

HOUSING FINANCE INTERNATIONAL

The Quarterly Journal of the International Union for Housing Finance



- ➔ Educational qualifications as a predictor of home loan success: 15 years of HomeStart's graduate loan
- ➔ The role of development banks in financing sustainable and affordable housing: The EcoCasa program
- ➔ Reducing the risks of mortgage default and possession in the UK; an international perspective
- ➔ Defaulting tenants and mortgage debtors in South Africa should not be sheltered under the PIE Act principles
- ➔ The financialisation of housing and the housing crisis in Sydney
- ➔ Regulation of the Swedish mortgage market
- ➔ The European Federation for Living [EFL] Spring Conference 2018

International Union for Housing Finance

Housing Finance International

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Innovation, the World Bank and Housing Finance International

The World Bank has organised and hosted a series of Global Housing Finance Conferences geared for an international audience of housing finance professionals, policy makers and others. 2018 saw the Bank's 8th Global Housing Finance Conference, held in Washington DC from 29th May to 1st June 2018.

The theme of this year's conference was "New ideas for financing affordable housing" and the programme presented a tour de force of stimulating speakers across a range of sessions covering subjects as diverse as the use of technology in affordable housing finance, raising funds from pensions funds and the potential of big data. Judging by the reaction of delegates the conference was a real success.

One new feature for 2018 was a competition for the presentation of innovative ideas and/or projects from across the globe. Representatives of organisations were asked to submit articles describing innovations in the affordable housing field. These had to have made or have the potential to make a real impact in their own markets and to be replicable elsewhere. An expert panel was established to judge the quality of the proposals submitted.

It was agreed that the two articles judged the best by the expert panel would be presented at a special session of the Conference. They would then be published in the next issue of *Housing Finance International* [HFI], where they would reach a world-wide readership.

Listening to the Conference sessions and talking with delegates during breaks it was clear that the world of affordable housing continues to exhibit real contrasts between the developed and developing markets. Rightly, the principal focus of the conference was on developing countries, where key issues to be tackled include:

- Rapid urbanisation, usually combined with a steep rise in household numbers,
- large informal housing sectors beset by low standards of what is often incremental construction, plus problems over land tenure and registration of title.

These exist against a backdrop of real poverty, cash-strapped governments and underdeveloped primary and secondary mortgage finance markets. Much discussion is focussed on how to lever in sufficient housing finance to make worthwhile aspirational projects possible.

In contrast, in the (so called) developed countries the challenges tend to revolve around problems of affordability (in spite of comparatively affluent households) created by chronic undersupply of new homes both to rent and to buy. Such problems are often exacerbated by a tendency for states to reduce commitments to build sufficient social housing and homes for low-cost homeownership. Strong aspirations for homeownership amongst those on lower incomes often sit uneasily with a public sector that has narrowed its traditional role of comprehensively meeting welfare and housing needs.

In the event, each of the two winning articles, which won strong approval from delegates at the conference and which are published in this issue of HFI, reflect issues associated with either the developed or developing world.

The overall winner of the competition was an article by Andrew Mills of Homestart. Homestart is a lender wholly owned by the state of South Australia and dedicated to making homeownership affordable for those on lower incomes in that state. Generating a deposit in a market with high and rising prices has long been recognised as a key issue. In his article *Educational qualifications as a predictor of home loan success: 15 years of HomeStart's Graduate Loan*, Mr Mills describes how Homestart has developed a low-deposit loan targeted initially at Graduates but also more recently at those with a range of other qualifications. Mr Mills demonstrates how the graduate loan actually performs better than mainstream prime mortgage loans in terms of default and how it has enabled large numbers of households to gain a foothold on the homeownership ladder. Homestart has demonstrated that it is possible to produce a viable scheme that is not over-complex, and which does not require large subsidies; this is something that could well be applied in other markets.

Our other winning article; *The role of development banks in financing sustainable and affordable housing: The EcoCasa program*, focusses on the rapidly growing housing market of Mexico.

