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LEVERAGING PENSION SAVINGS TO ACCESS HOUSING FINANCE

Ainur Zhakupova
Andrés Alegría
Emily Yang
Emily Zhang
Giovanni Pagán Vélez
Matthieu Riolacci
Yangqianru Chen
Yifei Liu

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EXECUTIVE SUMMARY

This paper expands on a previous World Bank research on Pensions and Housing Finance. It provides an analysis and a description of the different systems allowing the withdrawal of pension savings for housing purposes. Methods of exploration include the development of an ad-hoc survey sent to pension regulators, the collection of exterior macroeconomic data and the analysis of the interactions between the two. This work also offers a deeper analysis of three systems representative of their kind, namely South-Africa, Singapore, and Mexico, describing their features, strengths, and weaknesses. Results yielded by this methodology show that: 1) In countries that allow early withdrawal for housing purposes, pension funds are on average larger, 2) countries that responded to the survey and that allow early withdrawal have a lower homeownership rate compared to countries that do not allow early withdrawal 3) although housing prices grow at a faster rate in countries that allow for early pension withdrawal for housing, housing returns are about the same as for countries that do not allow early withdrawal.

This work paves the way for further research in a yet unexplored field. It does so by setting up a new database and a way of categorizing different systems. This fundamental understanding can guide future research aiming to assess causality and evaluate the effectiveness of different policies. The authors of this report are aware of the limitations of the research. They mainly lie in the size of the sample that should be expanded before stronger conclusions. Also, the joint analysis of qualitative and quantitative data show that issues are mainly country-specific, thus making it hard to come up with generalized recommendations.

1 INTRODUCTION

Retirement is one of the key public policy challenges nowadays. With the windfalls from demographic bonuses fading, and life expectancies and dependency ratios increasing across the world, countries have found that traditional pay-as-you-go systems are facing a challenge. In both advanced economies – like the United States and Japan – and emerging markets – like China and Brazil, workers cannot afford to retire because they lack assets that will supplement pension income. Policies that leverage pension savings to finance housing can endow citizens with real assets while also strengthening pensions financially. By using pension savings as collateral for individuals to get loans, countries can expand access to mortgage markets, increase homeownership rates, and address housing shortages in urban areas.

In 2018, the World Bank Group produced a comprehensive study titled *Housing Finance: Investment Opportunities for Pension Funds*[1]. In this study, the World Bank examined supply-side financing alternatives, like direct financing of housing assets and investment in real estate portfolios, and demand-side policies, which mostly focused on the financing of mortgages and the investment in mortgages securities. The report concluded that "housing investment instruments could offer pension funds a, longer term, asset class, which could complement and enhance existing investment strategies. However, for many emerging markets, significant work still needs to be done to create the ideal investment environment and lessons from practical experience should be examined further." Therefore, we will further this study to enhance the knowledge of pension regulators, fund managers, and scholars by focusing on **demand-side policies.**

To be more specific, we first examine the academic literature on our topic of interest in order to establish the economic and policy motivations for this paper. As part of our research we developed a survey that was sent to the International Organization Pension Supervisors (IOPS). Our primary goal was to develop a database of countries that use pension funds to finance housing. After discussing the survey and its results, we present statistics as a means of comparing countries

[1] http://documents.worldbank.org/curated/en/405421551711776551/Housing-finance-investment-opportunities-for-pension-funds

using pension savings for housing finance. We will be using case studies from Mexico, Singapore, and South Africa throughout the paper to examine the implementation of their respective pension savings and housing systems and also point out some of the flaws in their systems.

2 LITERATURE REVIEW

2.1 Policy Motivations

The main goal of public pension schemes is to supplement the income of citizens in order to furnish a comfortable standard of living for life after retirement or in case of career halting events. Pension systems oftentimes use several pillars[2] to achieve this aim, providing different forms of income for different circumstances or stages in life. The most common pillars are social security - which is the provision of income for retirees or those forced out of the labor force - and occupational pensions that receive contributions by workers and eventually return to them a compounded return on their savings after a certain period of time. These two pillars have been the centerpieces of the welfare states of developed economies in Europe and North America.

Nonetheless, this two pillar system is increasingly strained as policies to modernize pension systems have lagged and as the modern economy has placed increasing strains in the classic welfare state. As we have discussed briefly, pension systems across the globe are increasingly including a third pillar to the scheme by helping citizens acquire non-cash assets, with housing being the most common. Given the frequent inclusion of housing in pension schemes, we will narrow our research to this subcategory.

Facilitating mortgage finance can have unique social and economic benefits for pensioners if developed effectively. A home can provide an added welfare benefit for individuals (and society) that oftentimes goes beyond the market value of the home itself. In the United States, **homeownership has been associated with better health outcomes,** and greater access to a basic necessity. The physical and financial security of owning a home promotes **lower levels of crime,**

[2] http://www.actuaries.org/CTTEES_TFM/Documents/Chicago2017_Seminar_Presentations/Harmonisation_Pensions_Housing_MartinS_Final.pdf

independence of the welfare system, and higher overall levels of life satisfaction[3]. The logic goes that ensuring that citizens own their homes will generate social externalities that will accrue to the society as a whole and not just individuals. This provide motivation for public policies that stimulate homeownership.

South Africa Utilized Pension Funds to Improve Low Income Access to Housing
In 2017, only 4.4% of the mortgages were granted to individuals with low income (lower than R15,000), while the total mortgage loans make up to 80% of the housing credit market. Housing affordability is therefore a critical issue in South Africa, particularly for low income earners, as they are charged an additional 2% above the prime rate for a bank mortgage. Considering the high degree of liquidity of the pension funds, South African housing authority has been keeping the pension backed loans at prime or even lower to make pension backed loans more accessible and affordable as a tool to stimulate the market for both new and resale homes.

Housing is also a reliable **store of wealth** and by far the most common asset throughout countries. In Australia, housing assets are worth AUD 6 trillion (58% of total wealth) while in Singapore are valued at 210% of GDP. While in the United States it has been estimated that median housing equity is about 52% of total wealth. The importance of housing for the accumulation of wealth for individuals, also has significant implications for the recent increases in wealth inequality.

From a strictly monetary returns perspective, housing compares favorably to other non-cash assets. A study by the Federal Reserve Bank of San Francisco[4], computed the returns of housing, equities, and bonds between 1870 and 2015 across 16 developed economies. Over the 145 year period they studied they found that the average real return on housing was 7.05%, higher than both equities (6.89%) and bonds (2.5%). In the shorter period between 1950 and 2015, housing generated a real return of 7.44%, slightly below the 8.28% for equities. In addition to providing high real returns relative to other financial assets, the risk associated with housing was

[3] Yun and Evangelou (2016) https://realtoru.edu/wp-content/uploads/2014/06/Homeownership-Stable-Housing.pdf
[4] https://www.frbsf.org/economic-research/files/wp2017-25.pdf

far lower. By standard measures of uncertainty, housing was half as risky as equities, and slightly less risky than bonds. The ultimate investor, according to the study, would actually holds "an internationally diversified portfolio of real estate holdings, even more so than equities". Giving pensioners access to housing through mortgages either backed or financed by their pension contributions can potentially endow pensioners to a **diversified bundle of cash and a housing asset that will leave them better off than the traditional two-pillar system**. Although it is important to keep in mind that, a single home is a much riskier asset than a diverse portfolio of residential real estate.

However, the benefits of devoting pension savings to housing are not strictly limited to the financial returns they generate. A complementary perspective in the literature is developed by Benjamin, Chinloy, and Jud (2002)[5], focusing on the conception of housing as a consumption good not just an asset. Based on the Federal Reserve's *Survey of Consumer Finance,* their study finds that individual households devote a higher amount of their disposable income on housing than the traditional conception of housing as an investment would suggest. If housing were just another regular investment vehicle, we would expect households to diversify their investments between financial assets and the illiquid housing asset. Instead, "the marginal propensity to consume from housing ranges between 15 cents and 20 cents per dollar of wealth per additional dollar of wealth. The results are based on time series and aggregate data for the U.S. economy for consumption, financial wealth and housing wealth." In the United States, **households have used their homes as a means of borrowing and funding consumption**. Housing homeowners to be more flexible with their finances and this can be characterized as an additional benefit that motivates policy.

