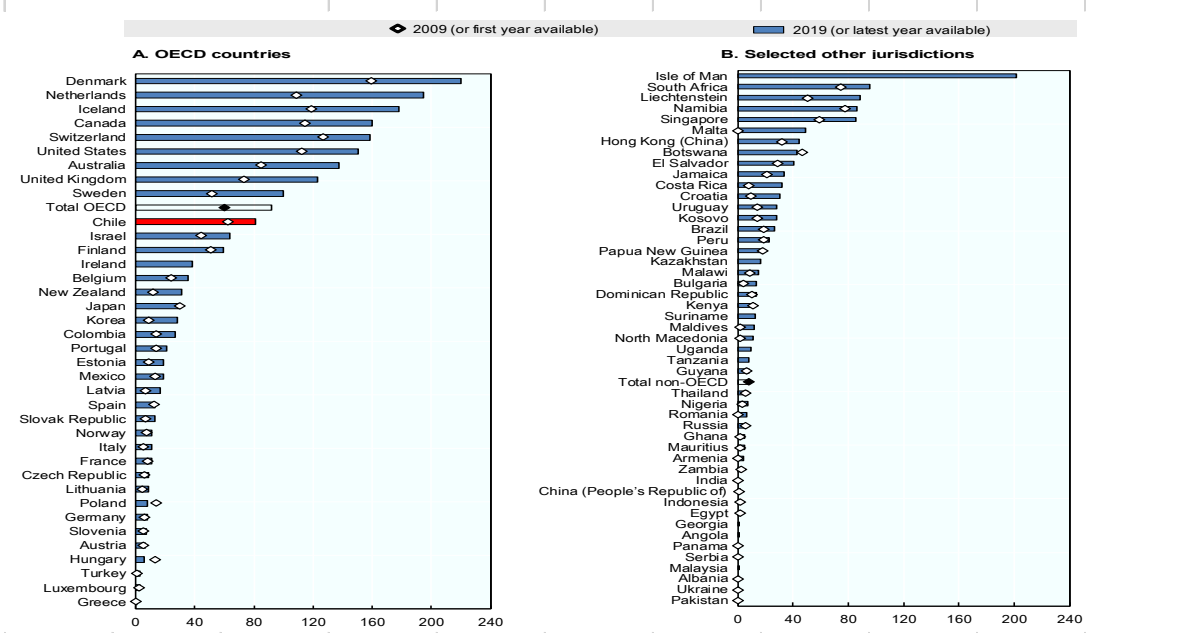
²⁵ The Central Bank has estimated that 15% of the withdrawals went on consumption, 62% to pay down debt or were transferred to other forms of savings, with the remainder unidentified (Informe de Política Monetaria Marzo 2021).

²⁶ Various estimates, to include from Pension Commission (October 2020). See also Lorca, M. (2021), 'The Effects of the COVID-19 early release of pension funds: The case of Chile', School of Economics UNSW https://www.researchgate.net/publication/344334807_Effects_of_COVID-19_early_release_of_pension_funds_The_case_of_Chile and CIEDESS (2020), 'Retiro Exceptional de Fondos de Pensiones: Estimación de Fondos a Retirar y Posible Impacto en Pensiones', INFORME CIEDESS No.7, July 2020 https://www.ciedess.cl/601/articles-6025_archivo_01.pdf. IMF Country Report Chile 21/84 estimates a decline in the average expected replacement rate at around 15% for men 20% for women (higher for older workers). IMF estimate the knock-on impact on the Solidarity Pillar to be the equivalent of one fiscal cost of 2-3.5% GDP in 2020.

²⁷The Central Bank has provided a repurchase liquidity facility (Compra al Contado y Venta a Plazo – CC-VP) that was offered to the AFPs in order to facilitate the efficient processing of the withdrawals.

Figure 1: Pension Fund Assets % GDP Selected Non-OECD Countries (2019)

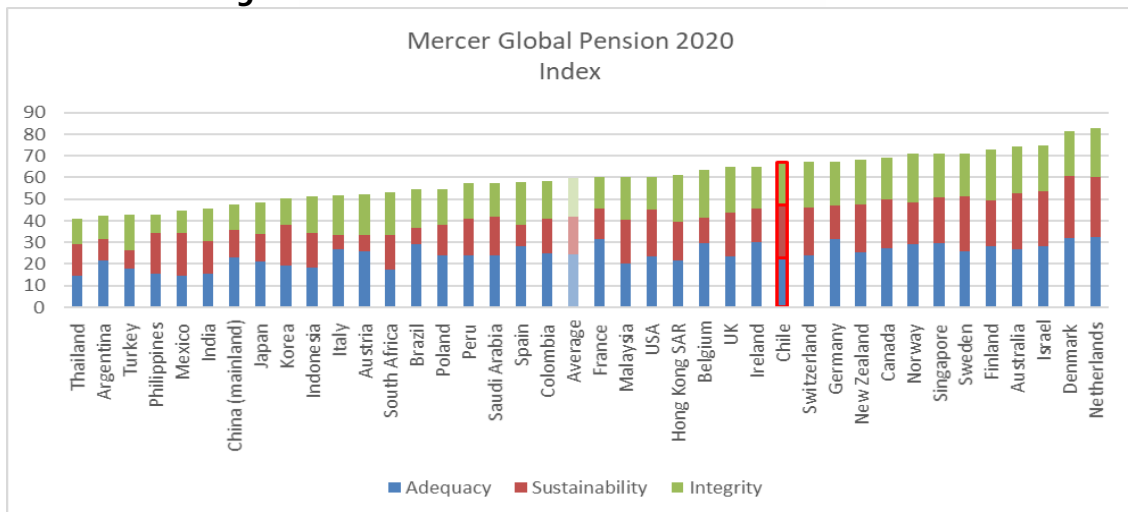
Figure 1.3. Total assets in retirement savings plans, in 2009 (or first year available) and 2019 (or latest year available) As a percentage of GDP



Source: OECD Pension Markets in Focus 2020²⁸

5. Chile’s pension system scores well globally, but the recent withdrawal activity will have an impact. Overall, Chile scores reasonably well on the Mercer CFA Institute Global Pensions Index which ranks global pension systems. This is largely driven by the scores for sustainability and integrity with adequacy measures pulling down the overall score. Given the extent of the withdrawals from the system, the 2021 ranking is likely to have slipped.

Figure 2: Mercer CFA Institute Global Pension Index 2020

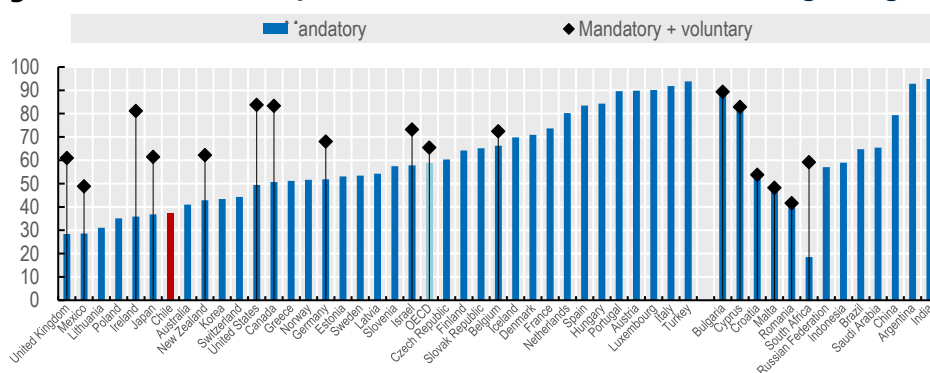


²⁸ <http://www.oecd.org/finance/private-pensions/pensionmarketsinfocus.htm>

Source: Mercer²⁹

6. Adequacy remains the major issue with the system. Most Chilean's are now covered by the pension system, with 11 million or almost 90% of workers having an individual account.³⁰ As of the end of 2019, almost 600,000 pensioners were covered by PBS benefits, with a further 1.1 million receiving APS benefits. The challenge has been with the adequacy of pension benefits. Estimates from the Superintendence of Pensions (SP) indicate that the average replacement rate is 40% of the last salary (52% for men and 29% for women) and that 78% of women and 55% of men receive pensions below the poverty line.³¹ Figure 3 shows Chile at the low end of the OECD's modeled pension replacement rate international comparisons. This hides great disparity between income groups (see Figure 4), with lower income levels receiving relatively adequate levels of benefits,³² but with middle class workers receiving levels well below international benchmarks. The 2019 increase of the solidarity pension from 110,000 to 177,000 pesos, which is in line with the poverty level, address the absolute poverty challenge.

Figure 3: Future Net Replacement Rates for Full-career Average Wage Workers³³



Source: OECD (PAG 2019)

²⁹ Note: the overall index value for each system represents the weighed average of the three sub-indices: 40% adequacy; 35% sustainability; 25% integrity <https://www.mercer.com/newsroom/global-pension-index-uncovers-impact-of-covid-19-on-future-pensions.html>

³⁰ As of 31 December 2020, there are 11,081,375 (5,898,874 men and 5,182,497 women) active affiliates in the current pension system. There are 588,464 current pensions from the former pension system, with an average 145,683,530 UF monthly pension in February 2021.

³¹ Figures for average replacement rate, as also shown in Figure 4, are from a 2017 Ministry of Finance presentation, with SP cited as the source for that data. Figures for percentages below the poverty line are from the Informe Final of the 2015 Presidential Commission Report (p191)

³² The OECD note that pension vs. the median wage is higher in Chile than in Germany, Spain, Italy, Japan and the USA (Pensions at a Glance (PAG) 2019).

³³ As defined by the OECD in their Pensions at a Glance 2019 publication (p154), the net replacement rate is defined as the individual net pension entitlement divided by net pre-retirement earnings, taking account of personal income taxes and social security contributions paid by workers and pensioners. The OECD calculations also specify (p146) that replacement rates are based upon final earnings, or valorized lifetime average earnings (OECD baseline assumes these two to be the same.)

Figure 4: Estimated Median Replacement Rates by Income Cohort

		Median Replacement Rate*	
		Self financed	Total
Gender	Female	12%	29%
	Male	33%	52%
	Total	20%	40%
Quintile	1	14%	110%
	2	10%	55%
	3	18%	41%
	4	26%	35%
	5	26%	27%
	Total	20%	40%

Source: Ministry of Finance Pension Reform Presentation (2017) with SP as original source, (replacement rate measured using last income)

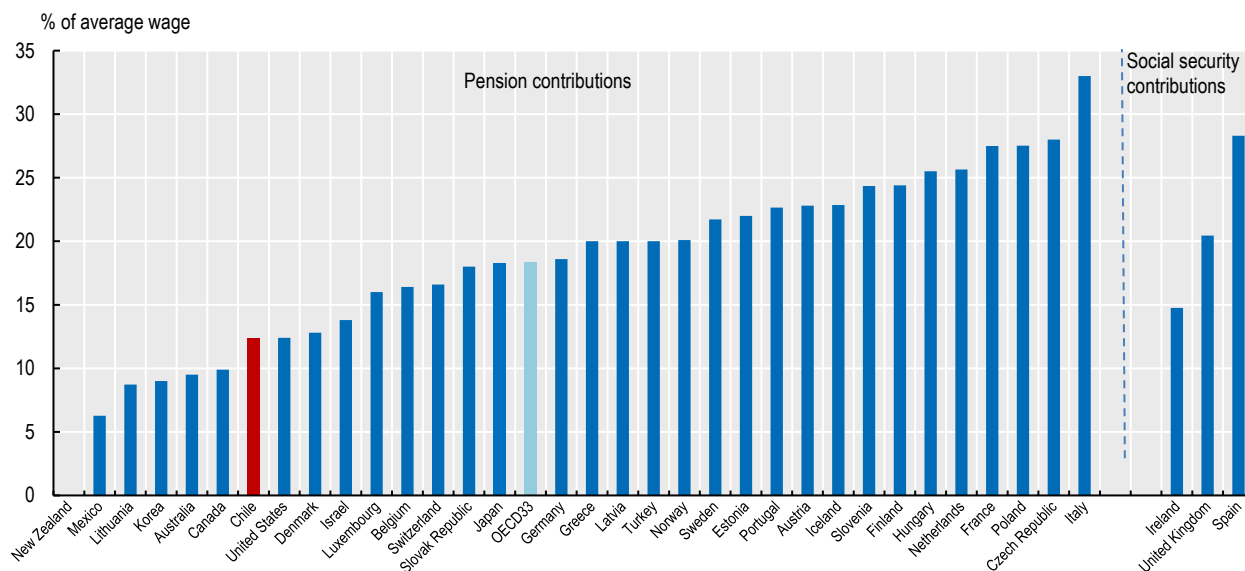
7. The causes of the low benefit rates stem partly from within but also from outside the pension system. The 10% contribution rate is relatively low by international standards (see Figure 5), with recognition that this needs to increase accepted by previous Commissions and current reform proposals. As shown in Figure 6, even if contribution density were not an issue and participants contributed for 30+ years, replacement rates when considered with the Solidarity Pension would not be sufficient. Additional contributions are needed. As discussed in the following section, the actual returns generated on these contributions by the AFP system have been reasonable (approximately 25-30% replacement rate for full contribution density), and this is less of a cause of low pensions than is widely perceived. The contribution rate was not increased despite a systemic decline in investment rates as the Chilean economy developed.³⁴ The retirement age has also not changed since the start of the system, despite life expectancy at retirement having increased from 78 to 86 for men and 81 to 90 for women.³⁵ This increased longevity has resulted in lower pension benefits both in the form of annuities or programmed withdrawals. Labor market factors also play a major role, with Chile (and Latin American countries in general) having a high number of workers who move between formal and informal/ self-employment. This has meant that contribution 'density' is low, resulting in men contributing to

³⁴ See IMF Country Report Chile 21/84

³⁵ Edwards, G., Soto, R., Zurita, F., (2020), 'Life expectancy at retirement and income levels in Chile', C A F Working Paper #2020/05
https://scioteca.caf.com/bitstream/handle/123456789/1624/Life_expectancy_at_retirement_and_income_levels_in_Chile.pdf?sequence=1

their pension for only around half of their working life and women around one-quarter.³⁶ SP research found that 20% of men and women contributed more than 90% of the time; whilst 10% of men and 20% of women contribute less than 10% of time.³⁷ Wage growth also caused the replacement rate to erode. Taken together, these factors have made it impossible for the pension system to deliver the 70%+ replacement rate which was widely anticipated (though never guaranteed) when the system was launched.³⁸

Figure 5: Pension Contribution Rates Selected Countries



Source: OECD (PAG 2019)

³⁶Amongst those who started a pension in June 2019, the median number of contribution years (from a 45-year career) was 23 for men and 9 for women.

³⁷ (Berstein, Larrain and Pino 2006). See also (Arenas, A. and Mesa-Lago 2006) with regard to the topic of density

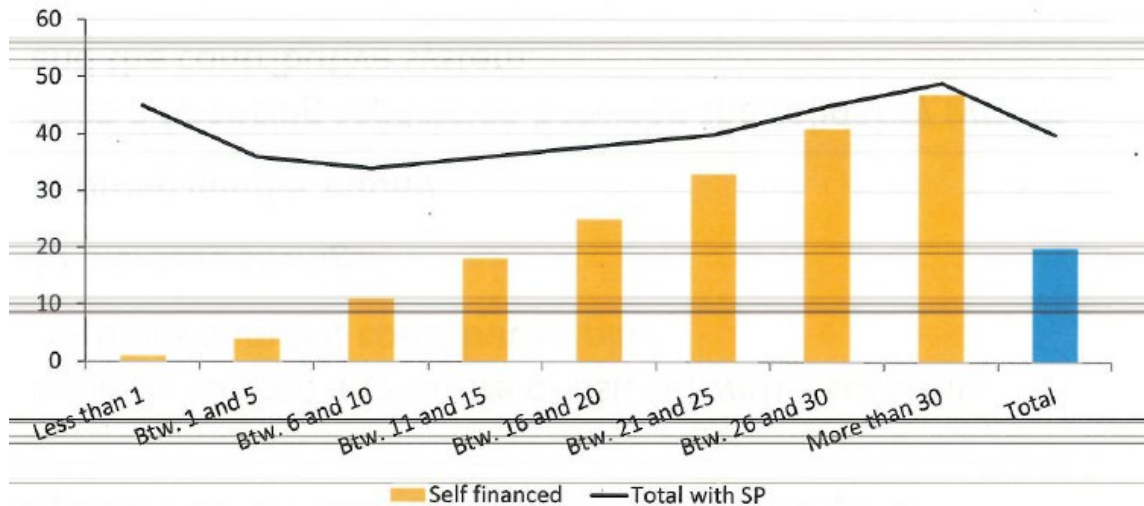
³⁸ Barr, N., Diamond, P., (2016), 'Reforming pensions in Chile', Polityka Społeczna, No.1, 2016, pp.4-9

<https://www.ipiss.com.pl/?lang=en>

Figure 6: Higher Contribution Density is not Enough

(SP denotes Solidarity Pension)

Replacement rate, per contribution years*
(Percentage)



Source: SP (via MoF presentation 2017)

8. Elderly poverty is no higher than for other groups despite the low pension spend, though inequality overall remains high. Though income disparity is relatively wide in Chile, elderly poverty is not an exceptional problem (see Figure 8), despite Chile’s relatively low pension spending - currently less than 3% of GDP vs. OECD average of almost 8% (see Figure 7).³⁹ The system has delivered from a sustainability standpoint, with the prospect of larger deficits or the crowding out of other social spending (or both) avoided as the result of existing system design choices. Demographic aging (UN demographic projections estimate that the percentage of elderly in the population will double by 2050 and life expectancy will increase 5 years), however, will increase pension costs in the coming decades (see Figure 9).