Mexico has a fast-growing population and a large housing deficit. Over 40% of its population live in poverty. It is in this context that Ernesto Infante Barbosa and colleagues describe the EcoCasa programme in their article. This programme, initiated by Sociedad Hipotecaria Federal [SHF], represents an innovative financing partnership with the German Development Bank [KfW] and the Inter-American Development Bank [IDB], plus funds and grants from the German Government, the European Union and the Clean Technology Fund. Using this funding EcoCasa has successfully promoted a project that is confident of completing 60,000 sustainable and energy efficient homes by 2023. Over 36,000 new homes had been completed by 2017. What is almost more impressive is that these new homes have been provided at a cost no higher than a conventional home. This exciting programme has demanded a range of innovative interventions with developers and others; altogether this is an article well worth studying.

Our third article in this issue; *Reducing the risks of mortgage default and possession in the UK; an international perspective*, tackles the difficult issue of mortgage safety nets; the provisions that exist to make default by mortgagor homeowners less likely and to assist those in difficulties in terms of paying their mortgage. Peter Williams, Steve Wilcox and Christine Whitehead contrast the mortgage safety net provisions existing in the UK with those in a range of other countries including Australia, Canada and several European states. They show how in the UK there has never been a fully coherent safety net but rather a set of measures than can be characterized as such. Elsewhere, assistance for mortgagors, where it exists, is often via measures primarily intended to address other issues.

Mortgage default is also the subject of our next article; *Defaulting tenants and mortgage debtors in South Africa should not be sheltered under the PIE Act¹ principles*. In this interesting

¹ The Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998 [PIE Act].

piece, Vuyisani Moss examines the legal and regulatory framework for dealing with mortgage default in South Africa. He goes on to assert that the Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998 [PIE Act] has been used inappropriately to deal with cases of mortgage default and non-payment of rent. Mr Moss believes that use of the Act in ways for which it was not designed have caused headaches for lawyers and can deter investors. In making his case he draws a fascinating picture of the South African housing and mortgage market.

Is a house a home or an investment? In what circumstances can investment in residential real estate have unacceptable consequences

in terms of rising prices and squeezed affordability? Alan Morris sets out to answer these and other questions in his analysis of the Sydney housing market; *The financialisation of housing and the housing affordability crisis in Sydney*. Morris analyses the profound impact of domestic and overseas investors on the Sydney property market and concludes that with the median house price now at over AU\$ 1 million accessing homeownership is now impossible for many households. In Australia as a whole it has been estimated that 27% of the housing stock is now owned by investors.

Sweden has had long-term problems with rising house prices and increasing household debt. In her article, *Regulation of the Swedish*

housing market, Alexandra Leonhard analyses the effectiveness of a series of measures brought in by the Swedish government with the aim of curbing excessive lending practices. Ms Leonhard concludes that the measures have had only limited success until recently.

The final article in this issue is a valuable report on the European Federation for Living [EFL] Spring Conference, which covered a range of subjects within the affordable housing field.

Enjoy!

Andrew Heywood

JUNE 2018

Contributors' biographies

Claudia Castillo, M. Architect, has been awarded by the Abraham Zabludovsky Prize and the Architecture Biennale, and has extensive experience in sustainable building and participation in important Energy Efficiency projects for ICA, GIZ, and UNAM. She works as National Expert for KfW and SHF in the design and implementation of the EcoCasa Portfolio.

José Cruz Triay has extensive experience in project management for sustainability initiatives in the built environment. He is Director of the Architecture Program at Tecnológico de Monterrey Campus Estado de México, Professor at Tecnológico de Monterrey's School of Architecture, Art and Design, and advisor for sustainable architecture projects and programs.

Claudia Magalhães Eloy is a consultant on housing finance and subsidy policy in Brazil, who currently works for FIPE [Fundação Instituto de Pesquisas Econômicas] and has worked for the World Bank [TA] and for the Brazilian Ministry of Cities and Companhia de Desenvolvimento Urbano e Habitacional de São Paulo [CDHU]. Claudia has also participated in the development of the National Housing Plan, in the analysis of the Housing Finance System. She holds a PHD in Urban Planning at the University of São Paulo [USP], a Master in City Planning at the University of Pennsylvania, a Master in Public Administration

at Bahia's Federal University [UFBA] and a BA in Architecture and Urban Planning [UFBA], with a specialization in Real Estate Finance at the Brazilian Economists Order [OEB]. She also attended Wharton's International Housing Finance Program.