Matthew Rognlie argues that "the rising real cost of residential investment and the limited quantity of residential land have conspired to make housing more expensive and given low elasticities of substitution this has meant a rise in housing share of income."[6] (Rognlie, M. 2015). Homeowners have seen a continued appreciation of their assets while those without the opportunities to own a home have seen their share of wealth decrease. In his research, Rognlie

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5 http://pages.jh.edu/jrer/papers/pdf/past/vol26n04/01.329_344.pdf

6 https://www.brookings.edu/wp-content/uploads/2016/07/2015a_rognlie.pdf

found that inequities in the housing market have been associated with increased wealth inequality in recent history, following a common pattern throughout US history[7]. From this perspective the use of pension funds to increase mortgage finance may be an inherently redistributive policy. Countries may find the third-pillar to be an effective conduit to stimulate homeownership among younger generations that since the Great Recession have been less involved in the housing market than their predecessors[8]. If implemented correctly, expanding housing access through the use of pension savings may **reduce intergenerational income inequality**.

In the context of increasingly strained pension systems, homeownership may prove to be a safety net for the elderly. Elsinga, Quilgars, and Doling (2012)[9], discussed the extent to which housing equity was being used by EU citizens as a means of supplementing their retirement income. In their research they concluded that although this practice is still limited, it is more widespread in countries where the pension system is under significant strain. Whether or not this merits the use of pension savings as a means of ensuring the retirement of those whose pensions are already strained, is a matter for further discussion.

In the context of developing countries, using pension funds for housing developments is a policy intervention designed to **correct market failure or to stimulate an underdeveloped financial market[10].** For many emerging markets the challenge is to develop a housing market that otherwise will remain underdeveloped. In the case of Mexico, where before the turn of the century there was significant shortage of affordable housing and very limited private sector financing for mortgages, policymakers sought to develop the public pension system for formal workers, *Instituto del Fondo Nacional de la Vivienda para los Trabajadores* (INFONAVIT), as a vehicle for increasing homeownership. In 1992, Mexico received a $300 million loan from the World Bank[11] in order to begin a process of expanding mortgage finance for workers and also getting private developers and commercial banking involved. Today, INFONAVIT plays a large role in Mexico's

[7] https://www.citylab.com/equity/2018/04/is-housing-inequality-the-main-driver-of-economic-inequality/557984/

[8] https://www.urban.org/urban-wire/state-millennial-homeownership

[9] https://web-b-ebscohost-com.ezproxy.cul.columbia.edu/ehost/pdfviewer/pdfviewer?vid=1&sid=c1e17a31-dfb3-4be1-ba84-5712257d7eb4%40sessionmgr102

[10] Chiquier & Lea, 2009; Renaud, 1999.

[11] https://revistas.javeriana.edu.co/index.php/cvyu/article/view/4133

mortgage finance sector, which has grown considerably since the initial push to increase INFONAVIT role in the early 1990s.

2.2 Challenges and Drawbacks

We have seen some of the possible benefits of providing pension beneficiaries with access to housing through the use of pension savings and have discussed in depth what have been some of the motivations behind policy interventions of this nature. However, there are significant challenges to this sort of scheme that also need to be considered.

The first drawback that may arise from allowing pension beneficiaries to withdraw their pension savings is that they do so too early. One of the most important aspects of having a pension account is that individuals are able to see the value of their savings expand at rate above the rate of inflation, thanks to the diversification of the pension fund's portfolio. However, if for example a pension holder opts to withdraw funds from their pension account 15 years into having contributed to the account in order to buy a house, the individual will be missing out on 15 years of compounding interest[12] (assuming that the span of the pension is 30 years) or will see a much smaller amount of money compound - depending on the scheme.

For this to be a beneficial transaction the value of the house needs to appreciate at a rate that is higher than the pension fund would have - given the lack of diversification from a single house it is not always the case. Ultimately, it may prove better for pension holders to have their funds in a diversified portfolio[13] that includes housing rather than have direct exposure to it. This economic calculation may be more complex than simply looking at the returns of different assets, given the social benefits connected to housing[14] such as lower crime rate and higher life satisfaction, among others. Nonetheless there are significant trade-offs that policy may not always take into account.

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[12] https://pensionsorter.co.uk/compound-interest/ and https://www.econlib.org/library/Enc/Pensions.html

[13] For a detailed discussion on this topic refer to Farma and French (2004) https://www.jstor.org/stable/3216805?pq-origsite=summon&seq=1#metadata_info_tab_contents

[14] Refer to brief discussion in the policy motivations section or to Yun and Evangelou (2016) https://realtoru.edu/wp-content/uploads/2014/06/Homeownership-Stable-Housing.pdf for a more detailed discussion

Another fundamental concern is that housing assets may prove to be too illiquid for retirees who transition from having a steady stream of income from their monthly wages to oftentimes lower pension benefits. Owning a house may be positive during the individual's lifetime but it makes little sense for them to liquidate them, not to mention concerns that arise when the housing market is in a downturn. Although some financial products, like reverse mortgages, are allowing for the elderly to monetize their housing equity these products still aren't widespread enough or suitable for low-income families.

Singapore: Asset Rich but Cash Poor

The flip side of high homeownership rate is that the contribution rate for retirement savings has remained low (6%), and there has been little savings left in the other accounts to top up income post retirement. In 2016 withdrawals from CPF accounts amounted to over 50% of contributions. As of March 2017, S$200 billion had been withdrawn by nearly 2 million members, predominantly to fund public housing. The Singapore issue is oftentimes referred to as "asset rich but cash poor".

Currently, in Singapore there are four ways to monetize home equity to generate cash flow for retirement, namely subletting of home, downsizing to a smaller home, lease and buy-back and reverse mortgage.

- **Government buys back tail end of lease**

Realizing the severity of the "asset-rich but cash-poor" issue, measures have been taken to improve retirement adequacy. In 2013, Singapore's House Development Board (HDB) enhanced the Silver Housing Bonus (SHB) and Enhanced Lease Buyback Scheme (LBS). The SHB scheme applies to low-income elderly households who move from a bigger flat to a three-room or smaller flat, while the LBS allows those living in a three-room or smaller flat to sell part of their lease back to the HDB. By using the net sale or rent proceeds to top up the CPF Retirement Account (RA), retirees are able to receive cash bonus and supplement their retirement income.

The following example shows how the LBS scheme works. Consider a family who bought a HDB apartment in 1990 on a 99-year lease. In 2019, the remaining lease on the property is 70 years. The family can retain 30 more years of the lease and sell the remaining 40 years of the lease to the HDB through the lease buyback scheme. The HDB determines the value of the remaining lease based on the property's market value estimate and credits the amount to the family's CPF account.

- **Reverse Mortgage Fails to Take Off**

Reverse mortgage, a type of loan that allows senior citizens whose net worth is mostly tied up in the value of their home to monetize their housing asset. According to Asia Pathways, the private sector in Singapore initially provided reverse mortgage option elderly people. NTUC Income, an insurance firm, introduced a reverse mortgage scheme for private housing homeowners in 1997. In 2006, OCBC Bank joined NTUC Income in offering reverse mortgages. However, both institutions discontinued their schemes by 2009 due to a lack of demand from borrowers. Among the reasons for the low demand were: i) conditions for borrowers in the reverse mortgage schemes were fairly complicated, and ii) lenders wanted properties with long remaining leases as collateral; however, with over 80% of population residing in HDB flat with only 99-year lease (increasing number are nearing the halfway mark), fewer households were eligible to apply for the reverse mortgage.

- **Risk-pooling Tools Needed to Enhance CPF's Sustainability**

From a macro perspective, pension system has the responsibility to provide adequate real income throughout old age, thus mitigating longevity, inflation and survivors' risks. CPF is insufficient to address pension sustainability from a broader perspective. Individuals bear macroeconomic and other risks for which they are not necessarily equipped because i) the mandatory savings using DC methods is in nature oversimplified, and ii) the absence of social risk pooling, i.e. medical and social insurance. The absence of social risk pooling is particularly unfair to women because they as a group have higher longevity but lower labor participation rate and therefore lower CPF balance. The use of social risk pooling methods such as social insurance and budget-financed non-contributory social pensions linked to per capita income, whose value does not decrease over time in real terms; and a shift in policy focus from addressing absolute poverty to relative poverty.