³⁹ The move to the funded system significantly reduced pension liabilities. Gill et al. (2004) produced aggregated estimates of the implicit pension debt (IPD) as GDP percentage with and without reforms for 2001 to 2050. With the reform, the IPD fell from close to 130 percent to 40 percent in 2001, from 170 percent to 10 percent in 2020, and from over 200 percent to almost zero in 2050. The pension reform improved the pension system’s long-term fiscal sustainability by reducing the projected public pension debt from 90 percent of GDP to 60 percent in 2030 and from 175 percent of GDP to 70 percent in 2050.

Figure 7: Spending on Pensions per head Population Over 65

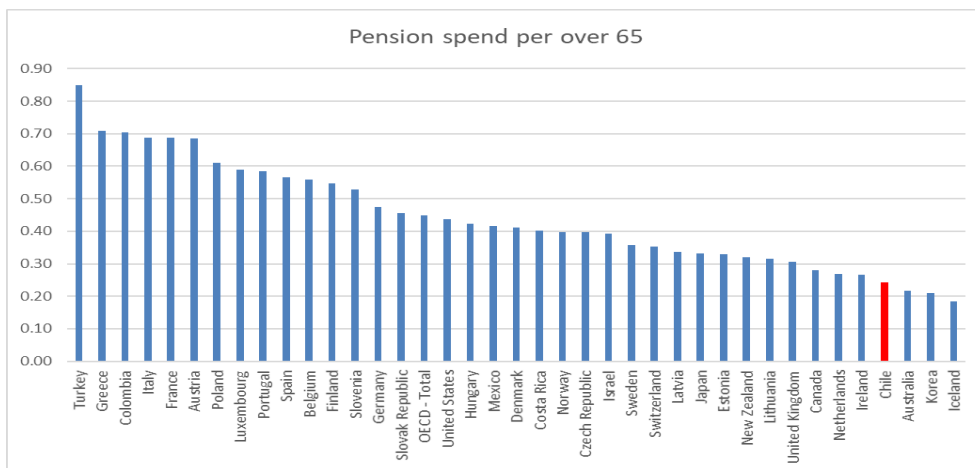


Figure 8: Poverty Rate Among Older Age Groups and the Total Population (Relatively Poverty Rates % 2016)

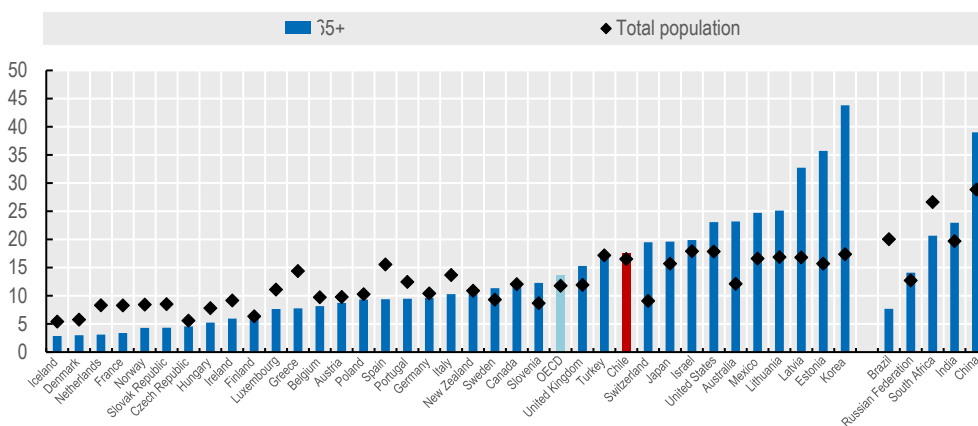
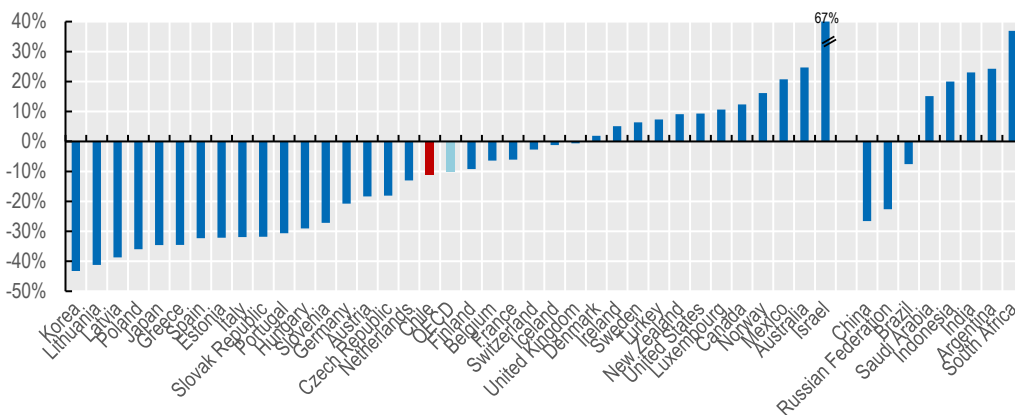


Figure 9: Population Aging (2020-2060) Selected Countries (change in the working age population, 20-64)



Source: OECD (PAG 2019)

9. A further round of reforms proposed by the Government in late 2018 spent quite a bit of time in the reconciliation process having been approved by the Lower House of Congress but ultimately did not move forward in the Senate. The goals of the reform Bill were: to provide better benefits to current and future pensioners who pay regular contributions; increase coverage of the solidarity pillar; strengthen competition and affiliates participation in the system; and strengthen institutions. Some elements of the proposal had been broadly accepted (notably the increase in solidarity pillar coverage from 60-80%⁴⁰ of the lowest income individuals and the introduction of a 6% employer contribution). Others remain greatly contested (notably around the management of the increased contributions and formulation of benefits). A more detailed commentary on these proposals can be found in Annex 1.

⁴⁰ The subsequent “Ley Corta de Pensiones” as amended by the Labor Commission, included an expansion of coverage for the Basic Solidarity Pension to 85% and increased the payment amount to 210,000/month, among other changes. See footnote 21 regarding the Guaranteed Universal Pension, which passed in February 2022. <https://www.meganoticias.cl/nacional/356387-ley-corta-pensiones-montos-en-que-esta-proyecto-aumento-pension-basica-solidaria-cuarto-retiro-27-10-2021.html>

II REGULATION & SUPERVISION

A. Regulatory Framework & Governance

10. The pension system in Chile is overseen by the Superintendencia de Pensiones (SP), which has provided strong oversight of the sector since its foundation. SP is an autonomous entity, yet related to the Ministry of Labor and Social Security (MoLSS). It is financed via the government budget, oversees AFPs and ensures that the operation of the mandatory private pension pillar follows legal requirements. Five appointed members from the Consejo Técnico de Inversiones (CTI – Technical Investment Council) meet monthly and oversee the investment regime.⁴¹ The Investment Regime for the Multifondos, as most recently approved in November 2020, is a 74-page document detailing how the AFPs are to structure their offerings.⁴² Separately, the Risk Classification Commission (CCR) is an independent institution which assesses the specific securities that pension funds can invest in.⁴³

11. SP has coordinated with other financial sector regulators historically but that process is being further improved. As part of the pending pension reform, a “Pensions Coordination Committee” has been proposed, which will have the role of facilitating the technical coordination and exchange of information between SP and the new Financial Market Commission (CMF) in matters related to pensions. The new committee would be required to meet monthly, with key leaders from both SP and CMF, in order to ensure sufficient communication between these key elements of the financial oversight community.

12. A review of the pension legal and regulatory framework in Chile shows broad compliance with international standards. The primary legislation governing pension funds remains the 2008 Law, which introduced new benefits for the elderly poor in the form of a strengthened Solidarity Pillar, but which also introduced an auction mechanism intended to increase fee competition among the AFPs, among other changes. As part of this note, a high-level assessment of the legal and regulatory framework in Chile was conducted according to the International Organization of Pension Supervisors (IOPS) Methodology for Review of Supervisory Systems using IOPS Principles (see Annex 4).⁴⁴ As a whole, the assessment indicates that SP is a mature institution with broad adherence to international best practices. However, there are some areas where further progress could be made, such as the degree of risk orientation and proportionality.

⁴¹ SP proposes the investment regime; CTI must concur and the MoF approves

⁴² https://www06.spensiones.cl/portal/institucional/594/articles-14235_recurso_1.pdf

⁴³ CCR has SP and other government representation along with representatives of industry. CCR is funded via levies imposed on the AFPs <https://ww1.issa.int/node/195545?country=826>

⁴⁴ <http://www.iopsweb.org/principlesandguidelines/44502991.pdf> The results of the review are based on the self-assessment of the SP, with adjustments made by FSAP team based on a review of existing legislation and international comparison and calibration.

13. SP has sufficient powers to oversee a relatively small group of Pension Fund Administrators. SP has an annual budget of about USD\$ 23 million and employs ~250 staff in a range of roles.⁴⁵ SP has adequate powers as outlined by the International Organization of Pension Supervisors (IOPS) in their Principles of Private Pension Supervision.⁴⁶ SP is operationally independent and has strong legal powers, which include the explicit authority to interpret legislation.⁴⁷ Beyond this relatively uncommon ability, SP has robust licensing requirements (including capitalization, insurance protection and fit and proper tests for management personnel). Further, SP has authority over mergers and acquisitions, ability to undertake corrective actions, and power to revoke licenses when necessary.

14. SP conducts both on-site and off-site investigation of pension funds, through a risk-based supervision (RBS) model, which has recently been updated. A risk-based supervision model was first planned by the SP in the wake of an assessment by the World Bank in 2006. However, until 2010, SP continued to conduct their supervision in an entirely compliance-based fashion; given the context of Chilean civil law, the AFPs were subject to a wide range of requirements specifying exactly what they must do in specific situations.⁴⁸ Since 2010, SP has been gradually implementing risk-based supervision, improving their model over time to move away from a strictly compliance focus. In 2016, a law was enacted requiring SP to fully implement an RBS methodology.⁴⁹ This new methodology involved the implementation of a “risk matrix” and “risk assessment model” that SP would develop for each AFP. Following the promulgation of this law, SP updated the secondary regulation describing the required RBS approach, to include implementation of the three lines of defense model as espoused by the Institute of Internal Auditors (IIA).⁵⁰

15. Although the IOPS assessment reveals a strong position overall for SP, there are a few areas of opportunity for improvement. First, there could be further improvements in the risk-based approach that SP employs once the investment regime is updated⁵¹. The AFPs receive dozens of requests from SP daily – which is unusual in a risk-based system which would expect to prioritize major potential problems. This is likely because there are few degrees of freedom in the SP compliance requirements, especially how it regards investments. Greater flexibility would be advised, and in fact is allowable under the law. In terms of international standards, under IOPS Principle 6 (Proportionality and Consistency) item 6.7 encourages the supervisor to allow entities appropriate flexibility in deciding how to comply with legislation. Secondly, as regards transparency, the current approach by SP is not to publish rationales for supervisory decisions. This is understandable, as there may be confidentiality issues with sharing as well as other

⁴⁵ <https://www.spensiones.cl/portal/institucional/594/w3-propertyvalue-5992.html>

⁴⁶ <http://www.iopsweb.org/principlesguidelines/IOPS-principles-private-pension-supervision.pdf>

⁴⁷ www.iopsweb.org/rbstoolkit Module 1 Preparation, p7

⁴⁸ www.iopsweb.org/rbstoolkit Chile Case Study 2014 p5

⁴⁹ www.iopsweb.org/rbstoolkit Chile Case Study 2019 p3

⁵⁰ *ibid.*

⁵¹ The recommended changes to the investment regime are a key enabler for streamlining the SP RBS approach.

supervisory effectiveness impacts. However, under IOPS Principle 9 (Transparency) item 9.5⁵² suggests that one of the suggested best practices is for supervisors to publish decisions (with appropriate explanation and subject to confidentiality constraints) in a way such that other supervised entities can better understand expectations, and thereby contribute to greater transparency overall in enforcement efforts. This type of greater transparency could be an opportunity to even more effectively reinforce an SP “enforcement pyramid” approach (Figure 10), as detailed in the IOPS toolkit⁵³

Figure 10: IOPS Enforcement Pyramid



Source: IOPS Toolkit Risk-based Supervision

16. The regulatory regime that SP is responsible to supervise should be redirected more strongly toward market conduct oversight and away from its strict focus on investments.

This should provide more targeted protection for pension fund members and a more efficient system overall. Importantly, the strong oversight by the regulator has ensured that there has been no fraud or illegal use of funds from the system since its introduction. However, SP’s powers, especially when considered in concert with CTI, can be restricting for the regulated entities (which have teams dedicated to respond to the regulators’ often daily correspondence), especially given the relatively well developed financial sector in Chile.⁵⁴ The formulaic aspect of the regime as a whole represents a temptation for participants to engage in “check the box” type approaches (both the regulated entities and the front-line supervisors) – particularly when it comes to investments - instead of an approach that would be more enabling of innovation. Where the SP might be able to make a more efficient impact would be the area of market conduct; as an example, to better encourage higher quality disclosures on the part of the AFPs. For example, an

⁵² <http://www.iopsweb.org/principlesguidelines/IOPS-principles-private-pension-supervision.pdf>

⁵³ http://www.iopsweb.org/IOPS_Toolkit_brochure_2016.pdf

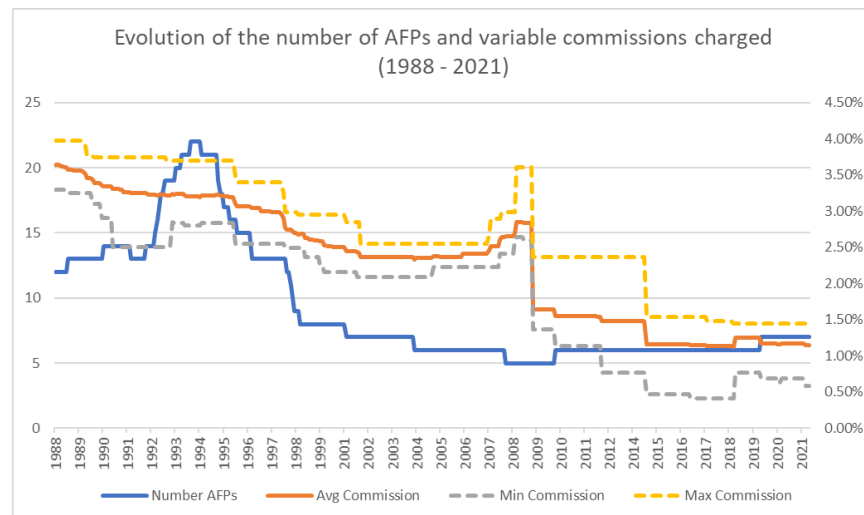
⁵⁴For example, see Chile’s ranking in IMF Financial Sector Development Index <https://data.imf.org/?sk=F8032E80-B36C-43B1-AC26-493C5B1CD33B&slid=1485894037365>

international benchmarking of pension fund transparency saw the Chilean funds are ranked relatively low vs. their international peers.⁵⁵

B. Competition and Efficiency

17. The AFP Universe is relatively concentrated – with the auction system introduced in 2008 creating a ‘two-tier market’. The number of AFPs has risen and fallen during the life of the system, with 7 currently in operation - 5 legacy and 2 new entrants which joined since the auction mechanism was introduced in 2008 (see Figure 11). On a biannual basis, this system automatically allocates all new entrants to the labor market and pension system who do not make an active choice of AFP to the provider that tenders the lowest bid.⁵⁶ Figure 12a shows progression of asset accumulation over the last ten years, demonstrating continued growth for the largest providers in the system (the big four AFPs manage over 90% of the assets), whereas the smaller entities, two of which joined since 2008, have had a harder time building significant scale. The large four have basically not competed in the auction tenders, whereas the three smaller ones have – although this has not helped them to achieve significant asset

Figure 11: Evolution of AFP System



Source: SP⁵⁷

⁵⁵ See CEM Pension Fund Transparency Benchmark <https://www.top1000funds.com/global-pension-transparency-benchmark-countries/#tabs-countries>

⁵⁶ With the advent of this new mechanism, AFP Modelo entered the market with the lowest bid and proceeded to win again two years later. One of the incumbents (AFP Planvital) won the following two bids (2014 and 2016 – being the only bidding in the latter) at extraordinary low rates, but at the cost of most of their profits. In 2018, Planvital reverted to a higher quote and again a new AFP (AFP Uno) entered the market with the lowest commission rate. In the most recent tender, announced March 2021, the original disruptor, AFP Modelo, again had the lowest bid (competing with Uno). ASFA “The Chilean pension tender model” February 2017, p18 Vasquez, Sofia, “The Chilean Pension Reform: Results 36 Years Later” p26

⁵⁷ Original version and concept for chart from Sierra Vasquez, S. “The Chilean Pension Reform: Results 36 Years Later” 2017 Final Project p33

accumulation as few exiting members switched providers, despite their obviously lower cost⁵⁸. As can be seen in Figure 12b, the AFPs that participated in the tenders have done relatively better in acquiring participants.