Alix Goldstein is the General Assistant at the European Federation for Living. She completed her Master's degree in Urban Geography at the University of Amsterdam. Alix was an organizer of the 2017 International Social Housing Festival and completed an internship with the Amsterdam Federation for Social Housing Associations [AFWC]. Alix has a background in social justice work and believes strongly in the right to affordable housing.

Andrea Hernández holds a Sustainable Development Engineering degree by the Tecnológico de Monterrey. She has important experience in generating sustainable urban development studies and public policy proposals for institutions such as the World Bank and the Interamerican Development Bank. Currently, she oversees the urban aspect of SHF's Sustainable Housing Programs.

Andrew Heywood is an independent consultant specialising in research and analysis of housing and mortgage markets, regulation and policy with both a UK and international focus. He is a visiting fellow of the Cambridge Centre

for Housing and Planning Research [CCHPR] and a research fellow with the Smith Institute. He is also Editor of the journal *Housing Finance International*. Andrew writes for a number of publications on housing and lending issues and publishes reports commissioned by a wide range of clients.

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Alexandra Leonhard has worked with the housing and mortgage market since 2011. She holds a Ph.D in economics and has worked at the National Board of Housing, Building and Planning. After 4 years at the ministry of Finance she has recently started to work at the Swedish Institute for European Policy Studies.

Ernesto Infante Barbosa is an economist with extensive experience in development and social policy issues. For the past 10 years Ernesto has been working on sustainable housing policy, rural/urban housing finance, macro-economic monitoring, education policy, public finance and criminal justice policy, both in Mexico and the United Kingdom. He is currently, Deputy Director for Multilateral Affairs and Sustainable Housing Market Development at Sociedad Hipotecaria Federal [SHF]. He is responsible for the management and promotion of the multilateral project portfolio in SHF, including sustainable housing projects: ECOCASA, New Housing NAMA Facility and the Passive House component of the ECOCASA program. He holds a Master of

Contributors' biographies

Science in Social Policy and Development from the London School of Economics and Political Science [LSE]; a Master of Public Administration from The Monterrey Institute of Technology and Higher Education (Graduate School for Public Policy) as well as Executive Education Diplomas from the JFK School of Government (Harvard University), Georgetown University, and UNAM in topics such as: Energy Policy and Strategies; International Politics, Bilateral Cooperation and Conflict; and Public Policies for Education.

Andrew Mills is Head of Strategic Development for HomeStart Finance in Adelaide, Australia with a background in financial markets, treasury, strategy and product development. He is responsible for leading innovation in how the organisation provides mortgage finance, with particular expertise in the areas such as low deposit lending and shared equity.

Alan Morris is a research professor at the Institute for Public Policy and Governance at the University of Technology Sydney. He works mainly in the areas of housing and marginality. His most recent book, *The Australian Dream: Housing Experiences of Older Australians*, compares the impact of housing tenure on the everyday lives of older Australians dependent solely or primarily on the government age pension for their income.

Vuyisani Moss is a Director at the National Department of Human Settlements in South Africa and is affiliated to Nelson Mandela University's Human Settlements Programme. He obtained his PhD in Housing Finance in 2012 at Wits University and Diploma in Housing Finance at Wharton School. His expertise is in development finance, property markets,

policy development, financial literacy, and economic development with over 18 years of operational experience.

John Oliver is CEO of HomeStart Finance which is one of Australia's leading providers of affordable home finance. He has over 40 years of financial industry experience, having held previous senior executive roles with Bendigo and Adelaide Bank and the Commonwealth Bank in retail and business banking.

Alex J. Pollock is a distinguished senior fellow at the R Street Institute in Washington DC. He was President and CEO of the Federal Home Loan Bank of Chicago 1991-2004, and President of the International Union for Housing Finance 1999-2001.

Zaigham M. Rizvi is currently serving as Secretary General of the Asia-Pacific Union of Housing Finance and is an expert consultant on housing and housing finance to international agencies including the World Bank/IFC. He is a career development finance banker with extensive experience in the field of housing and housing finance spread over more than 25 countries in Africa, the Middle-East, South-Asia, East-Asia and the Pacific. He has a passion for low-cost affordable housing for economically weaker sections of society, with a regional focus on Asia-Pacific and MENA.
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Kecia Rust is the Executive Director of the Centre for Affordable Housing Finance in Africa, and manages the Secretariat of the African Union for Housing Finance. She is a housing policy specialist and is particularly interested in access to housing finance and the functioning of afford-

able property markets. Kecia holds a Masters of Management degree (1998), earned from the Graduate School of Public and Development Management, University of the Witwatersrand. She lives in Johannesburg, South Africa.