There has also been academic research suggesting that expanding access to finance can have a negative effect on saving and investment. Mandatory contributions to housing funds tend to create distortions in the credit markets and prevent their developments[15], the allocation to a specific asset (housing) may not be the most desirable outcome since it artificially diverts investment from other sectors that may be more productive. According to Demırguç-Kunt et al (2003)[16], financial systems promote economic growth by channeling capital to its most productive

[15] Jappeli, Tullio, and Luigi Pistaferri. 2002. "Tax Incentives for Household Saving and Borrowing." Working Paper No. 83, Centre for Studies in Economics and Finance, University of Salerno.
[16] Demirgurc-Kunt,Laeven, and Levin (2003) https://www.nber.org/papers/w9890.pdf

use. A major part of the relationship between housing and the macro economy has been its negative role in affecting macro stability through major financial instability (for example, through bubbles in asset prices affecting collateral value and inducing rapid changes in financial structure and interest rates). Channeling pension savings to housing may create economic distortions that impede ultimate purpose of ensuring a comfortable retirement for pension holders.

South Africa: Housing Subsidy Program Creates Social Distortions

Despite of the many pension investing opportunities, the housing subsidy programs in South Africa has created a situation in which low to middle income earners (such as new graduates, nurses, etc.) are left out of the market for housing finance. Those at the lowest percentile of the income distribution have access to subsidized loans while the high-income individuals can of course afford mortgages. Households towards the middle of the income distribution do not benefit from the same policies and are left without access to affordable housing. This situation creates the so called "minute glass shaped" structure that should be addressed.

Even when ignoring the possible economic distortions there are more narrow concerns relating to the technical capacity of pension funds to also act as mortgage administrators as the Mexican case illustrated with the NPLs in the mortgage market that we discussed above. Furthermore, a recent analysis by the OECD[17], found two important constraints that pension funds faced when entering the housing sector. Pension funds faced higher administrative costs and faced longer delays to realize collateral in the event of default, significantly reducing their ability to recover losses. Additionally, regulatory constraints on LTV ratios also reduced this effect. Moreover, from a practical standpoint, pension funds have an incentive to be less aggressive in their loan collection due to their public interest goal. This may lead them to be more lenient on delinquent borrowers and can also lead borrowers to be more lax than they otherwise would be with a commercial lender.

[17] https://www.oecd.org/finance/private-pensions/35802785.pdf

Mexico: Some Administrative Lessons

The higher mortgage provider in Mexico -INFONAVIT- has a **Non-performing Loan** (NPL) rate which is three times higher than the private sector. This could be seen as a significant drawback of the Mexican approach to housing finance, where the easy access to mortgage credit leads workers to borrow more than they can afford. However, INFONAVIT has been working to improve the quality of its portfolio by improving the information it gathers on borrowers. The development of credit scores and the use of new predictive models to identify high-risk borrowers, has allowed INFONAVIT to be more prudent in its lending. The institution has opted to lend to less than the total Loan to Value to high risk borrowers, reducing the size of the loan by 10% to 25% for some borrowers. Additionally, INFONAVIT resorts to mortgage mediation when workers lose their jobs - allowing for grace periods and also helping workers be placed in new jobs.

One of the threats to a system such as Infonavit is the **high levels of labor informality in Mexico.** The International Labor Organization (2014)[18], indicates that nearly 60% of Mexican workers are employed in the informal sector. This poses a challenge to policymakers because the INFONAVIT system only serves the constitutional mandate for housing for those workers that are in the formal sector, neglecting workers in the informal sector completely. Because informal sectors are likely the most at risk of economic hardship, Mexico's current arrangement may be failing its most vulnerable by providing preferential financing to only formal workers rather than all workers. The scheme may also have some labor market externalities, since the cost to employers of putting 5% of the employer salary into the INFONAVIT account may be a possible deterrent to hiring - furthering the divide[19] between formal and informal workers in Mexico.

While affordability remains the main source of concern, the development of housing finance, including the increasing participation of pension funds, is limited by structural weaknesses. Two of them, titling issues and fraud, are purely administrative but hard to address. The fact that the titling of some lands is deficient increases the risk in financial transactions by questioning the ownership of private property in certain areas. It is hard for a fund to consent to a

[18] International Labor Organization, Programme for the Promotion of Formalization in Latin America and the Caribbean. (2014). *Informal Employment in Mexico: Current Situation, Policies, and Challenges.* Regional Office for Latin America and the Caribbean - ILO.

[19] Santiago Levy, "Under-Rewarded Efforts: The Elusive Quest for Prosperity in Mexico", 2018

loan when the withdrawer cannot prove she actually owns the land. This is notwithstanding the perseverance of fraud against which it is difficult to fight and that is fostered by administrative uncertainties such as the titling issues.

South Africa: "Minute Glass Shaped" Structure for Housing Loans

In response to the high demand among low income South Africans, more than 1.6 million housing units were built since 1994 under the Subsidy Program Act. In spite of the good intentions of the stakeholders in the marketplace, housing finance is well developed in South Africa. However, housing affordability remains an urgent problem. The proportion of households who had a mortgage in 2016 was 9.7%, down by 6 points from 2007. This situation cannot be solely explained by the 2008-2009 mortgage crisis, which did not affect South Africa. The most likely explanation is found in different types of inequalities. Urban populations are confronted to a rise in prices, and only 34.4% of them can afford the a low-priced newly built home. More important than geographical disparities, income inequalities leave the middle class out of the market for housing finance. Lower income individuals have access to subsidized loans and higher income individuals can afford mortgages. Households towards the middle of the income distribution do not benefit from the same policies and are left without access to affordable housing. This situation creates a "minute glass shaped" structure that should be addressed.

The question of **loan-to-value (LTV)** is more subtle. The effective loan to value can reach 70% to 80% of the savings, and the legal maximum is 90%. These figures can seem abnormally high compared to other system and raise the question of financial stability. However, the South African economy was not hit by the 2008 crisis as harshly as the US, and the mortgage market is much less developed. Thus, authorities do not consider these high levels of LTV as an immediate danger. Nevertheless, if the housing finance were to develop further, the question should be addressed.

3 Categorization

There is a broad variety of policy interventions developed by pension funds and governments to allow individuals pension holders to use their savings for purposes other than the conventional cash disbursements. For the purpose of housing, pension funds may provide members with a way to obtain finance for an existing property in a resale market, the construction of a new home or the upgrading, extension or refurbishment to an existing dwelling.

Pension funds can choose to enable their members to access personal loans by allowing the accumulated pension savings to be used as some form of "support." These funds, which are generally lower in value than, say, a mortgage loan, are typically used as a down payment for the purchase of an existing property, to fund part (or all) of a self-build project, or to extend, renovate or upgrade an existing property. There are several avenues that can be offered to pension holders to access their accumulated pension savings for housing purposes:

- **Direct withdrawal** of accumulated retirement savings.
- **Pension fund provides a direct loan to their members**, where the retirement savings serve as collateral in the event of default.
- **Pension fund provides a guarantee to the third-party lender** (on the back of the pension fund member's accumulated retirement savings) that enables the pension fund member to obtain loan finance from a third-party lender.

3.1 Permanent withdrawal

When the permanent withdrawal is applied, the post retirement situation could be subjected to the housing price movements. If the housing price goes down: they will be in financial hardship after retirement, with less savings and less assets to generate cash flow as well. However, if the housing price rises, residents tend to be "asset rich cash poor," like the situation in Singapore.

Singapore: An Example of Direct Withdrawal

Singapore has one of the most flexible pension systems in terms of housing funds withdrawal. The history of utilizing pension savings to purchase public housing can be dated back to 1968, when the Home Ownership Scheme (HOS) was first introduced to allow CPF savings to be used for purchasing public housing apartments.The mandatory Defined Contribution scheme under the Central Provident Fund (CPF) –the social security system in Singapore that requires employees to contribute up to 20% of their income and employers to contribute up to 17% of employees' income depending on an employee's age.