Figure 12a: AUM Chilean AFPs

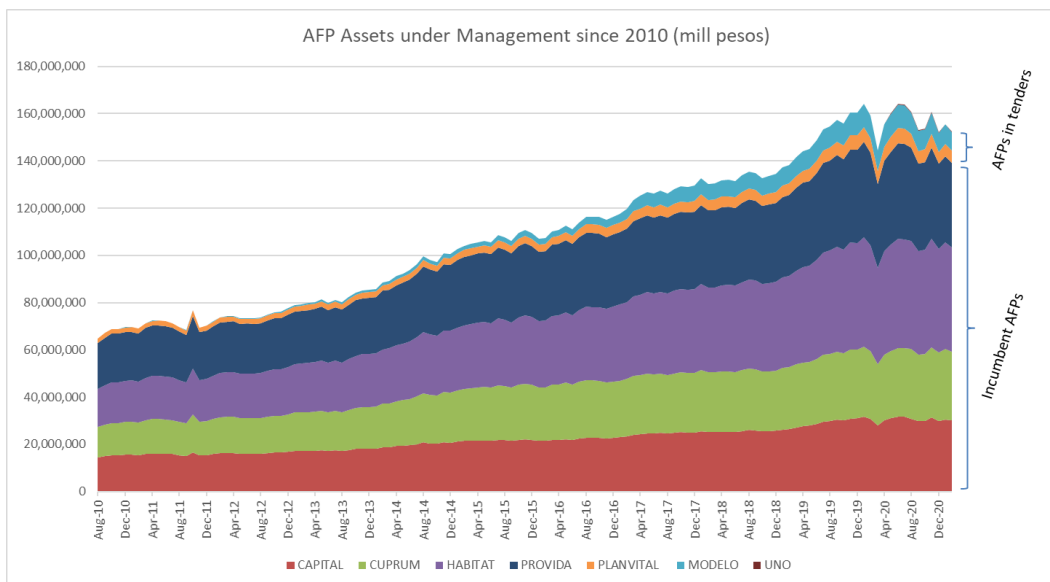
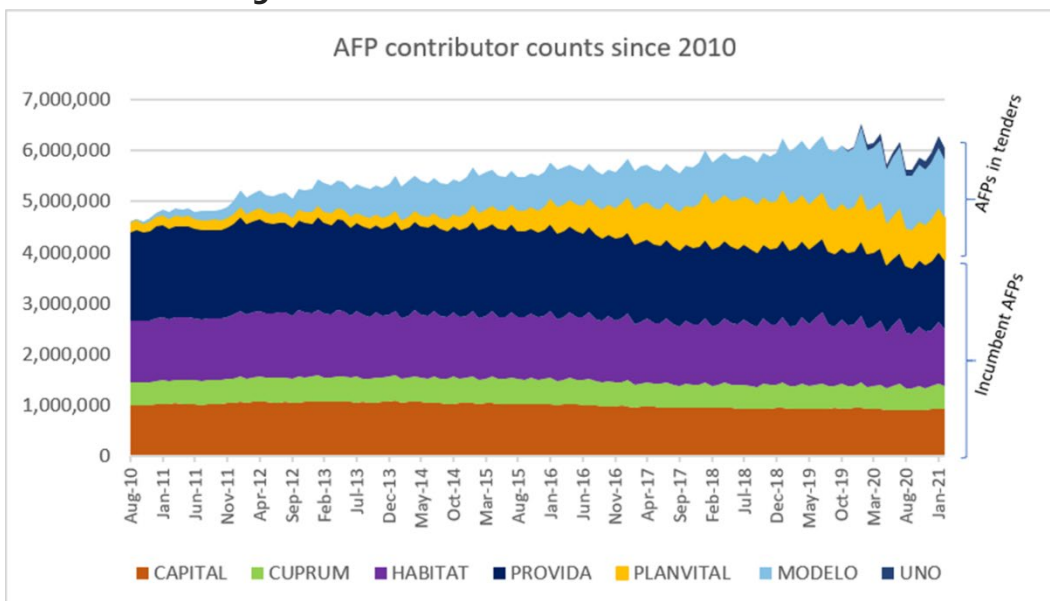


Figure 12b: Contributor Counts Chilean AFPs

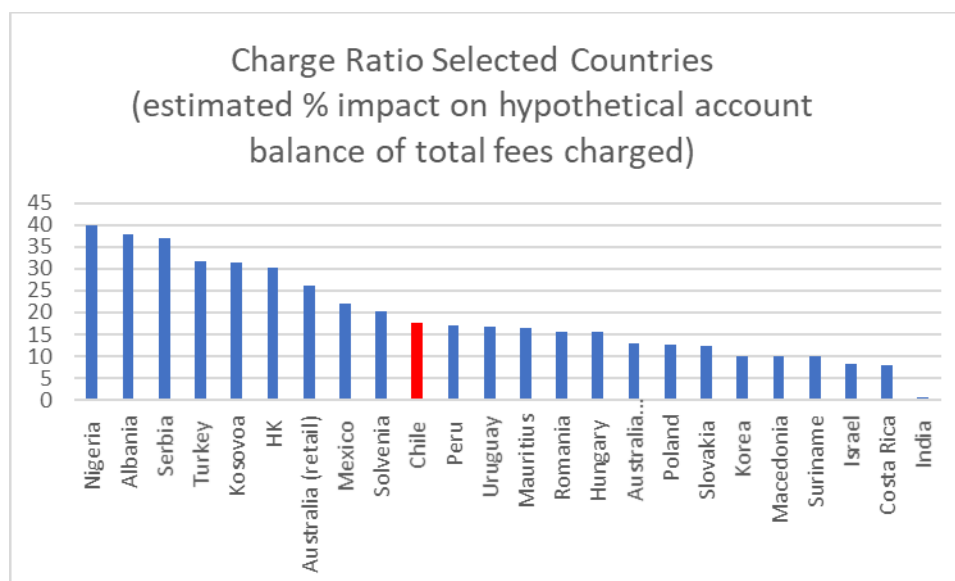


Source: SP Data

⁵⁸ IOPS, amongst others, have discussed competition within pension systems and 'sticky' choices, limited switching by members. See, for example, IOPS Working Papers on Effectively Supervision, No. 18 'Supervising Default Investment Portfolios' (2012).

18. The auction process has led to mixed results in terms of improving fee competition - with profit levels for the incumbents remaining relatively high and criticism and mistrust of the AFPs remain. As shown in the preceding figures, there has been a continuous level of reduction in fees overall, with the smaller providers charging fees which continue a downward descent; the recent auction was won with a bid of 0.58% of contributions. However, the upper tier of providers are not participating in the auction process and are able to charge higher fees to their established, older customer base (~1.5% contributions), vs. the smaller AFPs (~0.5%) which accept the younger cohort of new entrants to the system. Consequently, the auction system did not meaningfully affect incumbent revenues until only the most recent years – see figure 14, where only in 2019 and 2020 did the revenues of Modelo and Planvital start to approach incumbent revenues, with Modelo actually exceeding one of the incumbents.⁵⁹ Notwithstanding this reality overall pension costs in Chile are not far away from international averages; Although it is very difficult to compare pension costs across systems due to very different charging methodologies, one international attempt (see Figure 13) by IOPS would indicate that costs in Chile are middle of the road as regards international comparatives.

⁵⁹ ASFA “The Chilean pension tender model” February 2017, p17

Figure 13: IOPS International Fee Comparison Selected Countries

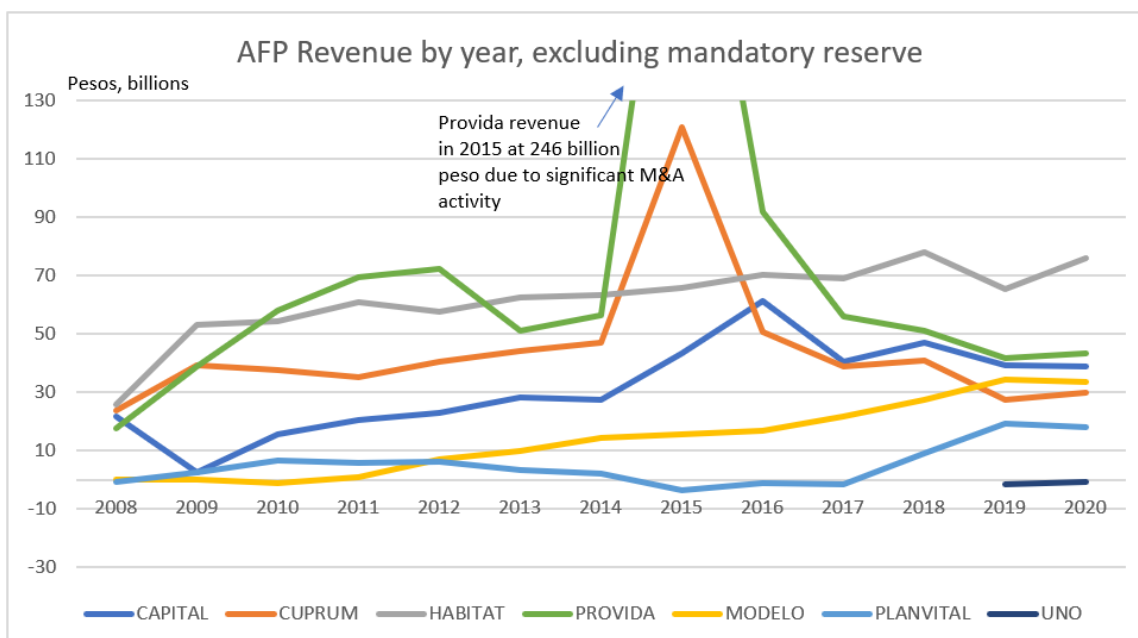
Source: IOPS (Working Paper No. 32 2018)

19. A continuing source of discontent in Chile has been the topic of AFP profits. As discussed, fees charged by the AFPs are competitive vs. international norms. However, within Chile there is concern that the AFPs earn profits that are excessive, even within the financial sector, given the mandatory nature of the system. Figure 15 below compares AFP profitability to bank profitability through 2020.⁶⁰ It is clear that AFP profitability has generally been higher in past years than that of banks. However, it is not clear whether this is “excessive,” and it also appears that recent years indicate a closer comparison. Of note, a quick snapshot at the profitability of asset managers vs. banks in the United States in the most recent time period (as of January 2021) also reveals ROEs for asset managers are roughly 50% higher than that of banks (~12% vs. 8%).⁶¹ Further, as indicated in the most recent years in the chart, AFP profitability has been generally coming down, even for some of the stronger entities. AFP Provida and AFP Cuprum both booked ROEs for 2020 below 7%. AFP Habitat, by contrast, was still able to return over 28% to equity holders in 2020.

⁶⁰ Original concept for chart from Lopez, F., (2016), “Industria de AFP chilena: Cuanto gana y cuanto deberia ganar? (The Chilean pension fund management industry: How much does it earn and how much should it earn?)” <https://ideas.repec.org/a/ila/anaeco/v31y2016i2p101-114.html> (more recent version of chart based on SP and CMF data)

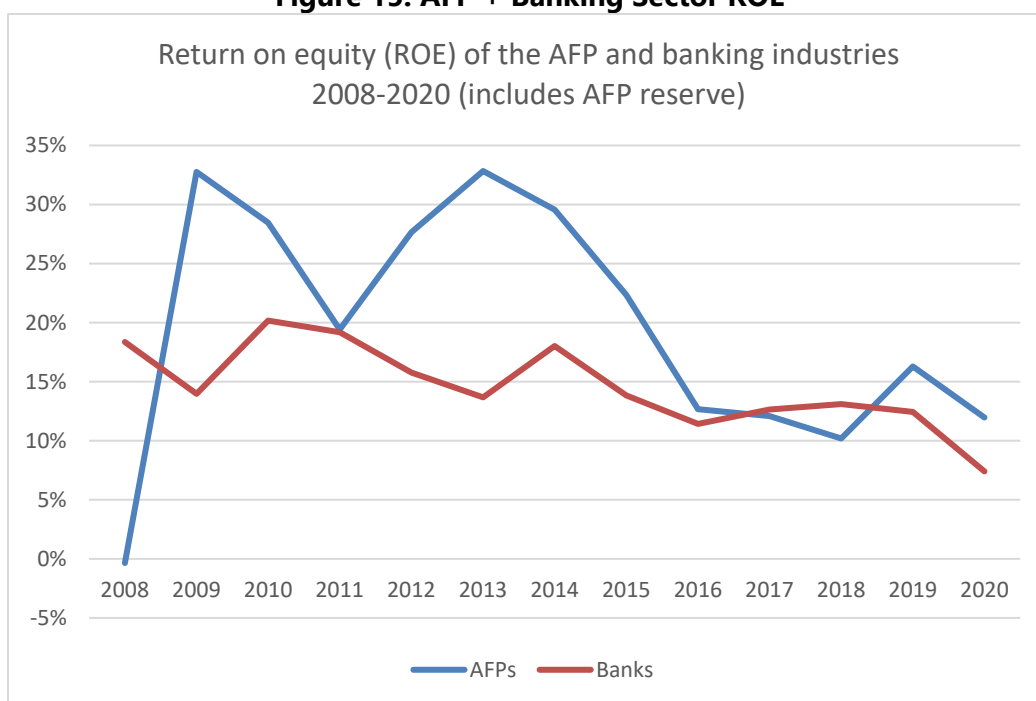
⁶¹ http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/roe.html

Figure 14: AFP Revenues



Source: SP

Figure 15: AFP + Banking Sector ROE



Source: SP and CMF data

20. It may be possible for the AFPs to deliver further cost efficiency, lower commissions and better returns for participants – but this will not be enough to yield a major improvement in pension benefit levels. From an operational standpoint, the administration

system of the AFPs is efficient overall – as the ‘stress test’ of the huge 2020 withdrawals demonstrated. This is in part due to the central contribution system, PREVIREDA.⁶² From a cost efficiency standpoint, however, some of the AFPs could do more, especially with regard to heavy spending on sales and marketing. The legacy AFPs still employ 40-50% or more of their employee base in these areas, though digitalization is allowing these numbers to decline, in some cases significantly, as there is less needed to maintain a large network of regional offices.⁶³ In some cases, a predominant service which the AFP offices provide to their members is the simple provision of various certificates which are used for multiple purposes, including securing rental properties or obtaining a loan (other sources being not fully trusted or available). In most cases the same certificates can be obtained digitally via the AFP’s website or even through the SP website.⁶⁴ Given the increasing capabilities of digital services, it will be important for the AFPs (and SP) to push more of this activity to a digital format to realize further efficiencies in the AFP cost structures. This could incrementally help drive down overall commissions further.

21. The AFPs’ investments are still highly regulated through the Multifondos investment regime – which does not result in the most efficient fund allocation for members and has become outdated. The investment regime is highly regulated, with five prescribed ‘target risk’ based funds offered by the AFPs, which also serve as default funds for different age groups (member are switched between funds over a five-year period) – as shown in Table 3.⁶⁵ Each of the five funds has a prescribed level of risky assets (equities and overseas investments) they are allowed to employ. Importantly, however, Funds A and E are not a part of the default mechanism and can only be actively chosen on the part of affiliates. This is a suboptimal design for the youngest and oldest participants. Too many younger participants have actively chosen the highly conservative Fund E, which does not match their long-term investment horizon and will result in poor outcomes in terms of retirement income (See Annex 3).⁶⁶ The multifondos approach was quite advanced when first implemented twenty years ago, but good practice internationally has since developed – including through the concept of ‘risk budgeting’

⁶² About twenty years ago, the five AFPs existing at that time agreed to cooperate in the provision of some key back-office functions. They formed a new jointly owned institution: PREVIREDA. PREVIREDA began offering key facilitation services that enabled smooth processing for participants as they transferred between AFPs and as they reached their payout phase. PREVIREDA gradually increased its mandate to deliver additional services to include data verification, historical data custody and industry password facilitation. They priced each of these new services in such a manner to recover their costs, and as a few new AFPs joined the industry, they have continued to deliver services on a “level-playing-field” basis even as their ownership remains in the hands of the five original entities.

⁶³ In their annual report for 2020, AFP Provida reported a 40% reduction in their sales force, a reduction of roughly 600 from what had been a sizeable group of 1,500.

⁶⁴ <https://www.spensiones.cl/apps/certificados/formCertificadoAfilacion.php>

⁶⁵ International investment limits have increased gradually over time, reaching a maximum of 80% by 2011 (with limits varied by fund type).