Mark Weinrich holds graduate degrees in political science and economics from the University of Freiburg, Germany. He is the General Secretary of the International Union for Housing Finance and the manager for international public affairs at the Association of Private German Bausparkassen.

Christine Whitehead is emeritus professor of housing economics at the London School of Economics. She works mainly in the fields of housing economics, finance and policy. She has worked with a wide range of international agencies as well as regularly for the UK government and Parliament.

Steve Wilcox is a former Professor of Housing Policy at the Centre for Housing Policy, University of York. As well as originating the UK Housing Review, now in its 26th year, he has written numerous reports on low income home ownership, and welfare reform related to help with housing costs in all tenures.

Peter Williams is a Departmental Fellow, Department of Land Economy, University of Cambridge. He was previously Executive Director of the Intermediary Mortgage Lenders Association, Director of the Cambridge Centre for Housing and Planning Research, Deputy Director General of the Council of Mortgage Lenders and Professor of Housing at the University of Wales, Cardiff. He is currently on the board of The National Housing Federation.



Asia Pacific region – June 2018

↳ By Zaigham Rizvi

Bangladesh

The agreement for the project named “Rural and Peri-Urban Housing Finance Of Bangladesh” has been signed on April 3, 2018 between the President of the Islamic Development Bank [IDB] Dr. Bandar M. H. Hajjar and finance minister of the Peoples Republic of Bangladesh Mr. Abul Maal A. Muhit during the 43rd annual meeting of IDB held in Tunisia on April 1-5, 2018. The Bangladesh House Building Finance Corporation will execute the project under the supervision of the Financial Institutions Division, Ministry of Finance. The total cost of the project is 140.35 million EUR, of which 94.75 million EUR will be financed by IDB. The main goal of the project is to provide low cost housing finance to build multi-storied building in the rural and peri-urban areas to save the cultivable land of the country. (By Mr. Sayef Husain)

A detailed article on “Issues and challenges of the housing sector in Bangladesh: strengthening the specialized state-owned financing” by Mr. Debasish Chakrabarty, Managing Director of the Bangladesh House Building Finance Corporation will appear in the next issue of Housing Finance International.

India¹

India is among the fastest growing major economies in the world. Its economy’s huge size catering for the needs of a big population of 1.3 billion (population wise the 2nd biggest country in world), of which 66% are under 35 years of age creates a great demand for housing across almost all segments of the market. India’s current urbanization position is 32%, or 377 million, of total population, which is expected to rise to 40%, or 600 million, by the year 2030. India’s housing shortage presently is calculated at 18.8 million, which will

also exponentially increase by 2030. India’s per capita income has risen from USD 1,345 in 2010 to USD 1,860 in 2016. This is also contributing to the people’s hopes, desires and to their ability to purchase a decently affordable house of their own. Because of India’s fast-growing economy, people’s desire to purchase as well purchasing power are also on the increase.

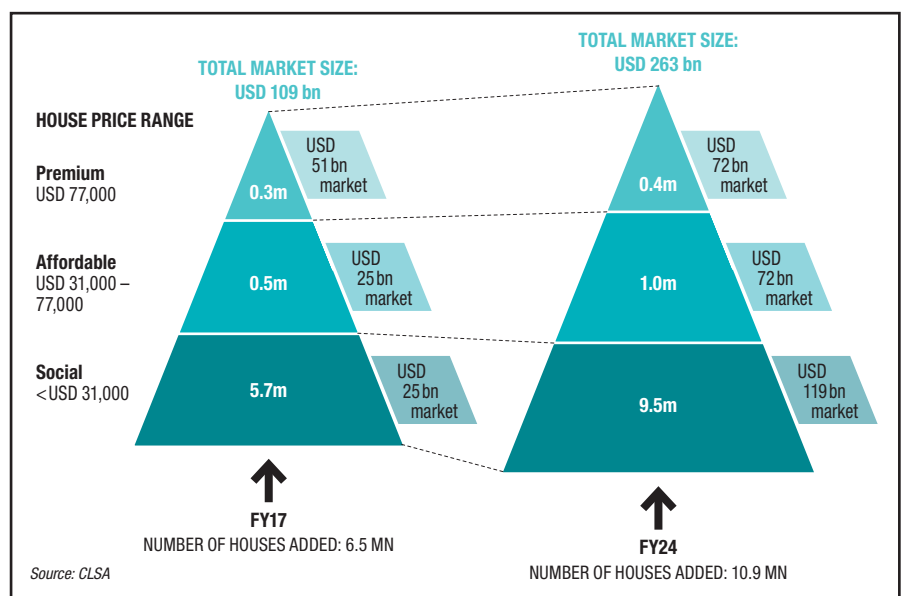
Fueled by the rapid economic upturn in the country, the overall housing market size is also expected to grow by 2.4x by FY24, and affordable housing market by 2.9 times. The following graphic presentation gives a proper understanding of the expected rise in demand.