There are no limits to withdraw CPF savings to buy a new flat from the Housing Development Board (HDB) which is a Singapore's public housing authority that plan and develop housing estates. There are, however, valuation limit (purchase price or market value of a property, whichever is lower) and withdrawal limit (120% of valuation limit) depending on whether it is a new or resale flat and whether it is financed via HDB concessionary loan or bank loan. An eligible worker may use up to 100% of his Ordinary Account CPF savings as a down payment for his house or flat. In addition, up to his entire monthly CPF Ordinary Account contributions may be used to service his mortgage payment.

As a result, Singapore has one of the highest homeownership rates (90.3%) in the world.

Kazakhstan: Singaporean Case May Not Work for Other Countries

Singapore's policy of early withdrawal of pensions for housing might be appealing for other countries to duplicate due to a high ownership rate they achieved. However, it might be not appropriate to use in all cases.

In Kazakhstan legislators have proposed the national pension fund to allow withdrawal of individuals' pension savings to be used as a down payment in mortgage housing program "7-20-25" that offers mortgages with a 7% interest rate, 20% down payment for 25 years. They cited Singapore as an example where early withdrawal for down payment is allowed.

However, the pension fund rejected the proposal arguing that the early withdrawal of pension savings is not allowed in Kazakhstan by law. Moreover, pension contribution rates are higher in Singapore (up to 37% of wage) while in Kazakhstan they are only 10% and therefore insufficient to use for housing or other purposes. The Head of the pension fund also mentioned that they considered the possibility of early withdrawal before. However, it was not clear which members can use this option as the savings in the pension accounts of many citizens are not sufficient for even half of the average down payment for housing. Also, some analysis has pointed out that if early withdrawal is allowed only for those members who have extra savings in their accounts, it could be inefficient as such members are not likely to have problems with housing while those who need housing probably will not have extra savings[20].

3.2 Direct Loans

Pension supported loans, refer specifically to loans provided by financiers to individuals for housing purposes, where the collateral for the loan is some percentage of the borrower's accumulated retirement/pension savings. To increase the supply of mortgages available to homebuyers, pension funds can elect to become providers of mortgages themselves, delivering an alternative channel to banks and/or traditional housing lending institutions (such as mutual- or building- societies). In most cases, pension funds who choose to be direct providers of mortgage loans give preferential rates and conditions to those that have contributed to the fund, particularly those that have contributed for extended periods of time. Switzerland's[21] pension fund provides two different methods of accessing housing finance For Pension holders that comply with eligibility requirements, can withdraw funds from accrued savings or pledge future contributions to the fund in order to make a down-payment on a home.

Although pension funds' functional expansion to provide financing for housing can provide direct benefits to pensioners throughout their lifetimes - rather than just at the time of retirement - there are risks being considered from these arrangements. One downside is that the pension fund would have to set up the infrastructure to provide back-office processing, loan management, and administration for the mortgage loans. In addition, the pension fund would bear the full risk of loss in the event of borrowers defaulting on repayment. This loss experience would be all the more acute if the pension fund membership was limited to a specific company (or companies) or to a sector that may be experiencing an economic or industry-specific crisis.

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[20] https://kapital.kz/finance/51587/pensionnye-nakopleniya-ne-reshat-kvartirnyj-vopros.html

[21] https://www.credit-suisse.com/ch/en/articles/private-banking/pensionskasse-fuer-wohneigentum-einsetzen-vorbezug-und-verpfaendung-201903.html

Pension fund managers are not experts in assessing credit risk, which exposes fund management to unforeseen losses. This lack of credit metrics makes it even more complicated for pension administrators to determine the appropriate interest rate to the direct loans. From a pure asset management perspective, the appropriate interest rate should be the alternative cost of borrowing, i.e. the rate of return on pension savings. This rate of return may in some cases be lower than the interest rate on a traditional mortgage loan but it is far from certain. Because pension funds oftentimes have a mandate to provide equal treatment and privileges to all pension holders, there is a temptation to provide the same rate for all borrowers for the purpose of fairness. As discussed in our case study of NPLs in Mexico, this lack of risk differentiation may ultimately harm the pensions fund as a lender as well as the pension holder as borrower. Additionally, in closed pension systems recovery is somewhat easier because the individual has no alternative but to remain attached to the scheme. In open schemes, however, members are free to switch to another fund. Therefore, in order to minimize potential losses, some restrictions to mobility should be imposed. Alternatively, as pension savings switch from one provider to another, so would the outstanding housing loan liabilities. This is complex as one fund manager would have performed the credit assessment but the recovery costs could be borne by another.

Mexico: Direct loans through INFONAVIT

Infonavit is the administrator of the housing subaccount of the pension fund for private sector formal workers in Mexico. It was created in 1972, in order to guarantee the right of all workers to a adequate and dignified housing as guaranteed by the Mexican Constitution. To this end, employers must pay INFONAVIT 5% of the employee salary to the employee's housing sub-account administered by INFONAVIT. This separate account is primarily saved for housing purposes but by the age of 65, employees can access the funds for retirement.

INFONAVIT isn't the only institution that provides housing finance for Mexican workers. The FOVISTE[22], serves a similar role than that of INFONAVIT but is only for workers employed by the Mexican state. We have focused on the former for this case study, since its market share is about six times that of the latter.

[22] Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado

Increasing Homeownership for low-income workers: One particularity of the Mexican system is that it aims to close the financing gap between high and low-income employees, which is defined in the social mission of INFONAVIT. Therefore, with the 58% of market share, this institution is the largest provider of housing financing in Mexico, with nearly twice the market share of the private banking sector. INFONAVIT issues close to 369,000 loans per year.
The main policy innovation employed by INFONAVIT is a system of **cross-subsidies,** through which it provides below market rates for low-income borrowers - at times lower than the interbank rate - and then provides at market rates to higher income borrowers. INFONAVIT is able to provide these cross-subsidies due to the large pool of contributions it has. Infonavit has an advantage when it comes the time and completion of the payment, since they are allowed to discount the installments, directly from the payroll. This reduces the risk that workers will opt to default on their loan when they in fact have a stream of income from employment.
Since INFONAVIT serves a segment of the population that has lower income levels on average, the nominal value of the loans it issues is lower than that of loans by the private banking sector. For the the segment of the population that earns four times of the minimum wages or lower, INFONAVIT provides 9 times more mortgages than the private sector. This segment of the population accounts for 55.2% of the total amount allocated by INFONAVIT[23]. The distribution of flows and stocks reflect the concentration in lower-income workers by Infonavit compared to those that are being financed with the banking sector (Graphs 1 and 2).
Although the mandate of INFONAVIT is to serve the housing financing needs of the poorer segments of the population, it doesn't have a mandate regarding the real estate market, like other jurisdictions, such as China.

3.3 Pension as Collateral

An alternative method for direct loan is for the pension fund to provide collateral for housing loans from a third party. Pension funds can provide a third-party institution with a guarantee that the member's pension savings will secure a loan or part of a loan from the lending institution (usually banks). Pension fund trustees appoint the lender(s) and negotiate the terms and arrangements on behalf of the members, e.g. interest rates, loan terms and conditions. The interest rate on the loan is usually higher than that for direct loans as it would include the administrative

[23] Most of the information for this case study was gathered from an interview with INFONAVIT regulators.

and transaction costs but the investment pool is not drawn down at the time of loans. As long as the member does not default, the fund's investment pool is not affected. On default, the financial institution institutes a claim through the fund administrator who then deducts the outstanding balance from the member's accumulated savings before paying the remainder to the member.

South Africa: Permits Direct Loans and Collaterals for Third-Party Providers

South Africa has the most traditional model of pension system, at which it permits funds to grant either a direct loan or to furnish a guarantee for a loan from a third party. Structurally, the pension system comprises of three pillars including the means-tested State Old Age Grant (SOAG), Occupational Funds and Voluntary Retirement Savings. The SOAG is means-tested and therefore non-contributory. Individuals who are 60 or older with an income of under R73,800 for singles and R147,600 for couples receives a maximum monthly benefit of R1,600. The benefit is increased to R1,620 for those aged over 75.[24] The occupational funds has a relatively broader coverage -- 66% to 84% of population who work in the formal sector. As providers of housing finance are required to comply with the onerous provisions of the National Credit Act, only 30% of funds provide direct housing loans to their members and the maximum loan amount cannot exceed 90 percent of the fund member's accumulated retirement savings. The remaining 70% of funds choose to assist their members to access housing finance by providing housing guarantees to third-party housing finance providers secured by the pledge of those members' benefits in favour of the funds.