⁶⁶ Beginning back in 2016, however, this issue was magnified by the leaders of the “no mas AFP” movement, who suggested to young followers that they move to fund E as part of their collective protests against the system.

which allows for greater differentiation within as well as between asset classes.⁶⁷ More efficient 'target date' funds have also been developed.⁶⁸

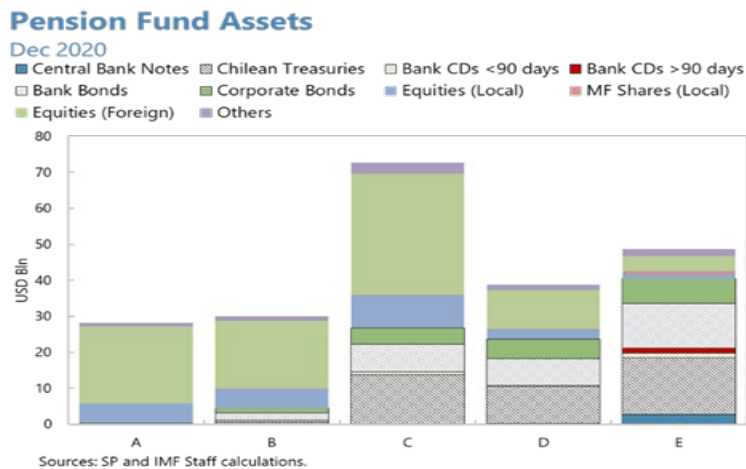
Table 3: Multifondos Regulations

Possible choice of Funds and the amount of risk in each Fund

	% of Equities	Men ≤ 55 years Women ≤ 50 years	Men > 56 years Women > 51 years	Default choice
Fund A: Most Risky	40%-80%	✓		
Fund B: Risky	25%-60%	✓	✓	Men ≤ 35 Women ≤ 35
Fund C: Intermediate	15%-40%	✓	✓	36 < Men ≤ 55 36 < Women ≤ 50
Fund D: Conservative	5%-20%	✓	✓	Men > 56 Women > 51
Fund E: Most Conservative	0%-5%	✓	✓	

Source: ICPM⁶⁹

Figure 16: Pension Fund Asset Allocation



Source: SP + IMF calculations

⁶⁷ ATP Denmark is an example of a leading global fund which has adopted a risk-budgeting approach (see Annex 5). The concept is discussed further in Lopezi, F., Walker, E. (2021), 'Investment Performance, Regulation and Incentives: The Case of Chilean Pension Funds', *Journal of Pension Economics and Finance* (2021), 20, 125-150

⁶⁸ See: Shoven, J., B., Walton, D., B., (2020), 'An Analysis of the Performance of Target Date Funds', Stanford University / NBR Working Paper No. 20-044 <https://siepr.stanford.edu/sites/default/files/publications/20-044.pdf>

⁶⁹ International Centre for Pension Management (ICPM), October 2018. "Summary of the Chilean Pension System"

22. The system allows a great deal of freedom to switch between funds, which has resulted in participants making many active choices that have resulted in suboptimal returns.

Funds A and E, with extremely different asset allocations, have been at the center of frequent switching activity by a small but significant number of participants, with a well-known advisor advocating periodic switching between these two funds promising questionable additional returns.⁷⁰ Based upon the analysis in a recent technical note from SP, the average participant who actively switched lost almost 5.7% in forgone return vs. the default strategy for their age group.⁷¹ This was driven both by poor market timing as well as by the fact that AFPs had to protect for this excessive switching by holding more liquidity type instruments than would otherwise be required, systemically lowering overall returns.⁷² Although new requirements have recently been put into place that should reduce switching activity, a more comprehensive overhaul of the investment regime is needed to address the issue.

23. The minimum relative return guarantee which the AFPs have to provide arguably discourages long-term investment behavior by the AFPs, which the proposed commission reduction on negative returns would only serve to enhance. The existing minimum profitability guarantee that the AFPs are subject to is based on the average return of the industry as a whole. Though rarely invoked, this discourages a long-term approach to investment (evidenced, for example, through their relatively low holdings of alternative investments – see Figure 17) which should be the advantage of pension funds given their management of savings over decades. Details of the AFP portfolios and performance can be found in Annex 3.⁷³ The current reform bill includes a provision that would require AFPs to return up to 20% of commissions charged for any year they experience negative real returns. This provision would likely further incentivize a focus on short-term performance investments and make it less likely

⁷⁰From the end of 2019 until April of 2021, just over 16 months, this advisor advocated 26 extreme fund moves <https://www.felicesyforrados.cl/planes/> (as accessed on 25 April 2021, via Google Chrome translate tool) Figure of 26 is quoted on the Felices y Forrado website in their “results” section, as accessed on 28 April 2021

⁷¹ Technical Note 7, April of 2021, SP <https://www.spensiones.cl/portal/institucional/594/w3-article-14339.html> calculated from 2014 through Jan 2021

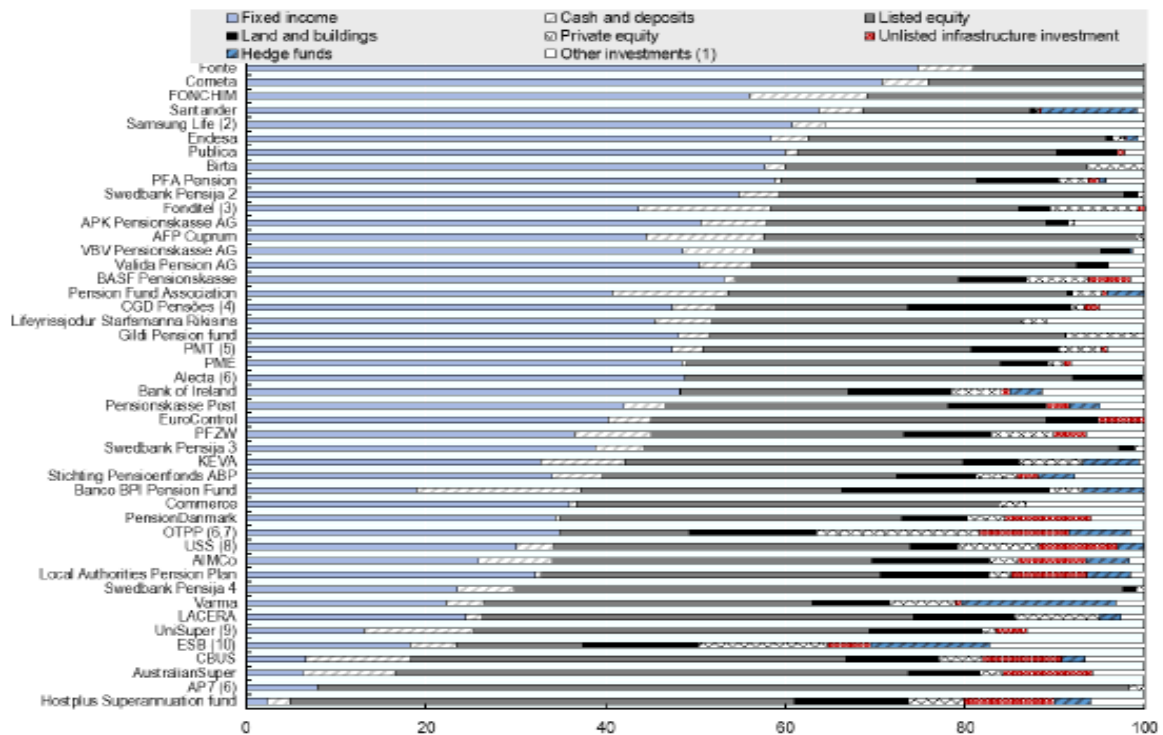
⁷² Pedraza Morales, A., E., Fuentes, O., Searle, P., Stewart, F., (2017), ‘Pension Funds and the Impact of Switching Regulation on Long-term Investment, World Bank Policy Research Working Paper 814 <https://openknowledge.worldbank.org/bitstream/handle/10986/27646/WPS8143.pdf?sequence=1&isAllowed=y>

A liquidity stress testing exercise for Fund E portfolios was also conducted by the IMF team as part of this FSAP. The results confirm sound liquidity management from AFPs—but the detrimental impact of fund switching remains to be fully addressed

⁷³ The existing regulation requires that each fund within the AFP portfolio delivers a return within a narrow band around the average real yield for each fund type over a recent period. Pension fund managers are also subject to a minimum reserve requirement (MRR) that is equivalent to 1% of the assets they manage in each fund. The negative return proposal, by contrast, excludes Fund A. Also, the new proposal would only be triggered when similar instruments had positive returns. For a discussion of the investment behavior of the AFPs, see: Lopezi, F., Walker, E. (2021), ‘Investment Performance, Regulation and Incentives: The Case of Chilean Pension Funds’, *Journal of Pension Economics and Finance* (2021), 20, 125-150

that an innovative AFP could pursue strategies more profitable in the long term but potentially more volatile in the short term.

Figure 17: Asset Allocation (including alternative asset classes) Large Pension Funds (including AFP Cuprum)

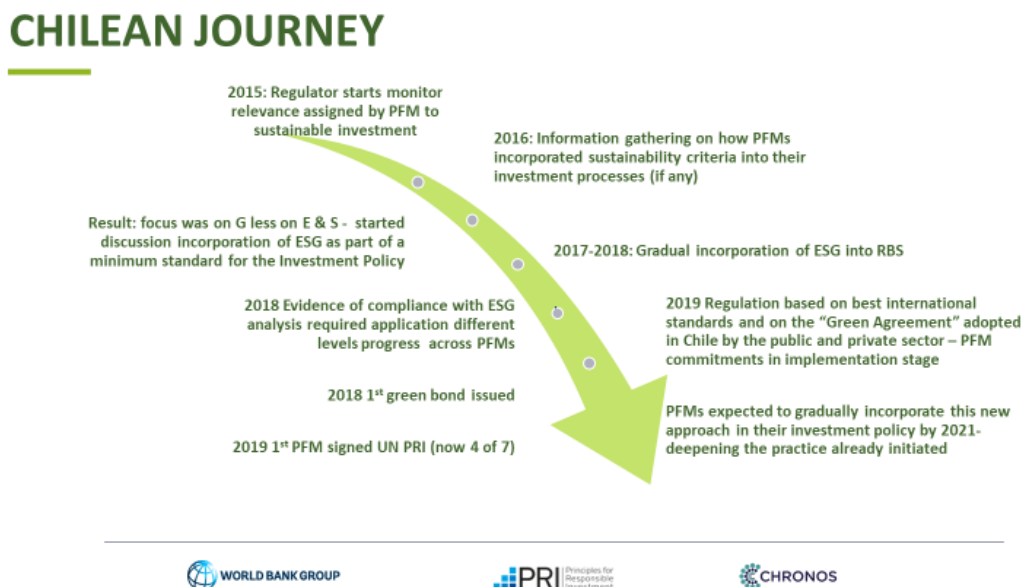


Source: OECD Survey Large Pension Funds & Public Pension Reserve Funds (2019)⁷⁴

24. SP requires consideration of Environmental, Social and Governance (ESG) factors to be included in a pension fund’s investment policy. This journey began in 2015, when SP first began to monitor AFP attention to ESG matters. As SP delved more deeply into examinations of AFP focus on ESG issues, it was clear that Governance (the “G” of ESG) was the primary focus, at least at first. SP increased the profile of ESG issues by incorporating it into their new Risk Based Supervision (RBS) framework in 2017-18. In 2019 the first AFP signed on to the UN PRI standard, and by 2021, all AFPs are expected to have incorporated an ESG cognizant approach into their respective investment policies (see Figure 18). The latest requirements in this area were issued via regulation in November 2020, which defined a minimum standard to integrate ESG factors and climate change risks into the management of investment risk and the Investment Policies of pension funds.

⁷⁴ <https://www.oecd.org/daf/fin/private-pensions/Survey-of-Large-Pension-Funds-2019.pdf>

Figure 18: Evolution of ESG Regulation in Chile



Source: SP

C. Performance

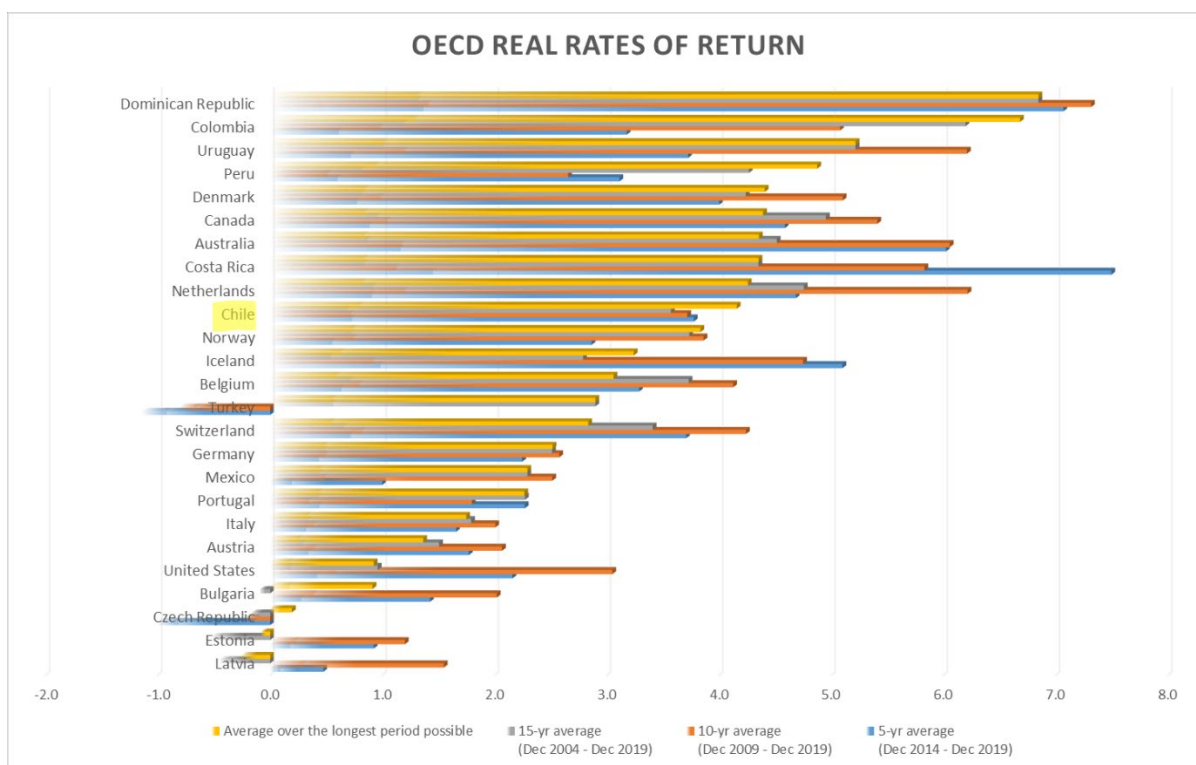
25. The actual investment performance of the AFPs has been reasonable. The performance of Chile's funds in real return has been reasonable with the 10% contribution delivering a 25-30% replacement rate.⁷⁵ Analysis has also shown returns to be broadly in line with stylized benchmarks.⁷⁶ In terms of international comparatives, the Chilean funds show slightly above average results over the past 15 years (as shown in Figure 19) – though these comparisons should be treated with caution given they represent an average of the system as a whole (which can be misleading for a multifondos system) and compare very different types of pension systems. This evidence is not in line with general perception around the poor performance of the funds, which are a major source of dissatisfaction with the privately managed DC system.⁷⁷

⁷⁵ Real returns have also been positive considering wage growth vs. inflation – see: Despalins, R., Remizova, I., Stewart, F., (2017), 'Pension Funds, Capital Markets and the Power of Diversification', World Bank Policy Research Working Paper 8136 [file:///C:/Users/wb437888/Downloads/SSRN-id3006210%20\(2\).pdf](file:///C:/Users/wb437888/Downloads/SSRN-id3006210%20(2).pdf)

⁷⁶ See Lopez, F., Walker, E. (2021), 'Investment Performance, Regulation and Incentives: The Case of Chilean Pension Funds', *Journal of Pension Economics and Finance* (2021), 20, 125-150

⁷⁷ Another potential driver for dissatisfaction has been the return vs. wage growth differential – or the degree to which returns did not exceed wage growth by an acceptable level. Given relatively strong growth in wages for Chile vs. OECD peers, these levels of return are comparatively then less helpful in the Chilean context.

Figure 19: Pension Funds Net Real Return over 5,10,15 Years



Source: OECD pension statistics database

26. Overall, the AFP system is largely performing as designed; but the sum total of many ancillary negative factors has weighed against what could have been stronger compensating out-performance. Again, system returns are adequate. However, the AFPs have been curtailed by the relatively constrained investment requirements for the multifondos structure, the structure of the minimum return guarantee and the negative impact from switching – factors which together cause a focus on short-term investment performance.⁷⁸ Although the system has delivered acceptable returns, they have not been sufficient to outweigh the significant negative parametric issues, such as the low contribution rate.⁷⁹ Nor has it been able to overcome structural labor market issues, such as the low density of contributions. Given the system has delivered returns in line with international norms as shown in Figure 19, the likelihood of much stronger returns sufficient to outweigh these structural issues would have been low.

⁷⁸ Further discussion of the impact of investment regulations can be found in: Valero, D., Monterde, A., (2010), 'Managing investment risk in Chilean pension funds' <https://www.oecd.org/pensions/private-pensions/49978309.pdf>

⁷⁹ If commission levels as the result of cost-cutting would decline to no more than 100bps for any AFP, the resulting reduction in cost (if passed through to participants in the form of reduced commissions) would yield high single digit / low double digit basis point increases in performance each year, accumulating to 30-50bps over the course of a five-year period.