So, India has the huge potential to see a substantial increase in its housing market i.e., housing demand as seen in the figure above, particularly in affordable housing segment, along with the surge housing finance agencies, which are already active nationwide, and would farther increase in keeping pace with the increasing demand for housing.

Evolution of housing finance in India

Here is a brief history of the evolution of housing finance in the country at a glance:

TIMELINE	ACTIONS/ACTIVITIES
Pre-1970	Centralised directed credit
1971	Housing and Urban Development Corporation – public sector, wholesale lending – financed State Housing Boards and Development Authorities
1977	HDFC: India’s 1 st mortgage finance company formed
1988	National Housing Bank – regulator of HFCs came into existence, which plays a combined role of regulator and development, provides refinance
Late 80s and early 90s	Public sector banks/insurance companies promote HFCs, private sector also enters
1990	Scheduled commercial banks get active in direct lending for housing finance
2010	Rise in affordable housing finance companies focusing on self-employed customers in the informal sector
2017	Affordable Housing Finance Budget – incentivized all constituents in the housing chain – developers, borrowers and lenders



¹ This article is based on a paper presented at MarcusEvan Global Affordable Housing Conference at Singapore, in April, 2018. The paper is titled “Fostering Affordable Housing Markets: Catering

to the Unmet Demand” by Conrad D’Souza, Member of Executive Management & Chief Investor Relations Officer, Housing Development Finance Corporation [HDFC], India

While various institutions and setups were being developed to facilitate the rising demands of mortgage financing, supporting institutional frameworks were also evolving to meet the market requirements for mortgages.

The most important component of today's financing paradigms are the Credit Bureaus. India's first credit bureau was established in 2000, and now India has 4 credit bureaus. The next important thing, for keeping the market's behaviour under control and within the satisfactory levels of the financiers are the foreclosure norms, which came into existence in 2002. To prevent fraudulent activities, The Central Mortgage Registry was established in 2011. With the objective of ensuring compliance on the part of developers and to provide consumer protection, real estate regulators were created under Real Estate Regulatory & Development Act, 2016.

The question is affordability

In today's world, whether a country is highly developed and economically strong, developing and just starting to see the fruits of economic betterment for its people, or at the bottom of the pyramid, the matter of gravest concern is affordability. Housing affordability is a many-faced demon, hitting both the demand side and supply side of the issue, with problems ranging from availability of serviced land, to the

availability of products within the reach of the targeted people, and facilitating people to get the required financing to meet their needs and to satisfy demand. India, with its huge population and its huge demand and limited availability of resources, is not any different. India is also striving hard to address the question of affordability, as this essential if its government is to meet the housing needs of its people.