There are some advantages to the pension fund of appointing a third-party loan provider over offering loans directly to members. First, the funding for the loans is furnished by the loan provider (and not from retirement fund reserves or investible funds). This allows trustees to invest fund assets in investment vehicles that continue to generate market-related returns for their members. Second, trustees do not have to be concerned about eroding fund assets (and investment returns) in order to finance the loan book. In some scenarios, loan books are allowed to grow so large that fund assets have been diverted to finance the book instead of being directed towards generating long-term investment returns. Third, trustees are able to ring-fence the depletion of

[24] https://www.oecd.org/els/public-pensions/PAG2017-country-profile-South-Africa.pdf

members' retirement savings at individual member level in the event of members defaulting on their loans. The entire fund does not have to carry the cost of bad debts (as it would have to do if direct loans were given). The risk of bad debts lies with the loan provider. Last, fund trustees do not have to concern themselves with operating and managing a loans business, supporting infrastructure costs and developing core competencies in lending.

However, this does not mean that use pension fund for collateral is a perfect solution. In fact, administrative challenges should also not be underestimated – not least ensuring that the pension drawdown is actually used to finance a residence and not used for non-housing related purposes. The challenge in applying pension as collateral regime could potentially lead to higher leverage of the residents, as they can borrow more than not utilizing pension as collateral. It can lead to financial unsustainability could be even worse when risky loans are granted.

We also found that different approaches to providing housing finance through pension savings face different obstacles and constraints. What may be a challenge for withdrawal may not be for collateral and vice versa? It's important for pension administrators and policymakers to keep these unique challenges in mind when trying to implement or reform an already existing scheme.

4 SURVEY

The initial motivation for the survey was due to the lack of information readily available on our area of study. Indeed, answering questions about the efficiency of different systems requires a clear categorization of the policy mechanisms used by pension systems. As this categorization does not yet exist, an added value to the research field was to create a database as large as possible, recording the different systems. Because the disentanglement of the different categories could prove to be tedious and technical, going from broader categories such as the possibility of early withdrawal or not, to the type of contribution adopted in each system, we needed the survey to be answered by regulators.

For these reasons, we sent a detailed questionnaire to the members of the IOPS, the International Organization of Pension Supervisors. The first step of the categorization process was to understand the different types of regulations in effect. Therefore, the pension regulators were the most suitable to answer the different questions and the most likely to share data. Another important point is that the IOPS has more members than the OECD, making the pool of respondents potentially larger and more diverse.

The survey had two purposes: creating a new standalone database that focused solely on the topic of pension access to savings and generating more information for future academic work. Gathering this information was the first step to a broader analysis, which was meant to be complimented by macroeconomic indicators and data from other observational studies. The prerequisite for such a task, and consequently a major subject of concerns, was to obtain a significant number of responses allowing for statistical analysis.

To maximize chances to receive as many answers as possible, the questionnaire was sent both in a paper and in an electronic version. It is also important to mention that the survey was divided in two parts. The first one focused on regulatory issues allowing for the categorization in terms of different regulations mentioned earlier. The second part, on the other hand, focused on practical aspects of the implementation of different policies, enquiring for example for the homeownership rate as an indicator of the program's impact. It was therefore less critical than the first part but could potentially provide valuable information for subsequent analysis.

Although the survey is not as exhaustive as we would have intended, the goal was to start paving the way for subsequent research and the obtained database is meant to be expanded. In order to do so, the survey provides a framework in which most of, if not all, the systems could fit. Of course, as these policies and regulations vary in time, the framework is doomed to change with paradigmatic shifts and new policy innovations, but it was conceived in order to be flexible enough to absorb minor variations. The room for improvement left is significant but mainly lies in the quantity of information gathered.

4.1 Survey Part I

In Part I, question a to i focus on the regulatory framework, which includes questions focused on the characteristics of the pension arrangement, early access to the pension fund, the form and allocation of early withdrawals for housing finance, as well as the percentage of early withdrawals that are used for housing. To be more specific, first we asked all sample countries to define their pension scheme in question a to c of Part I, whether it is voluntary or mandatory, whether it is defined benefit (DB), defined contribution (DC), or hybrid, and whether it is occupational or personal. The reason that the pension scheme matters is because different pension schemes tend to behave differently regarding early withdrawal. For instance, a mandatory scheme would have more restrictions for early access relative to a voluntary scheme.

If the surveyed countries allow early withdrawals, we asked follow-up questions in question d for details on withdrawal purposes, whether members can take out money for any purpose or housing purposes such as: down payment, direct loans, renovation and as a collateral for the mortgage. We also asked about whether other purposes such as education, hardship, and health were valid justifications for early. In terms of restrictions with early withdrawal, in question e to g in Part I, we also asked about the earliest time for withdrawal, maximum withdrawal limits, if any tax penalty is applied, and the percentage of the withdrawal used for housing. In addition, we asked the form that the access takes for housing purpose (question h Part I), including direct loan, lump-sum withdrawal, collateral for the mortgage from the pension fund and from third party provider. Through this question, we want to know how many countries are using collateral for the mortgage from a third-party provider as we assume that this could be a better way to balance future benefit payout with housing finance by not affecting the amount of money used for investment within the fund.

If the respondent countries do not have early access to the pension fund, an additional question is asked regarding any other forms of compulsory savings for housing, and we would ask them to skip unapplicable questions.

4.2 Survey Part II

After gathering information about the regulatory frameworks of different countries' pension systems, we further expanded our scope of research on knowing how pension funds interact with the market for housing finance and/or the provision of mortgages. To gather information on this, we asked questions a to e in Part II about the existing housing market and debt conditions, as well as measures of the effectiveness of the pension regulations and open-end questions regarding to challenges and lessons learnt. To help us understand the existing market and debt conditions, we asked about total outstanding housing debt and percentage of total outstanding debt financed by pension fund (b in Part II). To examine the effectiveness of countries' pension scheme, we asked question a and c in Part II on subjects such as the total assets under management, pension coverage, as well as a comparison of homeownership before and after the pension fund allowed early withdrawal for housing. Lastly, questions d and e in Part II focus on financial metrics such as interest rates, default rates, fraud, and NPLs in order to understand the strengths and weakness of the country's we surveyed. These could later on become valuable resources regulators for regulators to make policy improvements.

South Africa: Engagement in Linking Pension Funds to Housing Market Is Limited By Its Structural Weaknesses

Titling issues and fraud are purely administrative but hard to address. The fact that the titling of some lands is deficient increase the risk in financial transaction by questioning the tangibility of private property in certain areas. It is hard for a fund to consent to a loan when the withdrawer cannot prove she actually owns the land. This is notwithstanding the perseverance of fraud against which it is difficult to fight and that is fostered by administrative uncertainties such as the titling issues.

4.3 Survey Results

18 countries from Europe, Asia-Pacific, Latin America and Caribbean, and Sub-Saharan Africa have responded to the survey. Respondents are listed as follows:

- Europe (7): Austria, Croatia, Ireland, Iceland, Lithuania, Poland, Romania
- Asia-Pacific (2): Australia, India
- Latin America and Caribbean (3): Brazil, Chile, Mexico
- Sub-Saharan Africa (6): Ghana, Kenya, Mauritius, Namibia, Nigeria, Uganda

Among them, seven out of the 18 countries are classified as high-income countries with gross national income per capita of more than US$12,056, four are upper-middle income countries (US$3,896 to US$12,055), six are lower-middle income countries (US$996 to US$3,895), and one belongs to the low-income group with US$995 or less gross national income (Graph 1).

Taking a closer look at the pension system characteristics, most of the respondent countries (9) adopt the voluntary contribution system, five identify themselves as mandatory regimes, and two as hybrid (Graph 2).

Another way to classify pension schemes is by the way they collect the distribute benefits. Defined contribution plans (DC) does not promise a specific amount of benefits at retirement. The employee or the employer (or both) contribute to the employee's individual account under the plan, sometimes at a set rate. These contributions generally are invested on the employee's behalf. The employee will ultimately receive the balance in their account, which is based on contributions plus or minus investment gains or losses. The value of the account will fluctuate due to the changes in the value of the investments. On the other hand, defined benefit plan (DB) promises a specified monthly benefit at retirement. The plan may state this promised benefit as an exact dollar amount, such as $100 per month at retirement. Or, more commonly, it may calculate a benefit through a planned formula that considers such factors as salary and years of service. The benefits in most traditional defined benefit plans are protected within certain limitations[25]. Most of the respondent countries (12) have a DC scheme, while four are hybrid of DC and DB and none employs a DB scheme. From this small sample we gather that countries have transitioned away from DB schemes (Graph 3).