III RECOMMENDATIONS

A. Systemic reforms

27. The following recommendations are made noting the uncertainty surrounding fund withdrawals and the status of the current reform proposals, with further modeling and analysis of the potential impacts needed. Pension reforms are highly technical and require in-depth modeling to test distribution outcomes, potential impacts on the labor market and fiscal cost implications. Such work is largely beyond the scope of this FSAP exercise and was also not feasible to conduct at the time when the report was being drafted given that the full extent of the withdrawals was still not known, and the systemic reform proposals and accompanying discussion are highly fluid and have yet to be agreed upon. The recommendations made in this Technical Note should be taken as principle based and require further research and analysis as to their potential costs and distributional effect.⁸⁰

28. The funded pension system has made a significant contribution to financial sector diversification and stability, and promoted sustained economic growth and development in Chile. It should be maintained in order to contribute to the financing of the post-COVID recovery period, longer-term development goals, and to preserve fiscal stability in the face of rising demographic challenges. Establishing a funded pension system gave Chile an advantage over the past decades amongst Latin American regional peers as well as emerging markets globally. Having a deep base of local institutional investors (both pension funds and insurance companies) played a significant role in bank funding, contributing to financial stability and capital market development and ultimately the economic growth and development of the country (See Annex 2). The volatility in emerging markets in 2020 due to the COVID-19 pandemic has shown the benefits of having a strong base of domestic investors. There has also been growing recognition by global policy makers that private sources of capital will be needed along with public funds in order to fund the investment needed for Sustainable Development Goals (SDGs), Paris Accord and other global targets. Consequently, having borne the generational transition costs of moving to a funded pension system, it should be maintained. Moving back to a PAYG system is not sustainable given the demographic situation in the country with the working aging population set to decrease.⁸¹

29. It is strongly recommended that no further large-scale withdrawals from pension funds be allowed. Although the full amount of withdrawals from the pension system is still

⁸⁰ Modeling of social security reforms is beyond the scope of an FSAP exercise and would require a Public Expenditure Review (PER) and /or similar diagnostics. For general discussion of social protection reforms, see Palacios, J. R. and Robalino, D. A., (2020), '*Integrating Social Insurance and Social Assistance Programs for the Future World of Labor*', IZA Institute of Labor Economics DP No. 13258 and Packard et al (2019), '*Protecting All Risk Sharing for a Diverse and Diversifying World of Work*', World Bank Social Protection Publication. An initial assessment of reform proposals and the impact of the first 2 rounds of withdrawals from the system in 2020 can be found in IMF Country Report Chile 21/84

⁸¹ For Discussion of PAYG vs. funded systems see: Barr, N.' The Truth About Pension Reform' IMF Finance & Development, September 2001, Vol 38, Number 3 <https://www.imf.org/external/pubs/ft/fandd/2001/09/barr.htm> and World Bank (2014), 'The Inverted Pyramid' <https://openknowledge.worldbank.org/handle/10986/17049>

unknown, the impact on the system is already substantial and will have a significant impact on current and future pension incomes. Though access to pension savings is popular (globally not just in Chile), the authorities should make this clear to the members of the system (e.g., through the SP pension risk simulation tool). This means that the potential 6% increase in contributions into the pension system will effectively have to repair the damage done to the system by the withdrawals, rather than fully contributing to improving future pensions. Preventing future withdrawals will likely become harder the more access is allowed, further undermining the benefits of the funded pension system. Mechanisms for some of the withdrawals to be repaid (at least by higher income workers) could be explored.

30. To improve pension levels, an increase in the contribution rate into the funded pension system of at least the recently proposed 6% is needed. Raising the level of the solidarity pension to 177,000 pesos increases the minimum pension to the poverty level and provides a replacement rate of an average income earner to a little under 30%.⁸² This addresses the absolute poverty challenges with the system - particularly if the coverage of the solidarity pillar is increased from 60-80% of lower income individuals.⁸³ The increase in the PBS by 50% to 177,000⁸⁴ along with a 60% increase in contribution rate into the funded system would take the average pension up to around the minimum wage (which is the target level for the current reforms) and a replacement rate above the ILO minimum recommend 40%. Given the considerable reduction in pensions which will result from the recent withdrawals, an increase in contribution rate of at least the proposed 6% will be needed to meet these targets. The challenge will be whether these improved pension levels will still be seen as too low. Further contributions increases, and redistribution, would be needed to take the replacement rate up to the OECD average.⁸⁵

⁸² According to the National Statistics Institute, the poverty line is \$176,625; the minimum wage is \$326,500; the average wage in the country is \$620,000; The average wage for pension system contributors is \$930,000 \$972,000 for men and \$874,000 for women.

⁸³ The Ministry of Labor and Social Security modeling of the impacts of the Pension Reform Proposals as of March 2021 estimate the increase of the Solidarity Pension benefit to 178,958 pesos and the increase in coverage from 60-80% of the population as providing a pension for 148,000 who did not previously receive one, and improving the pensions of 488,000 middle class pensioners depending on the amount of their base pension, with this Pillar reaching a coverage of 2.1 million beneficiaries.

The debate over whether to move to a universal pension is beyond the scope of this note but are discussed in the 2019 World Bank White Paper (Packard et al 2019). Palacios and Robalino 2021) which outlines the concept of 'tapered basic income' or pension. The IMF (Country Report 21/84) estimate that a universal basic pension, providing a fraction of the minimum wage to everyone of eligible pension age (65+ for males and 60+ for females), would reach a cost of anywhere between 2.5 and 6 percent of GDP by 2050 (5 to 10 percent of today's GDP), depending on the choice of parameters.

⁸⁴ Again, as mentioned in the earlier footnote, the latest version of the Ley Corta, as amended by the Labor Commission, would increase the monthly payout to 210,000 and the scope of coverage to 85%, not 80%.

⁸⁵ The IMF (Country Report 21/84) estimate that the increase in contribution rate from 10-16% causes the expected replacement rate to increase from 34 percent to 45 percent for those aged between 20 and 25, and the population average increases from 35 percent to 41 percent – above the ILO recommended minimum 40% but still below the OECD average (59%).

31. Further parametric changes, including gradually increasing the age for accessing pensions in line with life expectancy are also required to increase replacement rates. Parametric changes could also help expand the contribution base (and therefore overall contributions into the system) by expanding the definition of covered earnings and raising the contribution ceiling. Gradually increasing the retirement age (linking automatically to increases in life expectancy)⁸⁶ and aligning the age at which women can access all pension benefits to 65 will also help increase overall pension rates.⁸⁷ In the OECD as a whole, gender gaps in statutory retirement ages such as the one described in Chile will exist in only four out of the 36 countries once current legislation is enacted.⁸⁸ Additionally, from 2000 to 2018, the effective retirement age for women in Chile actually declined, moving from a difference of 2.5 years vs. the age for men to 3.3 years.⁸⁹ Efforts to increase contribution density, including a greater focus on enforcement, as explored in a later recommendation, would also be of some benefit.

32. The contribution rate should be increased gradually to minimize labor market impacts. Chile is amongst the outliers of OECD countries in not having any employer contributions to the pension system. Though introducing such contributions will impact the labor market, particularly in Chile where the labor market is characterized by many workers moving between formal and informal / self-employment, smoothing this in over ⁹⁰ multiple years would help to minimize the impact.⁹¹ It will also be important to ensure that the accompanying labor regulations, specifying matters such as minimum wage and severance conditions, do not further contribute to informality as the contributions are gradually implemented. Innovative ways of

⁸⁶ Denmark is an example of a country that has implemented indexing of the retirement age to changes in life expectancy, but the first impact of this change will not actually be implemented until 2030 following a 2015 decision. *Denmark: Key Policies to promote longer working lives Country note 2007 to 2017* OECD 2018

⁸⁷ See IMF (Country Case 21/84) estimates. Also, in 'When We're Sixty-Four' (Rofman and Apella 2020), the authors mention the possibility of voluntary mechanisms that can become "flexible programs that provide incentives for voluntary behavioral changes," that have the result of extending the active life of workers. Such mechanisms may provide a welcome complement to mandatory policies.

⁸⁸ In Germany, where exceptions allowing some women to retire at age 60 were eliminated in the past decade, the effective retirement age for women increased more than that of men in the 18 years ending in 2018. OECD (2019), *Working Better with Age, Ageing and Employment Policies*, OECD Publishing, Paris, <https://doi.org/10.1787/c4d4f66a-en>, p35

⁸⁹ Importantly, however, the OECD's data would indicate that the "effective retirement age" for women in Chile is still among the highest, at an average of 66.7 years. OECD Database on Average Effective Retirement Age, www.oecd.org/els/emp/average-effective-age-of-retirement.htm. StatLink 2 <https://doi.org/10.1787/888933991242>

⁹⁰ The economic impacts of increased contributions are discussed in Santoro, M., (2017), 'Pension Reform Options in Chile: Some Trade Offs', IMF Working Paper 17/53

⁹¹ The "costs associated with labor legislation" are discussed as a key driver of informality, along with the contributions to a pension system in 'Better pensions, better jobs: status and alternatives toward universal pension coverage in Latin America and the Caribbean' (Pages et al 2017)

delinking contributions from payroll taxes and linking to consumption using digital channels could be considered for future reforms to help address the contribution density challenge^{92, 93}

33. Employer contributions could be managed by a public entity with strong governance in a way which complements the AFP system. The proposals within the recent reform package for managing the new employer contributions are not clear and should be rethought. Placing half the increase in an individual accounts managed by a public entity and the other half into a solidarity /redistribution fund adds complexity and potential confusion to the system.⁹⁴ A solution which would complement the current individual account system would be to manage all the employer contributions centrally through a dedicated public entity – which would need to be established with strong governance criteria, based on international good practice.⁹⁵ This entity would take a ‘*universal owner*’ approach,⁹⁶ managing funds on a long-term basis, allowing for the capture of illiquidity premium and not requiring daily market valuations. The pension systems in Canada and Denmark include some of these elements (see Annex 5). Maintaining the current privately managed individual account system and combining with some central management of funds would allow for a balance and spreading of risk between public and private provision.⁹⁷ The provision of pension statements could also be taken on at a central level which should help to alleviate costs to AFPs.

34. Consideration could be given to managing any new employer contributions on a ‘collective DC’ basis. Rather than introducing a DB element to the system, as current proposals

⁹³ As discussed in (Packard et al 2019): “*However, the consumption that is taking place digitally is effectively formalizing—that is, making observable— large swathes of the economy. While incomes should also be increasingly observable, the damaging distortions from a mandatory contribution levied on consumption are likely to be far lower than those from one levied on income. Along with lower transaction costs, this change opens new opportunities to effectively mandate or encourage people to save.*”

⁹⁴ To raise just a few questions, would the publicly managed account be the default fund? Would individuals be able to switch between public and private providers or would they have two different accounts? Would the public and private managers be subject to the same investment regime? Complications over switching between public and private provision has been documented (e.g., in the case of Colombia – see (Morales et al 2017). Additionally, having two separate components in the system delivering on a solidarity benefit seems inefficient.

⁹⁵ Strong governance – including independence and technical ability – would be vital for making such public management of funds successful (see Annex 4 for international examples).

⁹⁶ Universal owners are asset owners who recognize that through their portfolios they own a slice of the whole economy and the market. They adapt their actions to enhance the return prospects of their portfolios, and hence the prospects for the whole economy and the market as well. See Urwin, R., (2011), ‘Pension Funds as Universal Owners: Opportunity Beckons and Leadership Calls’, *Rotman International Journal of Pension Management*, Vol. 4, No. 1, pp. 26-33

⁹⁷ As the current administration of the privately managed individual accounts works relatively effectively (including through the central collection system), a separation of functions between administration and fund management (along the lines of the Swedish system) which has been discussed in the context of Chile is not seen as necessary.

have suggested,⁹⁸ the payout of the investment returns from the public management of the 6% employer contributions could be made in the form of an 'annual bonus payment' made into individual accounts.⁹⁹ This annual bonus could be smoothed, with an amount held in reserve to pay out more in years of lower overall market returns, thereby pooling some investment risk on a 'collective DC' basis. A target return to achieve a replacement rate from the system overall could be set, under the 'defined ambition' approach which collective DC funds in the UK and the Netherlands have adopted.^{100 101}

35. Unfunded commitments (raising current pensions in payment) should be covered within the existing solidarity pillar. The proposals for how the additional benefits from the increased employer contributions should be structured (with part or all being directed to individual accounts and part to a new solidarity fund) are not clear and should be reexamined. The World Bank policy recommendation has long been to clearly separate the poverty alleviation element of pension systems from the consumption smoothing goal.¹⁰² An increase of at least 6% in contributions will be needed to secure better pension rates in future and should not be diverted to pay for current pensions. Any increases to current pensions in payment should be covered by the solidarity pillar rather than through reintroducing unfunded benefits and a PAYG element to the savings pillar.¹⁰³ This will help avoid at least a portion of the labor market distortions that led to an IMF analysis indicating a negative impact to Chilean GDP of 0.5% based on the proposed reform package of

⁹⁸ It is understood that the proposed DB elements of the solidarity pillar were modeled as being parametrically fair and adjustment mechanisms proposed. However, any DB element risks underfunding if parametric changes, which are notoriously difficult, are not made in a timely fashion when needed.

⁹⁹ This would all still allow for the link between the increased contributions and individual accounts. A 2017 study by the Central Bank of Chile which shows that targeting additional revenue from higher contributions to individual accounts bears the strongest positive impact on GDP in the long run (quoted in IMF paper (Santoro 2017)). As commissions are charged on contributions not assets under management, this should not raise extra revenues for the AFPs.

¹⁰⁰ See UK Parliament report on CDC schemes <https://commonslibrary.parliament.uk/research-briefings/sn06902/>

¹⁰¹ Some elements of redistribution within the employer contribution, centrally managed fund could be introduced through a form of 'points system'. The annual bonus' proposal (as outlined previously) would be allocated according criteria (e.g., with the number of points increasing for number of years of contribution, higher for women, youth, unemployment etc.). The contribution ceiling rate could be raised for this purpose.

¹⁰² See World Bank (1994), 'Averting the Old Age Crisis' As outlined by Packard et al (2019), "A key principle shaping the package is that poverty-prevention and redistribution objectives (that is, vertical redistribution) should be pursued transparently with instruments financed from broad-based taxes, whereas statutory contributions should be reserved to finance consumption-smoothing instruments with actuarially fair parameters (that is, horizontal redistribution). Traditionally, industrial- era contributory social insurance systems have mingled different forms of redistribution, either directly, through budget financing of deficits (or the buildup of contingent liabilities implying future budget subsidies) or through redistributing between different groups of contributors. By consolidating poverty-prevention and redistribution objectives in the core of the package and financing it entirely from general revenues, governments can increase coherence across the publicly and individually financed layers of the package and reduce perverse incentives."

¹⁰³ The IMF paper (Santoro 2017) notes that: "Growth costs are lower if revenue or the solidarity pillar is financed through indirect taxes...a pension reform package funded by a mix of higher contributions and indirect taxes would carry lower growth costs than one funded exclusively by increased contribution rates...Raising part of the total funds of the reform using less distortionary taxes reduces the labor cost wedge so that labor supply and investment are less penalized. Funding via a consumption tax also implies less impairments of competitiveness so that exports decline less than in the case of the authorities reform."

an earlier government.¹⁰⁴ Increases in retirement income for the current cohort of pensioners (beyond the increase in the Solidarity Pension to the minimum wage), should be managed on a time-bound basis and through dedicated funding. Likewise, further redistribution (to women, middle income workers) can be managed through existing mechanisms within the Solidarity Pillar (as opposed to the opaque proposal to fund these increases through issuing government debt or loan in some form to the proposed new solidarity fund).

36. The reform proposals relating to other benefits are consistent with international best practice. Additional benefits for special needs, such as severe disability (dependence subsidy) as included in the current proposal are seen as needed. Proposed improvements to the unemployment benefit are also welcomed.¹⁰⁵ Other proposed parametric changes to the pension system (equal benefit rights civil partners, treatment homicide, treatment divorce etc.) are in line with international good practice (see Annex 1).

B. Reform of the pension system

37. A non-profit AFP could be established to compete with and act as a standard setter for the industry. Given the AFP system is operating relatively effectively (through some central collection and as costs have considerably reduced, even for the 'incumbent funds'), maintaining the current system is recommended, but with reforms to increase particularly investment efficiency. That said, confidence and trust in the system has clearly been lost and needs to be restored. To do so, an explicitly 'non-profit' AFP could be introduced to compete with and act as a standard-setter for the private AFP managers for the 10% employee contributions into the pension system. The non-profit AFP would be operationally self-sufficient (i.e. the entity would not be loss making or subsidized by the government) and would be subject to the same terms, investment regulations etc. as the private funds - similar to the well trusted public Banco Estado (see example of UK NEST in Annex 6).¹⁰⁶ It is proposed that the non-profit fund would not be the default option, but that the auction system be

¹⁰⁴ The IMF Paper (Santoro 2017) predicted a smaller negative impact to GDP based upon an alternative scenario that avoided using new contributions to finance the solidarity pillar and instead used alternative sources for this component.

¹⁰⁵ World Bank analysis notes that, among OECD member countries, Chile still has among the largest share of workers on fixed term or temporary contracts. Chile's system of income support for unemployment is very well regarded and has achieved effective coverage but would benefit from further reform. Coverage for severe disability is also supported. World Bank (forthcoming 2020), *'Priority Risks to Middle-Class Wellbeing: Functional Dependence, Catastrophic Health Spending and Long-duration Unemployment.'*

¹⁰⁶NB the non-profit AFP would be separate from the ATSS or other public entity which would manage the employer contributions into the system collectively under a separate mandate.

The pension market in Chile is large enough to sustain another competitor (taking approximately half a million members as the size of fund needed to generate economies of scale and low costs – with the 11 million participant market currently being served by only 7 funds). Allowing other types of sponsor (cooperatives) or providers to offer pensions (banks etc.) is not recommended as this could introduce a large number of smaller funds into the market increasing fragmentation and opening up market conduct risks of mis-selling products. See

Oleksiy A. Sluchynskyy, O., A., (2015), 'Defining, Measuring, and Benchmarking Administrative Expenditures of Mandatory Social Security Programs', World Bank publication <https://openknowledge.worldbank.org/handle/10986/21789>

adjusted so that new entrants are allocated based on both price and performance (measured, for example, using a Sharpe Ratio over a multi-year period).¹⁰⁷ Assuming the non-profit fund would be the lowest cost option, the private funds would still be able to prevail if they can show they are delivering additional returns and /or service quality with a strong advantage vs. the non-profit entity.