Furthermore, 61.1% of respondents reported that pension fund in their jurisdiction allows early access (Graph 4). Among them, 63.2% of early access serve for housing purpose, 26.3% are for other purposes and 10.5% can be used for any purpose. Of the 10 countries that permit early access for housing purpose, the forms of early access are identified as following: four countries allow lump-sum withdrawal, two countries offer direct loan, two allow the pension savings to serve as collateral for mortgage loan from third-party provider, and the remaining two countries allow participants to use pension savings as collateral for mortgage loan from pension fund itself of mortgage loan in general.

[25] https://www.dol.gov/general/topic/retirement/typesofplans

5 Statistical Analysis

As we saw above, the survey results have helped us to group the countries by different and useful self-reported categories. The relevance of this sample rests in the accuracy of the information reported and the possibility of characterizing these countries by their answers. Nevertheless, the coverage of the survey has been limited to those countries that were prompt to answer. In this regard, up to this point, we count with only eighteen countries' responses, which are by themselves a great contribution to the understanding of the different pension funds systems, as we have described and analyzed in section 2.1. To address this issue, we have searched for other countries' information to determine, in a broader definition if they allow or not early withdrawal. The latter was possible since most of the countries that allow early withdrawal for housing allow it without restriction in the destiny of the fund. Therefore, we have extended our sample to sixty-seven countries, we did this in a balanced way for those that allow early withdrawal to their pension fund system and those that do not allow early withdrawal, and with this information, we have collected some financial and macroeconomic data to characterize the so-called *augmented sample*[26].

Based on the survey we have observed that most of the countries that allow early withdrawal to have also reported that they allow this for housing purposes. Thus, we have determined that we can have a good approximation of the group of countries that allow early withdrawal for housing by analyzing those that allow early withdrawal, without discriminating by destiny of the funds, or at least not reported in the sources of information that are publicly available, compared to those that declare no early withdrawal allowed. In order to do that, we have collected information for different regulators, multilateral institutions, and international reports' information. The number of countries in the augmented sample can be dissected in two groups; countries that allow early withdrawal, and thirty-two of the countries do not allow early withdrawal (Table 1). While this is an improvement and step ahead in our research, the lack of data for some

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[26] We will refer to the combination of the survey responses and available data as augmented sample throughout our paper

countries could reduce the sample in addressing some of the variables analyzed, the latter will be discussed below. The variables that we were able to collect and analyze are the ratio of pension funds assets to GDP, homeownership rates, GDP per capita, real return of pension funds, financial development index of the country, and financing structure of the pension funds.

In a first step, we have analyzed the variables cited for the survey sample, in order to determine if we could extrapolate some of the observations from the augmented sample. As we can see in Graph 5, countries in the survey sample that allow early withdrawal for housing present a lower homeownership rate on average. Although we are not trying to determine why some countries would embark in policies that promote housing ownership, the fact that those that allow early withdrawal for housing purposes present a lower ratio, allows us to think that they could have been trying to tackle this issue via pension funds, or they could have been in an earlier step of housing development market. Also, the mentioned difference could be attributed to differences in how mature is the system in the specific group of countries, which at this point we are not able to determine.

The group of countries that we are analyzing does not present a significant difference in their income per-capita. The latter is relevant in two ways. For one, there is a balance in our sample which allows us to say that we have a fairly balanced sample, which is helpful to determine other differences and the robustness of these. For the other, there has been a discussion regarding what type of countries have allowed these dynamics. In our sample, we observed no significant differences between groups.

Second, as we described above, we had some concerns about the size of the survey sample to make inferences, for this reason, we also present the results observed in the augmented sample. It is important to notice that most of the observations regarding statistical differences between groups are maintained in our augmented sample, for instance, the homeownership is slightly lower for those countries that do not allow early withdrawal (Graphs 7 and 8). In addition, those countries that allow early withdrawal present a higher ratio of Pension Funds to GDP (Graph 6). This difference corresponds to roughly 37 percentage points, which is also reflected in the augmented sample, although the difference for this sample is close to 28 percentage points (Graph 9 and 10). The latter could be correlated with our next variable which corresponds to the GDP per-capita. We look at this variable in order to analyze if there were some differences regarding the development of the country (Graphs 11 and 12). As we can see, countries that allow early withdrawal presents a higher income per-capita close to US$ 30,000, compared to those that do not allow early withdrawal that presents a lower income per-capita on average, which is close to US$ 18,300.

There was a concern about how the real estate market behaves in different jurisdictions. In order to address this question, one can observe that there is no statistical difference between the two groups of countries in terms of real estate prices. On average, in the group that is not allowed to access the funds before retirement, the houses prices have increased by 4.3% on average for the last five years. While the group that allows early withdrawal have on average a 12.6% of house prices increase in the same period (Graphs 13 and 14). Expanding this analysis the real return presents no differences between groups (Graphs 15 and 16).

Third, as a policy concern, the fact that countries from such different regions and levels of income have pursued the development of a housing market via pension funds could be informative for further research. We are aware of the limitations of presenting such statistics, in terms of the real motivations that different countries could have had to change their policies or systems. In this regard, we have seen that there is a difficulty to unify criteria in order to determine which of the systems is more beneficial for the people.

Finally, the augmented sample is a step further in the understanding of what type of countries have this type of pension funds' characteristic. In addition, we have seen that the augmented sample is informative in a series of ways. For one, there is a potential to add and analyze other variables that could expand the analysis proposed on this note. Also, it represents a larger set of countries to explore, from different regions of the world and stages of developments.

6 FINAL REMARKS

For our contribution we have focused on the policy motivations, challenges, and the different alternatives available for pension funds to provide housing finance for workers. Our focus has been on demand-side alternatives, which aim to facilitate the access to the existing supply of housing. Among the mechanisms used by pension funds we found direct loans, collateralized loans, and early withdrawal as the main pathways through which workers are able to leverage their pension savings to have access to housing.

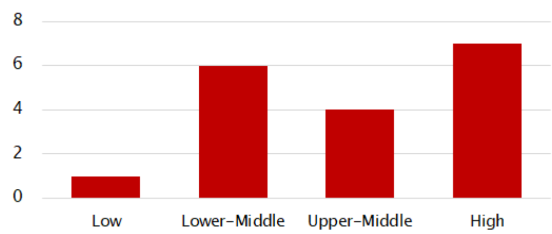
In our research we have found a broad degree of heterogeneity in the policy arrangements they choose for providing housing finance. Our case studies on Mexico (direct loans), South Africa (collateralized loans), and Singapore (hybrid system with direct loan provision) have helped to illustrate these differences and the trade-offs that policymakers and individuals face.

Our survey on the use of pension savings for housing finance, compiled responses from 18 countries. From this small sample we were able to present a preliminary overview of countries. Given the limited size of our survey sample, we have expanded the sample with roughly fifty more countries, and collected data to characterize countries by financial and macroeconomic features. Our augmented sample allowed us to develop a better understanding of our topic.

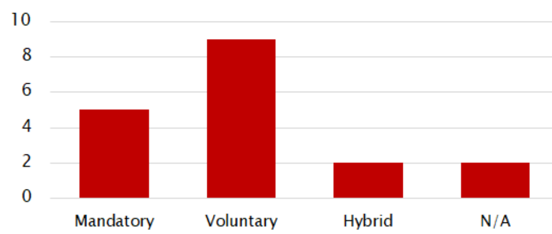
From the statistical analysis of the augmented sample, we were able to find some interesting insights. First, we have found that the homeownership rate is slightly lower for those countries that do not allow early withdrawal relative to those that do. Second, we have observed that countries that allow early withdrawal have a higher ratio of Pension Funds to GDP, and a higher income per-capita on average. Finally, we see from our statistical analysis that home prices in early access countries are higher than in countries that don’t allow for it but that returns are about the same. Although our data is not robust enough to make causal claims, we hope that this sheds some light for future research that is more narrowly focused on these relationships we have found.

GRAPHS AND TABLES

Graph 1: Countries by Income Classification
(number)

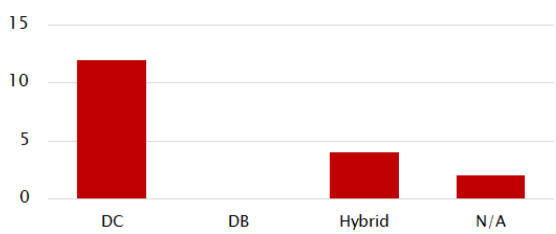


Graph 2: Systems Distributions
(number)

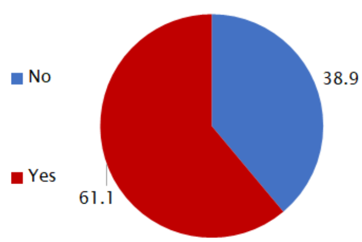


Source: Capstone team.

Graph 3: Systems Distribution II
(number)



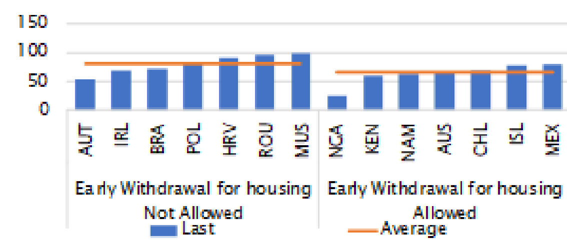
Graph 4: Can the Pension Fund be Accessed Early?
(percentage)

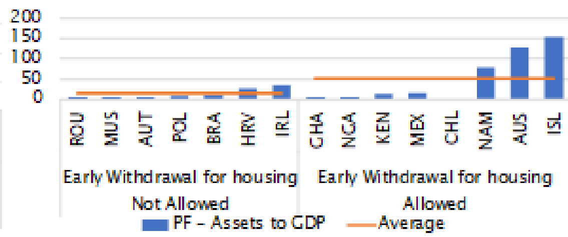


Source: Capstone team.

Graph 5: Homeownership rate – by early withdrawal allowance
(percent)

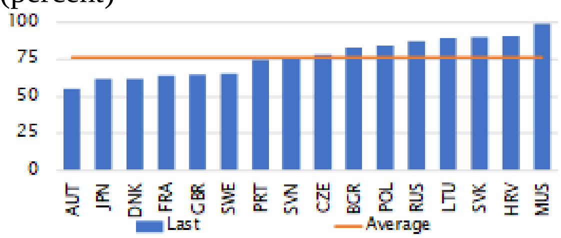
Graph 6: Pension Funds Assets to GDP – by early withdrawal allowance
(percent)



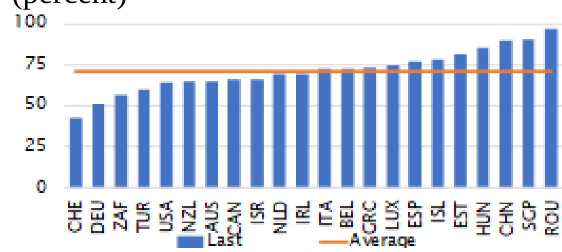


Source: Capstone team based on tradingeconomics' information.

Graph 7: Homeownership rate – Countries that do not allow early withdrawal
(percent)

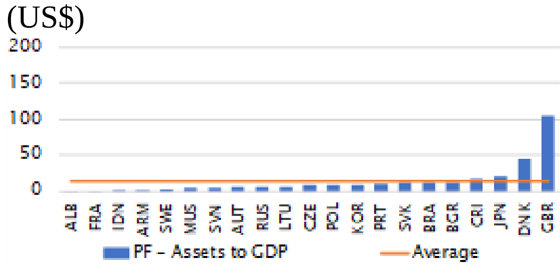


Graph 8: Homeownership rate – Countries that allow early withdrawal
(percent)



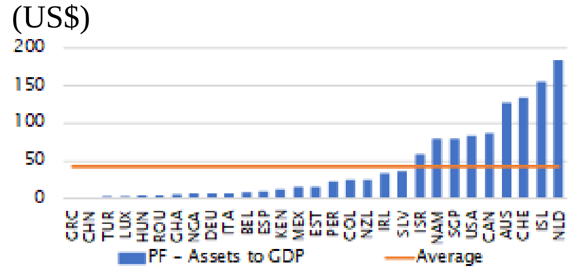
Source: Capstone team based on tradingeconomics' information.

Graph 9: Pension Funds Assets to GDP – Countries that do not allow early withdrawal
(US$)



Source: IMF.

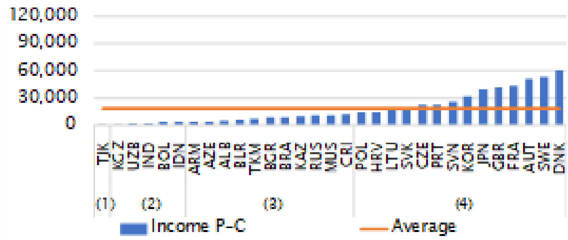
Graph 10: Pension Funds Assets to GDP – Countries that allow early withdrawal
(US$)

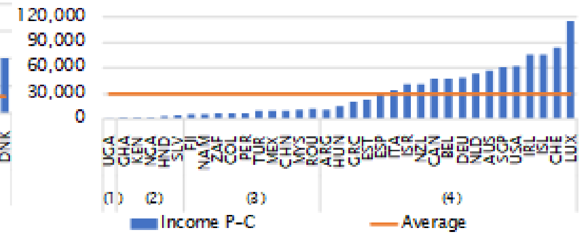


Source: IMF.

Graph 11: Income Per-capita – Countries that do not allow early withdrawal
(US$)

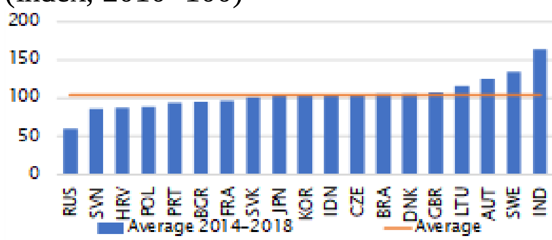
Graph 12: Income Per-capita – Countries that allow early withdrawal
(US$)





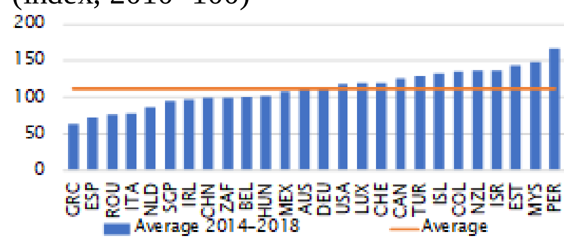
(1) Low Income countries; (2) Lower Middle Income countries; (3) Upper Middle Income countries; (4) High Income countries.
Source: IMF.

Graph 13: Real Estate Prices – Countries that do not allow early withdrawal
(index, 2010=100)



Source: Capstone Team based on BIS information.

Graph 14: Real Estate Prices – Countries that allow early withdrawal
(index, 2010=100)



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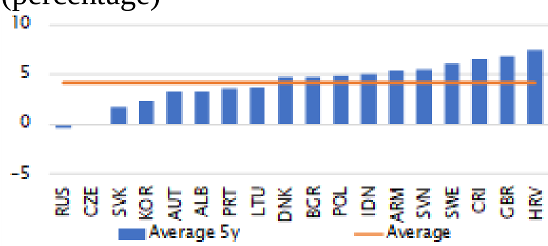
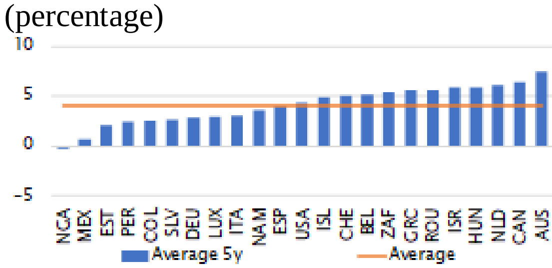
Graph 15: Pension Funds' real return – Countries that do not allow early withdrawal
(percentage)



Source: Capstone Team based on OECD information.