38. The multifondos investment regulation should be revised and replaced with a ‘target date’ default and limited number of thematic ‘tilted’ investment options. The multifondos system in combination with a strong regulatory and supervisory regime has led to a compliance-led approach to pension investment (see Annex 3). Given the level of development in the Chilean markets in the last 20 years since the system was introduced, and the development of investment strategy globally, introducing a more up to date approach to investment risk management is recommended. A Target Date approach is one whereby each cohort is invested in a portfolio which is designed to optimize returns over a targeted period (the target being the expected retirement date). The portfolio is adjusted over time on a ‘life cycle’ basis, shifting into less risky assets the closer the cohort is to retirement.¹⁰⁸ This fund could be set as the default for individuals, with a limited number of other investment options offered to individuals who still wish to make a choice (one approach might be a “conservative” target date suite coupled with a “normal” target date suite, plus a few thematic options, such as a ESG fund, to preserve a limited amount of choice for the participant.)

39. Implementation of a set of Target Date investment options would represent current international best practice for investment default funds and can help to address some of the key issues facing the pension system as an additional benefit. Target date funds allow for improved investment returns by ensuring participants are more often in the investment option most appropriate to their career stage.¹⁰⁹ Introducing Target Date funds as defaults should have the additional benefit of discouraging switching as these funds have proved to be more “sticky” than other instruments, as their intuitive appeal to a simple guidepost like retirement year or birth year promotes higher inertia than other approaches.¹¹⁰ If successful in reducing switching, the funds should also have a beneficial impact on the current tendencies of the funds to hold too many liquid assets and to be procyclical in certain circumstances. A further exploration of target date fund implementation considerations is included in Annex 7.

¹⁰⁷ The Sharpe Ratio is a risk adjusted return measure. It is a financial metric often used by investors when assessing the performance of investment management products and professionals. It consists of taking the excess return of the portfolio, relative to the risk-free rate, and dividing it by the standard deviation of the portfolio's excess returns.

¹⁰⁸ Mitchell, Utkus, 2012 “Target Date Funds in 401(K) Retirement Plans, NBER Working Paper Series

¹⁰⁹ A recent paper studying the track record of target date funds in the United States since their introduction suggests that as a result of target date fund adoption, retirement wealth could be enhanced by 50% and notes that their introduction has “fundamentally altered” the decision-making dynamic in U.S. DC plans. See Mitchell, Utkus 2020 “Target Date Funds and Portfolio Choice in 401(k) Plans

¹¹⁰ For example, Vanguard, by far the largest retirement plan target date manager in the US, with over \$800 billion in these assets, saw just 1.7% of their target-date investors make a change during the first four months of 2020 despite the dramatic market changes caused by the pandemic; vs. 5.3% for other plan participants, an incidence over three times higher for the non-target date investors. Vanguard “Automatic Enrollment: The Power of the Default” February 2021, Barron’s 2 July 2020 “Target Date Funds Are Performing Well. But Choosing One Can Be Harder Than You Think.”

40. Switching between managers and investment options should be further discouraged and allow funds to attribute costs where appropriate.¹¹¹ The experience in recent years in Chile, along with numerous other studies, has shown that most DC plan participants are not capable nor desirous of performing full analysis of investment decisions.¹¹² Further, as explored by the IMF in their FSAP technical note, recent switching in Chile has led to additional volatility in the foreign exchange market and additional stress in local bond markets.¹¹³ Switching should be further restricted, to limit fund switches to a few times a year at most and AFPs should be allowed to assess fees in order to help address the issue of remaining fundholders that have been disadvantaged by excessive switching behavior on the part of multiple departing participants.¹¹⁴ In fact, current law provides for fees to be levied on participants switching more than twice/year but in practice these fees are not currently implemented. Such fees should accrue to the funds, not the administrator, and would help ensure that the costs of providing liquidity to transacting shareholders are not “borne by non-transacting investors in the fund.”¹¹⁵

41. Some limited access to funds for specific purposes may be advisable in future, but must be strictly controlled. Most pension systems allow some access to pension savings, but only on a controlled basis.¹¹⁶ Though the recent fund withdrawals have had a material negative impact on the pension system, access to funds has been very popular and has to some extent rebuilt confidence in and support for the individual account system. To maintain this trust, some access could be built into the system, but on a strictly controlled basis. This could be limited simply to allowing hardship withdrawals for strictly defined purposes.¹¹⁷ Or it could take additional forms such as: withdrawals for education and/or first home purchase; limited amount withdrawal allowed for an unspecified purpose a small number of times through the working life; withdrawal structured as a loan which requires pay back; and separation of account into short-

¹¹¹ See (Morales et al 2017)

¹¹² Academic research and surveys by asset managers and record-keepers in other OECD countries typically reveal that most participants have a “do it for me” or “help me do it” mindset, and would prefer being led in this area, with only a minority preferring to take an active role themselves. See Choi et al. “For Better or For Worse: Default Effects and 401(K) Savings Behavior” 2001 among others.

¹¹³ See accompanying IMF FSAP note on financial stability for further analysis of the impact of pension fund switching on the financial system. For comparison on international practices, see Mosher, J. and Antolin, P. (2020), ‘Effects of fund switches for Chilean pension members and their macroeconomic/financial impact’, Technical assistance for the Financial Stability Council of Chile Report prepared by OECD.

¹¹⁴ Current law mandates a fee be charged by the AFPs for those participants who switch more than twice per year. However, this fee is not charged in practice.

¹¹⁵ Swing Pricing and Fragility in Open-end Mutual Funds (Jin, etal 2019) IMF Working Paper

¹¹⁶See Jain, H., Sandbrook, W., Stewart, F. (2019), ‘Early Access to Pension Savings: International Experience and Lessons Learnt’, World Bank FCI Insights Series <http://documents1.worldbank.org/curated/en/757001551715193169/pdf/135031-WP-REVISED-PUBLIC-Early-Access-to-Pension.pdf>

¹¹⁷ A recent law, passed in February 2021, allows terminally ill members to use their pension savings to get a pension benefit for a 12-months period, adjusted to their shorter life expectancy. Further, if the 12-months benefit is higher than the Basic Solidarity Pension, the member can withdraw a lump-sum for the remaining funds.

term and long-term savings ('side-car' concept).¹¹⁸ The voluntary accounts could be also involved, with broader conditions for temporary access. Allowing more liberal modes of withdrawal from the mandatory accounts will continue to reduce funds in a system already hit by three waves of withdrawals through the first half of 2021, so these additional modes of withdrawals should be considered cautiously.

42. The voluntary pension system should be incentivized to help rebuild the pension savings lost during the recent period of withdrawals, as included in the pending reform bill. Some of the withdrawn funds were transferred to other types of savings – including some coming into voluntary accounts.¹¹⁹ This shows there is still an appetite for savings in the country. What is needed is to rebuild '*long-term*' savings which are needed to support economic development and growth. Approximately 2 million individuals have voluntary savings accounts in Chile. Employers can provide matching contributions into these accounts, but few companies offer such benefit due to limited tax incentives to do so. These could be increased in order to help rebuild pension savings following the 2020/2021 round of withdrawals, as the reform bill has proposed. Plans to allow for automatic enrolment and /or automatic increasing in contributions which are also in the reform proposal would bring plan design in line with international good practice.¹²⁰

43. The voluntary system can also be used to pilot innovative savings mechanisms - including using behavioral economic techniques and digital tools which can be used to link savings to consumption rather than income. Behavioral economic techniques harnessing digital technology are allowing for innovative mechanisms to encourage and incentivize pension savings, including automatically linking contributions to consumption rather than income.¹²¹ In order to capitalize on such developments, a 'Youth Advisory' Group' could be established (possibly as part of the National Pension Education Strategy which is part of the current reform proposal) to help ensure pensions meet the needs of next generation and in order to use this

¹¹⁸ See Bosch, M., Carolina Cabrita Felix, C., Manuel García-Huitrón M., and María Teresa Silva-Porto M.T.,(2020), 'Access to Mandatory Retirement Savings in Times of COVID-19: Public Policy Considerations', IADB <https://publications.iadb.org/publications/english/document/Access-to-Mandatory-Retirement-Savings-in-Times-of-COVID-19-Public-Policy-Considerations.pdf>

¹¹⁹ Banco Central, Informe de Política Monetaria, Marzo 2021

¹²⁰ This route to incentivizing occupational pension provision is encouraged rather than the establishment of a new type of AFP, which risks fragmenting the market. For further information on autoenrollment see OECD's review of the Turkish pension system <https://www.oecd.org/pensions/Reforming-the-Pension-System-in-Turkey-2019.pdf>; on automatic contribution escalation see <http://www.shlomobenartzi.com/save-more-tomorrow> ; on tax incentives see OECD analysis <https://www.oecd.org/pensions/financial-incentives-retirement-savings.htm>

¹²¹ For examples of innovative pilots see IADB Retirement Savings Laboratory <https://www.iadb.org/en/labor-and-pensions/home-retirement-savings-laboratory> [Whether these new forms of savings are able to raise sufficient funds to generate a retirement income vs. shorter-term savings remains to be seen.](https://www.iadb.org/en/labor-and-pensions/home-retirement-savings-laboratory)

reform opportunity to build forward not backwards.¹²² The National Education Council will need to manage expectations and explain system reforms clearly to the population to rebuild trust.

C. Supervisory Reforms

44. The risk-based supervision model should be recalibrated to further transition from a compliance approach once the investment regime has been updated. Although the move to RBS has been successful overall, it continues to generate multiple inquiries requiring action on the part of the AFPs that may signal a need for recalibration of the model. SP bases much of its subsequent supervision activities now on the risk assessments and develops a “supervision attitude” toward each entity (shared transparently with the entity, with opportunity for refutation). However, the risk-based model now generates many of the numerous requests that are sent to the AFPs. This could indicate that a recalibration of the RBS system could be of assistance to ensure SP is able to fully leverage the efficiency RBS can deliver. This recalibration would involve adjusting sensitivities of the model in such a way that the sheer volume of inquiries would decrease, but the supervisory staff would still be comfortable that the most critical questions continue to be asked. A move from the Multifondos investment regulations would help to adopt a new risk-based approach. The move to ‘Twin Peaks’ approach in 2021 by the CMA provides an opportunity for the SP to focus on market conduct issues.

45. The CCR should be restructured. Though there were good reasons for the initial creation of this entity within the investment oversight process, it could be argued that its involvement has not served in recent years to help cultivate investment innovation. Additionally, given the maturity of the system it is likely that it could perform successfully without such heavy oversight. In its early years the Chilean system was known for investment innovation (such as the introduction of index-linked bonds and infrastructure instruments). It is harder, though, to point to recent innovations, and the multifondos structure itself is showing its age (as demonstrated in Figure 16 showing the limited number of alternative investments held by a reference AFP). Is it also unusual for individual investments to require approval (e.g., specific types of mutual fund – particularly if already regulated overseas). Though offering strong oversight when the system was introduced, the level of market development and knowledge, as well as the increased experience of the SP team, make these additional approval layers unnecessary and overly bureaucratic. Restructuring at the time of reforming the multifondos system is recommended.

46. The Ministry of Labor should take on a stronger role in enforcing contribution compliance. This function currently rests largely with the AFPs, which is not in line with international practice, and increases the responsibilities and therefore costs of the AFPs. Though compliance levels overall are generally quite good, further enforcement would help improve contribution density. With the introduction of employer contributions (thereby increasing by 60% the total contribution amount), further oversight and enforcement will be needed (international

¹²² For example, in Denmark the Government, the social partners and representatives of youth have established the Disruption Council to examine more flexible ways of working, and to review social security benefits for self-employed and temporary workers (ILO 2020:145).

experience showing that employer contribution non-compliance is usually more of an issue than non-remittance of employee contributions). It is suggested that the Ministry make it clear to employers that there will be increased enforcement of the requirement to forward these contributions on a timely basis. This high-level message should then be supported with evidence of how this enforcement will work. This enforcement will clearly require some additional staffing but should also utilize available information on business taxation to leverage a “big data” type approach to pinpointing likely enforcement issues. The AFPs will undoubtedly continue to have some involvement but we would recommend that the Ministry increase their presence in this area so that it becomes more likely that all participant contributions are successfully invested into the system.

47. The SP governance structure should be considered in the future for a possible format change from a Superintendent structure to Board of Commissioners structure, in line with the CMF. The CMF model poses a possible structural question for SP. CMF was created in early 2018 and has inherited responsibility for oversight of the securities, insurance, and banking industries over the course of the past three years. The advent of CMF marked a change in the supervisory structure for other sectors; unlike the “Superintendent” approach with authority vested in a single individual, the CMF uses a structure with five commissioners as the highest authority. Four of the members of CMF are approved by the Senate, and one by the President. It is relatively difficult to remove them arbitrarily from the commission. In this manner the commission’s autonomy, as a body, may in fact be stronger than in the case of a single appointee. Historically, the Superintendent structure has worked well for SP, with respected and technically skilled individuals appointed for the role. However, given the politicization of pensions in Chile, and the possible creation of a new agency to invest employer contributions as well as SP’s ongoing responsibility to oversee the unemployment insurance plan, it may be advisable in the future to transition SP structurally to a multi person leadership format as a way to help oversee the new agency and as a way to ensure continued strong leadership. Initiating this change in the short-term is not recommended given the magnitude of other proposed reforms to the pension system. However, if the CMF startup proceeds well, this idea should be broached in three to five years’ time.

ANNEXES

Annex 1: Summary of Reform Proposals Passed by House of Representatives in January 2020

Pillars	Solidarity Pillar		Obligatory Savings Pillar		Solidarity Collective Savings Pillar	Voluntary Savings Pillar
	Solidarity Pensions System	Dependence Subsidy	Individual Capitalization System	Personal accounts administered by ATSS	Solidarity Fund administered by ATSS	APV and APVC
Objective	-Alleviate poverty in old age and disability - Pensions above the poverty line	Pension complement for people in severe dependence situation	<ul style="list-style-type: none"> - Smooth consumption between active and passive stage - Greater affiliate participation - Greater competition 		<ul style="list-style-type: none"> - Solidarity mechanism - Provide a minimum baseline for pensioners' benefits 	Complement savings to improve pension Improve pension of legal beneficiaries
Financing	General taxes		<ul style="list-style-type: none"> - Individual saving financed by worker (10%) - Payment of contribution to SIS - Extended lagoons insurance 	<ul style="list-style-type: none"> - Individual saving financed by employer (3%) - Lagoons insurance 	<ul style="list-style-type: none"> - Additional contribution payment (3% employer) - State financing in transition period 	Individual and company saving with tax incentives
Benefits	PBS & APS (poorest 60%) <ul style="list-style-type: none"> • PBS & APS increases • Strengthen longevity insurance *Increase coverage to 80% and increase PBS (LP)	Amount depends on level of poverty (focusing on poorest 80%)*	Old age: depends on amount saved Disability and survivors: depends on amount saved + SIS		<ul style="list-style-type: none"> - Complement for years of contributions paid, differentiated by gender - Benefit per year of contributions paid - Guarantee of minimum pension Dependence insurance 	Depends on the amount saved

Source: SP

Annex 2: Pension Savings, Economic + Capital Market Development

48. Strong theoretical arguments have been made linking the growth in pension fund assets and capital market development - which in turn acts to increase sources of long-term financing and thereby economic growth. The IMF, along with other researchers, has undertaken various studies showing positive macroeconomic effects from pension reform. For example, Karam et al (2010), using the IMF's Global Integrated Monetary and Fiscal model (GIMF), conclude that: *"public pension reforms can have a positive effect on growth both in the short run, propelled by rising consumption, and in the long run, due to lower government debt crowding in higher investment."* Bijlasma et al (2014), studying OECD countries, note that *"Growing pension savings leads to deeper capital markets. This can have a positive effect on economic growth."* Davis and Hu (2008) also find a direct link between pension assets and economic growth for both OECD and emerging market economies.

49. Researchers also cite empirical evidence to support the claim that pension reform contributes to economic growth and development. For example, positive impacts from pension reforms have been found in Latin America - the best-known example being Chile. Corbo and Schmidt-Hebel (2003) concluded that around one-third of the increase in the national savings rate in Chile the 1990s and one-quarter of GDP growth can be explained by pension reform, as can a 0.5% increase to the real average GDP growth between 1981 and 2001. More recently, the Household Financial Survey conducted by the Central Bank of Chile in 2017¹²³, concluded that household savings as a whole were equivalent to 7% of GDP and 35% of gross national savings; of that amount, 88% of Chilean household savings were accrued via the pension system. Similar impacts on long-run GDP growth rate were found for Colombia. Evidence has also been found in developing economies in Africa, such as Kenya.¹²⁴

50. The link between pension fund reform and capital market development is also well documented – notably by the World Bank,¹²⁵ amongst others. Catalan et al (2000) cite results showing that the growth of institutional investors cause the development of capital markets in OECD countries – a finding supported by Aras and Muslumov (2005) for OECD markets through the 1980s and 1990s. Walker and Lefort (2003) document these connections for Latin American countries, whilst Hryckiewicz (2009) and Cosmin et al (2015) cite empirical evidence for the connection between pension reform and capital market development in Central and Eastern European countries. Finally, Niggemann and Rocholl (2010) examined 87 pension funding reforms in 57 countries between 1976 and 2007 and found that pension funding reforms lead to larger stock and corporate bond markets relative to the time before the reforms and relative to

¹²³ Central Bank of Chile (2018). "Encuesta Financiera de Hogares 2017: Principales Resultados"

¹²⁴ See (Kipanga 2012), (Mungoma 2011).

¹²⁵ See various papers by Impavido and colleagues

other countries without such reforms, and that the effect is particularly significant in emerging markets.

51. In the case of Chile, financial deepening through the pensions fund industry has crowded in residential mortgage markets. According to the AFP (2006)¹²⁶, in the housing sector, pension funds were decisive in the development of a dynamic and deep market for their financing; the most important effects being residential mortgage access for broad sectors of the Chilean population, a sharp reduction in interest rates and a substantial increase in loan terms. Loan repayment terms did not exceed 12 years at the beginning of the individually-capitalized system and home loans were only accessible to a small group of the population. Currently, residential mortgages extend up to 30 years and are available to large segments of the population.¹²⁷

Table 4: Impact of Pension Reform on Capital Markets in Latin American Countries

USD \$ millions Size of market before + after pension reform	Corporate Bonds		Mortgage Bonds		Stock Market Capitalization	
Chile (1980 vs. 2011)	57	31,000	800	40,000	72	270,000
Colombia (1993 vs. 2007)	240	11,200	0.01	37	7	102
Mexico (1996 vs. 2011)	330	21,000	2,300	18,500	73,000	409,000
Peru (1992 vs. 2011)	0	5,800	0	27	1,700	82,000

Source: FIAP¹²⁸

52. That said, it has also been noted that the effect which pension reforms have is more pronounced once a base level of financial market development has been reached, and will not be felt without certain enabling conditions.¹²⁹ Indeed, Madukwe (2015) found no links between the pension reforms in Nigeria and capital market growth, whilst Kim (2010) finds results for

¹²⁶ AFP Association of Chile (2006). "Fondos de Pensiones han financiado los 14 principales proyectos de infraestructura vial y de transporte". AFP Association of Chile series, N° 54.

¹²⁷ FIAP (2021) Reversals Report

¹²⁸ Taken from presentation made by Guillermo Arthur, President, International Federation of Pension Fund Administrators (FIAP) at the 2012 IOPS/ OECD Global Forum on Private Pension http://www.spensiones.cl/portal/institucional/578/articles-8611_recurso_3.pdf

¹²⁹ See, for example, (Meng and Pfau 2010), (Impavido et al 2003), (Vitas 2000).

'Anglo-Saxon countries but not for Continent Europe or Japan'. Some studies have found the results less profound than initially thought.¹³⁰

¹³⁰ See the Raddatz and Schukler (2008) study of Chilean data from years 1995-2005. Older research by the OECD (1998) does not support the link – but this was undertaken before or soon after many of the reforms establishing funded pension systems in Latin America, Central and Eastern Europe etc.

Annex 3: AFP Industry Statistics

AFP	Decade Cohorts (by AFP)					TOTAL
	20's	30's	40's	50's	60's+	
CAPITAL	5%	16%	18%	24%	30%	16%
CUPRUM	1%	5%	9%	7%	11%	6%
HABITAT	5%	23%	24%	18%	24%	18%
MODELO	41%	21%	9%	6%	7%	19%
PLANVITAL	32%	13%	8%	8%	11%	15%
PROVIDA	9%	19%	31%	37%	17%	24%
UNO	6%	2%	1%	0%	1%	2%
Total	100%	100%	100%	100%	100%	100%

AFP	AFP's (by Cohort) - over vs. under developed				
	20's	30's	40's	50's	60's+
CAPITAL	33%	98%	108%	145%	183%
CUPRUM	20%	92%	151%	121%	189%
HABITAT	29%	126%	134%	101%	132%
MODELO	218%	114%	48%	30%	37%
PLANVITAL	214%	89%	55%	50%	71%
PROVIDA	40%	81%	131%	157%	71%
UNO	275%	78%	40%	21%	42%
Total					

Fund	Cohort (by Fund)				
	20's	30's	40's	50's	60's+
A	10%	19%	15%	5%	0%
B	79%	49%	12%	7%	10%
C	4%	15%	58%	48%	20%
D	2%	2%	2%	31%	56%
E	6%	15%	14%	10%	14%
Total	100%	100%	100%	100%	100%

Monthly commission and return, last 12 months

AFP	Monthly commission (Feb. 2021)	Real return on funds				
		Last 12 months (Mar. 2020 - Feb. 2021)				
		Fund A	Fund B	Fund C	Fund D	Fund E
Capital	1.44%	6.10%	7.52%	7.41%	6.18%	5.69%
Cuprum	1.44%	5.23%	6.35%	6.02%	5.76%	5.56%
Habitat	1.27%	5.87%	7.20%	7.05%	5.57%	5.48%
Modelo	0.77%	5.68%	7.95%	6.92%	6.05%	6.06%
Planvital	1.16%	5.48%	6.86%	6.05%	5.10%	4.35%
Provida	1.45%	6.66%	8.07%	7.17%	6.31%	6.38%
Uno	0.69%	5.69%	6.90%	5.37%	5.60%	4.59%
Average	1.22%	5.88%	7.34%	6.92%	5.96%	5.70%

Source: SP

Investment Portfolios (as of end January 2021)

<u>Equity</u>	<u>Fund A</u>	<u>Fund B</u>	<u>Fund C</u>	<u>Fund D</u>	<u>Fund E</u>
Maximum Allowable	80%	60%	40%	20%	5%
<i>Actual</i>					
Capital	80.2%	59.5%	38.9%	20.2%	4.8%
Cuprum	80.2%	59.4%	40.0%	20.0%	5.1%
Habitat	80.8%	60.1%	41.4%	20.7%	5.8%
Modelo	78.6%	58.8%	38.5%	19.3%	4.9%
Planvital	79.8%	59.3%	39.1%	19.3%	4.8%
Provida	81.8%	62.8%	42.3%	20.6%	5.2%
Uno	79.2%	60.6%	40.1%	20.0%	4.8%
<u>Foreign Investment</u>					
Maximum Allowable	100%	90%	75%	45%	35%
<i>Actual</i>					
Capital	84.0%	67.5%	51.3%	32.2%	11.5%
Cuprum	85.0%	70.1%	53.2%	33.2%	13.7%
Habitat	85.0%	70.5%	53.0%	34.4%	11.6%
Modelo	84.4%	69.1%	51.6%	31.8%	10.7%
Planvital	83.6%	70.9%	52.6%	32.1%	15.5%
Provida	85.8%	72.4%	55.1%	32.9%	10.7%
Uno	82.0%	69.2%	51.8%	32.7%	12.7%

Source: SP

Annex 4: IOPS PRINCIPLES ASSESSMENT

Principle	Assessment of implementation				
	Fully	Broadly	Partly	Not	N/A
1: Objectives	✓				
2: Independence		✓			
3: Adequate Resources	✓				
4: Adequate Powers	✓				
5: Risk Orientation		✓			
6: Proportionality and Consistency			✓		
7: Consultation and Cooperation	✓				
8: Confidentiality	✓				
9: Transparency		✓			
10: Governance		✓			
TOTAL		✓			

Source: World Bank FSAP team

Adjustments vs. SP Self-assessment:

- **Adequate resources:** revise up 1 notch (assessment vs. international comparisons – budget vs. funds overseen)
- **Risk Orientation and Proportional & Consistency:** revised down 1 notch (assessment vs. international comparisons- number of supervisory interactions with supervised entities)

Annex 5: Public Pension Governance

	Structure	Who the board answers to	How members appointed
CCCPIB Canada	<p>The <i>CPPIB Act</i> holds our Board of Directors and management accountable to the federal and provincial Finance Ministers who serve as the stewards of the CPP.</p> <p>The <i>CPPIB Act</i> has safeguards against any political interference.</p>	<p>CPP Investments operates at arm's length from federal and provincial governments with the oversight of an independent, highly qualified professional Board of Directors. CPP Investments' management reports not to governments, but to the CPP Investments' Board of Directors. The CPP Investments' Board approves investment policies, determines with management the organization's strategic direction and makes critical operational decisions.</p> <p>Board established an annual process for evaluating its own performance and that of its committees. Chairperson Effectiveness Assessment process, under which assessments are conducted through confidential questionnaires that are summarized. The summaries are reviewed by the full Board and provide a basis for action plans for improvement. The Board conducts a confidential annual peer review to assist each director in identifying self-development initiatives and assist in providing the external nominating committee with guidance when it considers individual re-appointments. The Chairperson also meets formally with each director as part of the Board and individual director assessment process.</p> <p>The CPP Investment Board is not subject to government appointments, its employees and directors are not part of the Public Service of Canada.</p>	<p>Directors are appointed by the federal Finance Minister in consultation with the participating provinces, and with the assistance of a nominating committee.</p> <p>The nomination process is designed to ensure that only those with expertise in investment, business and finance are appointed to the Board.</p> <p>The Chair of the nominating committee is federally appointed, and each participating provincial government appoints one representative. The nominating committee recommends candidates for appointment and re-appointment to the federal Finance Minister. In turn, the federal Finance Minister makes the appointments in consultation with the provincial Finance Ministers.</p> <p>Legislation disqualifies certain individuals from being directors.</p> <p>TERM: Each director is appointed for a term of three years and is eligible to be re-appointed for one or more additional terms. To ensure continuity, the terms are staggered so that no more than half of the terms expire in the same year.</p>
ATP Denmark	<p>The Danish ATP Act (ATP-loven) sets objectives and establishes regulatory frameworks for the management of ATP, including for ATP's management. ATP is managed by a Board of Representatives, a Supervisory Board and a Chief Executive Officer (CEO), and the composition of the ATP Board of Representatives and Supervisory Board is prescribed by statute. The CEO is appointed by the Supervisory Board.</p>	<p>The members of the Board of Representatives and the Supervisory Board are appointed by the Minister for Employment upon the recommendation of the social partners</p>	<p>The Board of Representatives comprises 15 employer representatives, 15 employee representatives and a Chairman appointed by the Board of Representatives. The Chairman may not be affiliated with any employee or employer's organizations.</p> <p>The Supervisory Board is composed of members of the Board of Representatives and comprises six employer representatives, six employee representatives and the Chairman of the Board of Representatives. Pursuant to the Danish ATP Act, ATP has no deputy chairman, and ATP staff members are not eligible to serve on the Supervisory Board. The Chairman and the other members of the Supervisory Board and the Board of Representatives are appointed for three-year terms, the aim being to achieve a balanced composition of men and women on the boards. The members are eligible for reappointment.</p>

<p>NZ Superannuation Fund</p>	<p>As an autonomous Crown entity, the Guardians is legally separate from the Crown. This means that, although they are still accountable to the Government, they have operational independence regarding investment decisions and are, instead, overseen by an independent Board.</p> <p>The Guardians' overarching responsibility is to invest the Fund on a prudent, commercial basis. Accordingly, the Guardians is responsible for establishing investment policies, standards and procedures for the Fund, including determining the proportion of money allocated to various types of investments and appointing external investment managers to manage different parts of the Fund.</p> <p>The Minister of Finance may give directions to the Guardians regarding the Government's expectations of Fund performance – as long as directions are consistent with the duty to invest the Fund on a prudent, commercial basis. The Guardians must have regard to any direction from the Minister and all directions must be tabled in Parliament.</p>	<p>Board members are appointed by the Governor General on the recommendation of the Minister of Finance. The Minister's recommendation follows nominations from an independent nominating committee and consultation with representatives of other political parties in Parliament. Essentially, this means that the Guardians operates at 'double-arm's-length'.</p> <p>The Guardians is subject to ongoing monitoring from Treasury as well as regular reviews from auditors on behalf of the Government. Every five years there is an independent review of how effectively and efficiently the Guardians is performing – with the first review conducted in July 2004. The terms of the review are set by the Minister of Finance who also appoints an independent person to conduct the review. The report is then presented to Parliament.</p> <p>In 2008 the Office of the Auditor General also conducted a review of the Guardians' governance and management of the Fund.</p>	<p>At any given time, the Board must consist of five to seven members – all chosen for their experience, training, and expertise in the management of financial investments. Each Board member is appointed for a term of up to five years, after which they may be reappointed.</p>
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Source: OECD + Scheme Websites/ Annual Reports

Investment Practices

CPPIB

53. The Canada Pension Plan was first established in 1966. It operates at arm's length from the Government of Canada and solely manages CPP contributions paid by workers and employers, not public funds. For much of its history, the plan relied on contributions to pay benefits. By 1996, the federal government had determined that the CPP as then constituted was unsustainable. Changes were made to the plan, gradually increasing the contribution rate to its current 9.9% and creating the CPP Investment Board.¹³¹

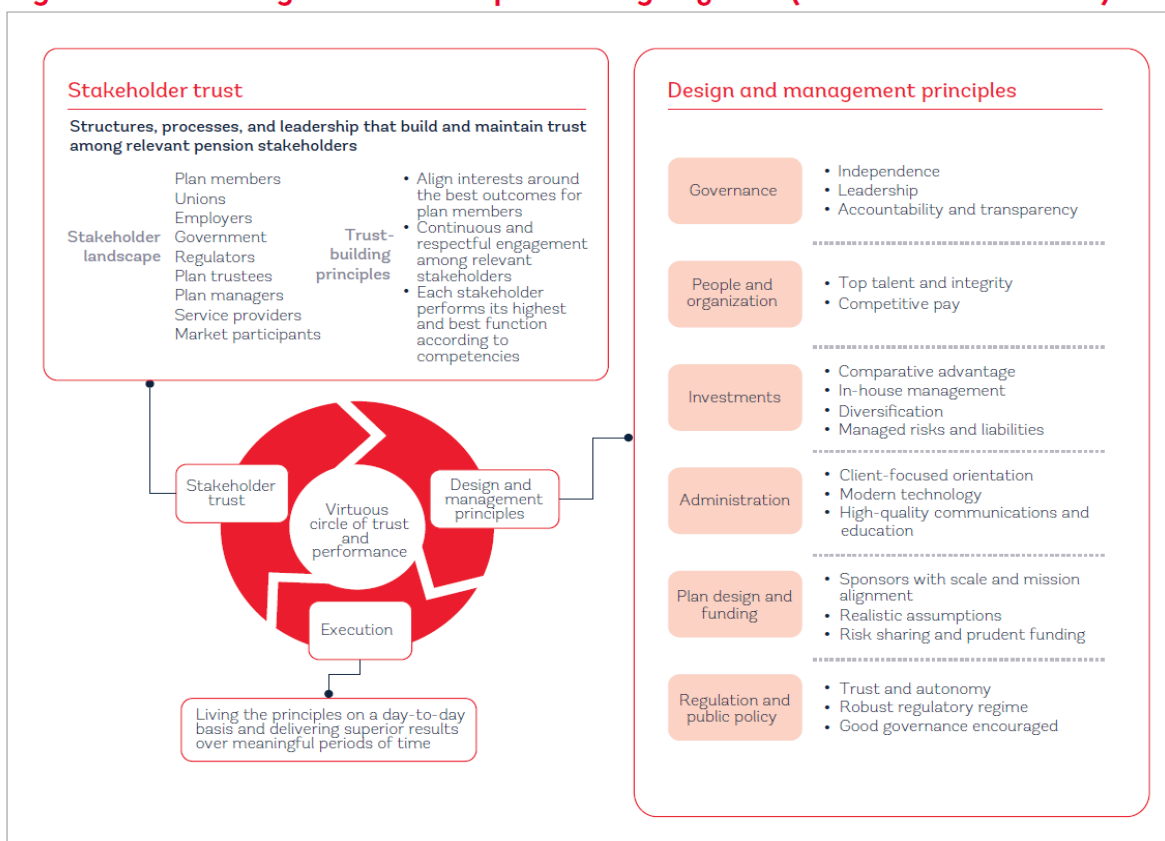
54. The CPP Investment Board began its investing program in 1999, establishing the CPP Reserve Fund to hold investment earnings and CPP contributions not needed to pay current

¹³¹ According to the Office of the [Chief Actuary of Canada](#), the CPP Fund needs a real rate of return of 4.0%, over the 75-year projection period in his report, to help sustain the plan at the current contribution rate.¹

pensions. It reports quarterly to the public on its performance, has a professional board of directors to oversee the operations of the CPP reserve fund, and also to plan changes in direction. As of December 31, 2020, the CPP Investment Board manages over C\$475 billion in assets under management for the Canada Pension Plan on behalf of 20 million Canadians.

55. The CPP Investment Board invests in private equity, public companies, and real estate. CPP Investments is one of the world's largest investors in private equity, having invested over US\$28.1 billion between 2010 and 2014 alone. The CPPIB invests in real estate and made their first direct office investment in Seattle in 2016. Only about 15 percent of the fund was invested in Canada at the end of the plan's 2019 fiscal year. As outlined in its Policy on Responsible Investing, first adopted in 2005, the Board considers environmental, social and governance (ESG) issues/factors from a risk/return point of view and encourages companies to adopt policies and practices that enhance long-term financial performance.

Figure ES.1: Building a world-class pension organization (Lessons from Canada)



Source: (CommonWealth)¹³²

¹³² Common Wealth (2017), 'The Evolution of the Canadian Pension Fund Model: Practical Lessons for Building World Class Pension Organization', World Bank https://www.top1000funds.com/wp-content/uploads/2017/12/The-Evolution-of-the-Canadian-Pension-Model-All-Pages-Final-Low-Res-11_13.pdf

ATP¹³³

56. The Danish ATP (Arbejdsmarkedets Tillaegspension or Labor Market Supplementary Pension) fund is a public pension fund that was created in 1964 to complement the universal pension benefit that is financed from general tax revenues and is paid to all old-age residents.¹³⁴ ATP covers all wage-earners in Denmark aged between 16-67 with more than 9 hours of paid work per. Retirement age is 65 (67 from 2027), and there is no minimum qualifying period.