Graph 16: Pension Funds' real return – Countries that allow early withdrawal
(percentage)



Source: Capstone Team based on OECD information.

Table 1: Countries in the augmented sample – group region and income group

Countries that do not allow early withdrawal			Countries that allow early withdrawal		
Country	**Group Region**	**Group Income**	**Country**	**Group Region**	**Group Income**
Albania	Europe & Central Asia	Upper middle income	**Argentina**	Latin America & Caribbean	High income
Armenia	Europe & Central Asia	Upper middle income	**Australia**	East Asia & Pacific	High income
Austria	Europe & Central Asia	High income	**Belgium**	Europe & Central Asia	High income
Azerbaijan	Europe & Central Asia	Upper middle income	**Canada**	North America	High income
Belarus	Europe & Central Asia	Upper middle income	**China**	East Asia & Pacific	Upper middle income
Bolivia	Latin America & Caribbean	Lower middle income	**Colombia**	Latin America & Caribbean	Upper middle income
Brazil	Latin America & Caribbean	Upper middle income	**El Salvador**	Latin America & Caribbean	Lower middle income
Bulgaria	Europe & Central Asia	Upper middle income	**Estonia**	Europe & Central Asia	High income
Chile	Latin America & Caribbean	High income	**Fiji**	East Asia & Pacific	Upper middle income
Costa Rica	Latin America & Caribbean	Upper middle income	**Germany**	Europe & Central Asia	High income
Croatia	Europe & Central Asia	High income	**Ghana**	Sub-Saharan Africa	Lower middle income
Czech Republic	Europe & Central Asia	High income	**Greece**	Europe & Central Asia	High income
Denmark	Europe & Central Asia	High income	**Honduras**	Latin America & Caribbean	Lower middle income
France	Europe & Central Asia	High income	**Hungary**	Europe & Central Asia	High income
India	South Asia	Lower middle income	**Iceland**	Europe & Central Asia	High income
Indonesia	East Asia & Pacific	Lower middle income	**Ireland**	Europe & Central Asia	High income
Japan	East Asia & Pacific	High income	**Israel**	Middle East & North Africa	High income
Kazakhstan	Europe & Central Asia	Upper middle income	**Italy**	Europe & Central Asia	High income
Korea, Rep.	East Asia & Pacific	High income	**Kenya**	Sub-Saharan Africa	Lower middle income
Kyrgyz Republic	Europe & Central Asia	Lower middle income	**Luxembourg**	Europe & Central Asia	High income
Lithuania	Europe & Central Asia	High income	**Malaysia**	East Asia & Pacific	Upper middle income
Mauritius	Sub-Saharan Africa	Upper middle income	**Mexico**	Latin America & Caribbean	Upper middle income
Poland	Europe & Central Asia	High income	**Namibia**	Sub-Saharan Africa	Upper middle income
Portugal	Europe & Central Asia	High income	**Netherlands**	Europe & Central Asia	High income
Russian Federatio	Europe & Central Asia	Upper middle income	**New Zealanc**	East Asia & Pacific	High income
Slovak Republic	Europe & Central Asia	High income	**Nigeria**	Sub-Saharan Africa	Lower middle income
Slovenia	Europe & Central Asia	High income	**Peru**	Latin America & Caribbean	Upper middle income
Sweden	Europe & Central Asia	High income	**Romania**	Europe & Central Asia	Upper middle income
Tajikistan	Europe & Central Asia	Low income	**Singapore**	East Asia & Pacific	High income
Turkmenistan	Europe & Central Asia	Upper middle income	**South Africa**	Sub-Saharan Africa	Upper middle income
United Kingdom	Europe & Central Asia	High income	**Spain**	Europe & Central Asia	High income
Uzbekistan	Europe & Central Asia	Lower middle income	**Switzerland**	Europe & Central Asia	High income
			Turkey	Europe & Central Asia	Upper middle income
			Uganda	Sub-Saharan Africa	Low income
			United State	North America	High income

Source: Capstone team based on World Bank's New country classifications by income level: 2018-2019.

APPENDIX

Appendix 1: Questionnaire

Questionnaire:

Respondent Information
Country:
Institution:
Name of Respondent:
Contact Details:

I. Regulatory Framework for Pension Funds Investment in Housing

a. Please indicate (check) the characteristic of pension arrangement that best define your jurisdiction:

- ☐ Voluntary
- ☐ Mandatory
- ☐ Other (please specify) _______________

b. Please indicate (check) the characteristic of pension arrangement that best define your jurisdiction:

- ☐ Defined Benefit (DB)
- ☐ Defined Contribution (DC)
- ☐ Hybrid
- ☐ Other (please specify) _______________

c. Please indicate (check) the characteristic of pension arrangement that best define your jurisdiction:

- ☐ Occupational
- ☐ Personal
- ☐ Other (please specify) _______________

d. Can the pension fund be accessed early for specific or general purpose? (In this and subsequent answers please clarify which type of pension scheme referred to.)

Type of pension scheme referred to ______________________________

- ☐ Yes

- If yes, for which purpose? Please check all that apply.

  ☐ Any purpose ☐ Housing (down payment)

  ☐ Housing (direct loans/mortgages)

  ☐ Housing (as a collateral for loan/mortgages)

  ☐ Housing (renovation/repairs)

  ☐ Education ☐ Hardship ☐ Health

  ☐ Other (please specify) ____

☐ No

- If NO, is there any upcoming plan of early access? _____________________

____

____

e. If early withdrawal from pension savings is allowed, what is the earliest time that member can have access? Maximum withdrawal limit?

Type of pension scheme referred to ____________________________

- Earliest time______________
- Maximum withdrawal limit (% of fund) ______________
- Maximum withdrawal limit (local currency absolute limit) ______________
- Allowed frequency of withdrawals______________
- Maximum number of withdrawals______________

f. If early withdrawal from pension savings is allowed, is there any tax penalty? By how much? Please provide answer and any further explanation:

Type of pension scheme referred to ____________________________

☐ Yes, there is tax penalty by______________%.

☐ No

☐ Other (please specify) ______________

g. What % of overall early withdrawals are used for housing? Approximate answers can be given if specific figures are not available.

Type of pension scheme referred to ____________________________

Of all early withdrawals, how much was used for housing ______________%.

h. If funds can be accessed for the purpose of financing housing what form does the access take? Please check all that apply.

Type of pension scheme referred to ______________________________

- ☐ Direct loan
- ☐ Lump sum withdrawal
- ☐ Collateral (if yes, please check all that apply)
  1) ☐ Collateral for Mortgage Loan from Pension Fund
  2) ☐ Collateral for Mortgage Loan from Third Party Provider
  3) ☐ Other (please specify) _______________

i. Are there any other forms of compulsory savings in your jurisdiction for housing? (e.g. compulsory contributions to both housing and pension fund)?

☐ Yes (please specify) _______________ ☐ No

II. Pension Funds Investments for Housing in Practice

a. Please specify:

- Total Asset Under Management (AUM) of the pension system _______________
- Pension Coverage: What is the percentage of labor force that contributes to the pension system _______________ %
- Percentage of Pension Fund's Assets Allocated to
  - Real Estate: ___________%
  - Stocks: ___________%
  - Bonds: ___________%
  - Money Market Instrument: ___________%
  - Alternative Assets: ___________%

b. Percentage of total outstanding housing debt:

- What is the total outstanding housing debt in the market?

____

- What is the total outstanding housing debt that is financed by the Pension Fund?

  ____

c. Percentage of population that owns a home:

- Prior to legislation allowing pension savings to be accessed for housing, what was the percentage of the population that owned a home? ___________%
- After the legislation allowing pension savings to be accessed for housing, what is the percentage of the population that owns a home? ___________%

d. If the pension funds in your jurisdiction are used as a direct loan,

- How is the interest rate determined?

  ____

- Have default rates been an issue?

  ____

- If applicable, what is the maximum loan-to-value ratio (LTV)? ___________%
- What is the average loan-to-value ratio (LTV)? ___________ %
- What is the nonperforming loan ratio (NPL)? ___________%
- What is the average age for people who got a mortgage?

  ____

e. What lessons can be learnt from experience of accessing pension savings for housing funding in your jurisdiction?

____

____

____

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