57. ATP is based on a flat contribution (currently corresponding 1 percent of the average wage tax deductible Over the years, they have ranged between the equivalent of 1.4 and 0.3 percent of average earnings.) and subsidized contributions are paid for recipients of social security benefits. The employer pays two-thirds of the ATP contribution, and the employee one-third. The amount paid depends solely on the number of hours worked. The maximum contribution for a full-time employee in the private sector corresponds to 1% of the earnings of an average full-time employee. Pension benefits depend on how long contributions were paid and accounts for a maximum of 41% of the state basic pension. The pension is paid out either as a lump sum if the balance is small (below a set amount) or in the form of an annuity and is subject to taxation.

58. In addition, it has long offered deferred group annuities with guaranteed benefits and periodic bonuses (with profits policies). 80% of the contribution is used to buy a guaranteed deferred annuity (i.e., annuitization takes place at the time of contribution payment and not at retirement age). The remaining 20 pct. of the contribution is allocated to ATP's reserves with the view of providing excess funding and with the view of escaping unintended redistribution between generations. The bonuses are added to the pensions in payment and to the pension rights that are being accumulated by active workers. ATP provides a guaranteed benefit sharing features with DB benefits but the benefit is not DB in the sense that it provides a specific replacement rate or similar. ATP accruals and indexation are strictly related to the individuals' contributions and the performance of the fund, but ATP is not DC in the "individual savings account" sense of the concept. ATP provides a fully funded, predictable, guaranteed benefit and a very high likelihood of future indexation – but at the end of the day indexations are conditional. ATP is best described as a hybrid scheme.

59. The scheme has low operating and investment costs stemming from the economies of scale provided by the collective approach. In recent years, it has been a leader among Danish

¹³³ <http://documents1.worldbank.org/curated/en/273361468026054863/pdf/wps4505.pdf>

<http://documents1.worldbank.org/curated/en/634591468244506361/pdf/wps4437.pdf>

¹³⁴ The 'Folkepension' is administered by the state and is financed on a pay-as-you-go basis out of general tax revenues. No earmarked contributions are paid to the financing of the scheme. A person is eligible to the flat-rate social pension when he or she reaches the age of 67. It is granted based on residence criteria (the main criteria in the Danish case being that the full benefit requires 40 years of residence between age 15 and age 65). The benefit is partly income tested against other pension income (benefits from ATP, labour market schemes, private insurance, work income etc.).

pension institutions in adopting innovative investment policies and has enjoyed an enviable record of high investment returns and low operating costs.

60. However, ATP also suffers from several weaknesses and shortcomings. It has a cumbersome governance structure, rooted in labor market relations and the role of social partners, while its group annuities have been based on rather 'idiosyncratic' risk-sharing arrangements. This is managed by a separate funded insurance scheme managed by representatives of the unions and the employers.

New Zealand Superannuation Fund¹³⁵

61. The New Zealand Superannuation Fund (Fund) exists as a part of the response to the fiscal pressure posed by New Zealand's ageing population. The Fund's structure, its overall level of risk and the investment activity it comprises all address this long-term purpose. The balance of risk and return is the key decision for structuring the Fund. We have decided that a weighting toward growth assets is required by the Fund's long-term purpose. This weighting tends to produce short-term volatility but the Fund's performance must be judged over a long period. We have considerable freedom to invest how we see fit. We are limited only by our Act and by the investment policies, strategies and controls imposed by our Board. We believe we can produce better returns by pursuing investments which can be riskier, more complex and more expensive than simpler options. We test that belief by publicly measuring the Fund's returns against the returns of the Reference Portfolio – our blueprint for a simple, low-cost portfolio which could achieve the Fund's purpose. We believe that paying attention to Environmental, Social and Governance factors is good practice for investors and for investee companies

62. The Reference Portfolio is important because it is our best effort at a blueprint for an investment portfolio that will meet the Fund's purpose, as simply and inexpensively as possible. This means it is both a structuring guide and an important standard for measuring whether we are adding value to the Fund. We have the ability to pursue some types of investments which deviate from the simple, passive investments within the Reference Portfolio. We do this only when we believe such investments will produce higher returns than are possible from the Reference Portfolio. Because of this assumption, we call these additional investments 'added-value activities'. Typically, 'added-value' investments are more complex and are more expensive to access than what is in the Reference Portfolio. They can also be harder to sell quickly. This is why we expect a higher return from them. This expectation – and therefore the value of this type of investment – must be tested by comparing their performance (taking cost into account) against the simpler, less expensive Reference Portfolio investments. We publicly disclose the performance comparison in our Annual Report. We believe this represents a useful, and robust, test of our belief that we can add value by diverging from the Reference Portfolio.

63. The real-life composition of the Fund at any one time is called the Actual Portfolio. It is the sum of all the investments we have made which reflect the Reference Portfolio, plus any

¹³⁵ <https://www.ifswf.org/sites/default/files/Publications/nzsf.pdf>

added-value investments. Investment opportunities come and go. So, the Actual Portfolio can – and usually does – deviate from the Reference Portfolio, based on what additional activities are both possible and, in our view, will add value.

64. The Investment Framework establishes a common investment language so that when our team members are discussing concepts such as risk, opportunity and value-add, they are talking about the same thing. More important, the common internal understanding of key concepts and definitions drives a common approach to how they are applied to each investment proposal regardless of the asset class, geographical location or how it is accessed (for example, directly or through an investment manager).

Annex 6: UK National Employment Savings Trust (NEST)¹³⁶

65. The UK faced a pension coverage challenge with only 50% of the labor force enrolled in a personal or occupational pension. Lower income workers, particularly those in smaller enterprises, had no access to work-based pension savings and were consequently reliant on the relatively limited public pension after retirement. In 2014, the Government introduced an 'auto-enrolment' policy, under which all employers had to enroll their employees, however few in number, into a pension scheme with rate of employer / employee contributions prescribed by the government (rising to 8% 5 years after the launch). Individuals then have the choice to opt out of the scheme should they wish within 3 months of enrolment.

66. As existing pension providers were not servicing such small employers, the Government supported (via a loan) the establishment of the National Employment Savings Trust (NEST). This scheme competes with existing providers but has a 'public good' mandate in that it cannot refuse business from clients who approach them, however small. This public good philosophy is enshrined in NEST via the Board of independent experts, appointed by the Government, who have the explicit goal of providing a low-cost, high quality service to small employers and their workers. The government supported autoenrollment via a national campaign.

67. To date, the auto-enrolment experience has been successful, with 90% remaining enrolled. Coverage rates have risen to record high of 77% (vs. 47% before enrolment). NEST has also become a highly respected organization, winning numerous national and international awards for its low-cost service (charges are only 30 basis points), innovative product design and service quality – notably with a strong emphasis on the use of simple, understandable language in all its communications.

The image shows the cover of 'The NEST phrasebook' on the left and a diagram of NEST Retirement Date Funds objectives on the right.

The NEST phrasebook
Clear communication about pensions
Version 2.0

NEST Retirement Date Funds - objectives

- Target investment returns well in excess of inflation after all charges over the long term

The diagram illustrates three phases of investment:

- Foundation phase (approx 5 years)**
 - Outperform inflation (after charges)
 - Promote confidence in saving
 - Minimise impact of extreme investment shocks
- Growth phase (approx 30 years)**
 - Target inflation +3 per cent (after charges)
 - Maximise diversification
 - Capture global growth
 - Reduce impact of extreme investment shocks
 - Perform in all economic conditions
- Consolidation phase (approx 10 years)**
 - Track annuity prices
 - Minimise chance of losses late in the journey

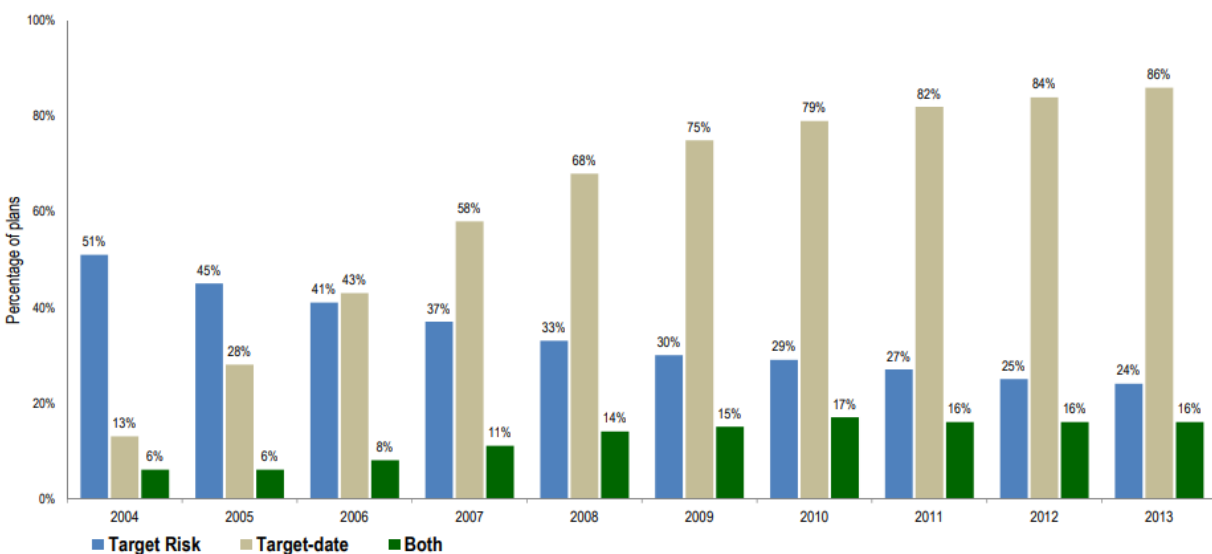
Choosing a retirement date will be many people's only investment decision

¹³⁶ www.nestpensions.org.uk

Annex 7: Target Date Fund Implementation Considerations

Target Date funds have been gaining ascendancy in many retirement markets, among which would be the United States, where they now constitute \$1.4T in assets as of 2019.¹³⁷ In many cases, target date funds took the place of what previously been stronger popularity for “target risk funds” (similar to the multifondos structure). The following chart using data from Vanguard (large U.S. fund manager and administrator) portrays the strong move toward target date funds in the late 2000’s and early 2010’s. That move has continued until today.

Vanguard defined contribution plans



Source: Vanguard, *How America Saves 2014*

There are a large number of considerations that will have to be evaluated for the implementation of Target Date funds in Chile. These include the following:

- 1) How many cohort funds should be required? A typical approach is to have one fund for each five-year cohort. More funds will allow better targeting but will drive less fund management efficiency.
- 2) How should the cohorts be defined? Many markets used retirement year labels to preserve focus on the goal. Other markets use birth year to make it easier for participants to choose.
- 3) How specific should the investment guidelines be for each fund? Some markets allow complete flexibility, but others specify corridors within which the relevant funds need to operate.

¹³⁷ Investment Company Fact Book (60th edition) 2020

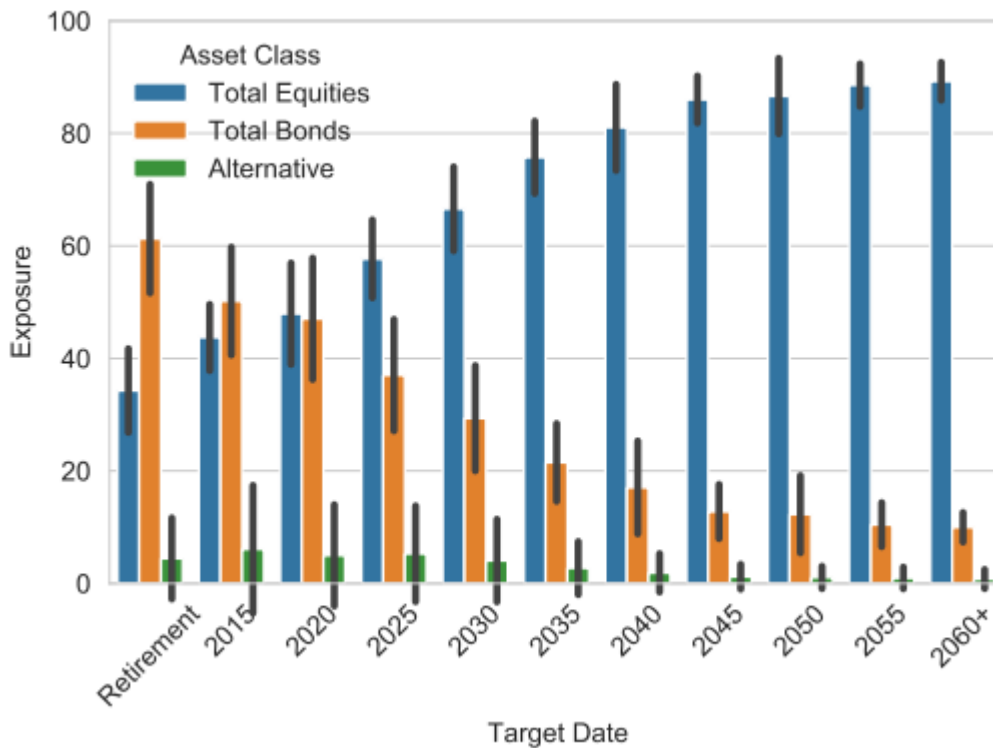
Given an implementation in Chile would happen in the context of the mandatory system, the regulations should be more prescriptive than the large degrees of freedom allowed in voluntary markets such as the United States. However, there should be enough latitude in the regulations to foster a higher degree of innovation and differentiation than what has been true most recently.

One market with a recent Target Date fund implementation is Lithuania, where in 2019 they converted their second pillar funds. In this case, they decided to use seven-year cohorts and use birth year labels. In addition, they chose to allow some latitude in terms of investment structure, designing a process in which the fund companies submitted proposed strategic asset allocations for each fund and, if those proposals fit within a risk framework set out by the regulator, they were approved. Otherwise, they had to be reworked. Below are the various benchmarks currently being used for the youngest birth year cohort group by each of the various funds in the market.¹³⁸ As is obvious from the graphic, the benchmarks used for each company's funds are not the same,

Pension Company	Pension Funds	Index Weight	Benchmark Indices
UAB „Swedbank investicijų valdymas“	Swedbank pensija 1996-2002	3.50%	iBOXX Eurozone TR EUR
		1.40%	iBOXX Liquid Corporates EUR
		2.10%	JPM Euro EMBI Global diversified Eastern Europe debt index
		93.00%	MSCI AC World Index IMI TR Net USD, (perskaičiuotas j
UAB „SEB investicijų valdymas“	SEB pensija 1996–2002	83.30%	MSCI World Net Total Return EUR Index
		14.70%	MSCI Emerging Markets Daily Net TR EUR
		2.00%	Bloomberg Barclays Euro Treasury 1-10yr A3 or better
		0.00%	Bloomberg Barclays Euro Aggregate Corporate Bond index
		0.00%	Bloomberg Barclay's Global High-Yield (EUR Hedged)
		0.00%	S&P European Leveraged Loan Index
		0.00%	JPM GBI-EM Global Diversified Composite Unhedged EUR
		0.00%	JPM EMBI Global Diversified Hedged EUR
		UAB „Luminor investicijų valdymas“	Luminor 1996-2002 tikslinės grupės pensijų fondas
27.0%	MSCI EM Daily Net Total Return		
6.0%	Bloomberg Barclays Euro Aggregate Bond Total Return		
3.0%	Bloomberg Barclays Emerging Markets USD Sovereign + Quasi Sovereign Total Return Value Unhedged EUR		
UAB „INVL Asset Management“	INVL pensija 1996-2002	1.0%	Bloomberg Barclays Liquidity Screened Euro High Yield Bond Total Return Value Unhedged EUR
		89.0%	MSCI ACWI IMI Net Total Return USD Index (perskaičiuotas j EUR) (MIMUAWON Index)
		8.0%	MSCI Emerging Markets Net Total Return USD Index
		3.0%	European Central Bank ESTR OIS Index (OISESTR Index)
		0.0%	Bloomberg Barclays Series-E Euro Govt 5-7 Yr Bond Index
		0.0%	Bloomberg Barclays EuroAgg Corporate 5-7 Year TR Index
		0.0%	J.P. Morgan Euro Emerging Markets Bond Index Global
		0.0%	JP Morgan Corporate Emerging Markets Bond Index Broad Europe (JCBBEURO Index), apdraudžiant Bloomberg J.P. Morgan Emerging Markets Bond Index (EMBI) Global Hedged Euro Index (JPEIGHEU Index)
UAGDPB "AVIVA Lietuva"	AVIVA Y3 1996–2002 tikslinės grupės pensijų fondas	90.0%	MSCI World Index (MXWO Index)
		10.0%	Bloomberg Barclays Series-E Euro Govt 1-5 Yr Bond Index (BERP15)

¹³⁸ Bank of Lithuania website, accessed 27 July 2021, under “Pension fund taxes and benchmarks” (Tier II & III PFs) <https://www.lb.lt/lt/pf-veiklos-rodikliai#ex-1-4>

but they have a consistent theme of a relatively large amount of growth-oriented assets and low fixed income assets, as should be the case for participants born between 1996 and 2002. Yet another picture of the variability in target date fund structures is presented below, from the market in the United States. In this chart, the amount of both equities and bonds for each five-year fund cohort is shown, with the variability in the amount of each type of asset represented by the thin vertical black line at the top of each bar. Again, though, it is clear that there is a consistent general theme, in this case of higher bonds for the cohorts either in or close to retirement on the left of the chart. Allowing some innovation in this area, within bounds, could be helpful.



Source: *An Analysis of the Performance of Target Date Funds*, Shoven and Walton 2020