Affordable housing finance – challenges and opportunities

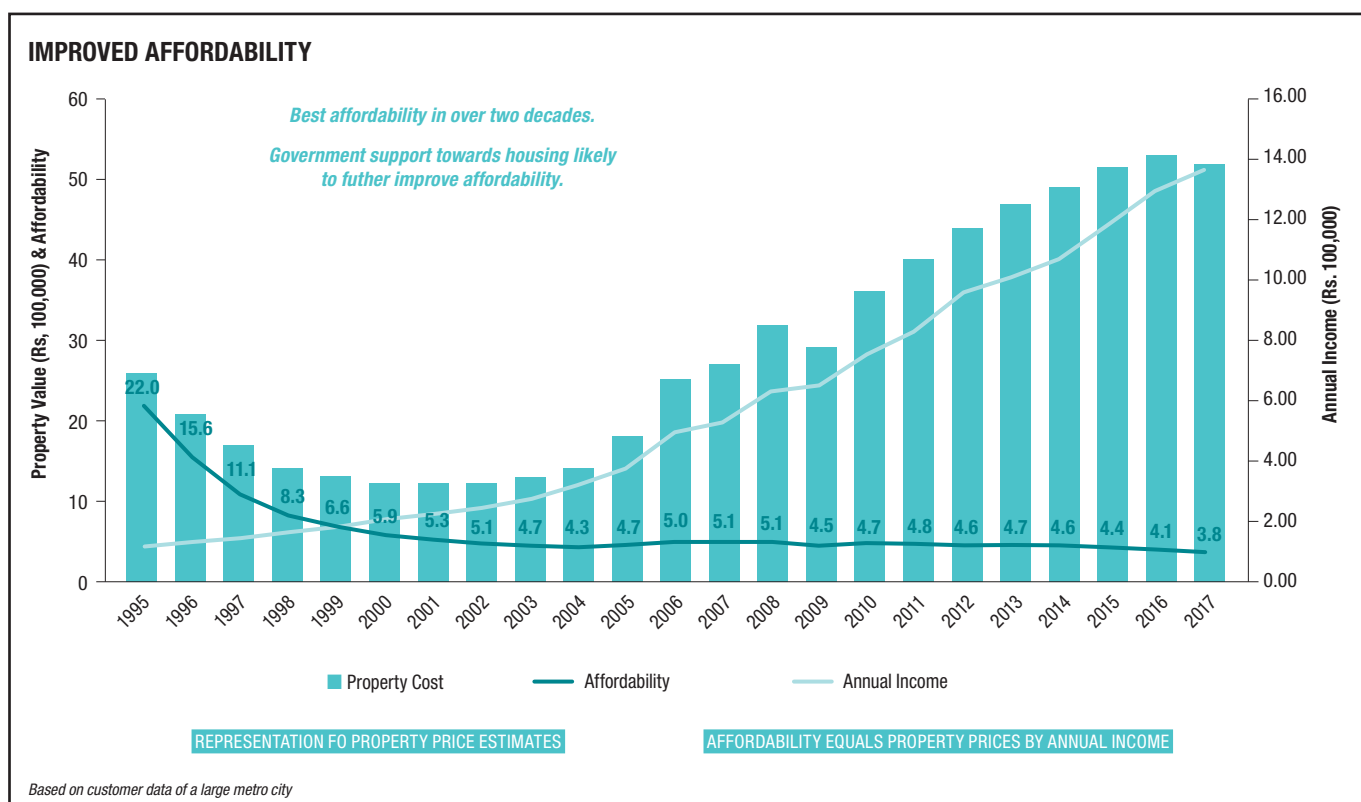
The key hindrances to providing affordable housing in India, as in any other country, is the lack of availability and high cost of land. The cost of collecting information on a borrower's credit worthiness is high and time consuming, affecting scalability. Income assessment may be inaccurate because of limited verification options. Frauds/ integrity issues may also result in higher losses. Higher yields are temporary in nature – re-pricing of mortgage debt may become necessary to retain the loan book. Unavailability of trained/skilled resources and high turnover of employees is sometimes also a considerable problem for mortgage underwriters, particularly in the sector of affordable housing, because of the special nature of the clientele. Credit appraisal presents similar problems. Loans generally given to those working in the informal sector may not have 'documented' proof of income

and hence it may be difficult to accurately assess the credit risk presented by the customer. A similar issue is large volumes of small ticket loans. On the legal side also, this type of financing presents some challenges, as most low-income households have 'para legal' rights to their properties, which fall short of full legal title.

There are opportunities. Demand for affordable housing by 2022 is estimated at 25 million units (in place of present 18.8 million). There are huge opportunities in Tier 3 & 4 cities with end user demand. The affordable housing finance market is estimated to be worth USD 95 billion by 2022. A combination of factors is converting latent demand into a commercially lucrative business opportunity, which are:

- Government financial support and policy thrust,
- Regulatory support,
- Rising urbanization,
- Increasing nucleatizaion of families, and
- Increased affordability

It has been observed, over the past a few years that affordability in India has been improving, thanks to concerted efforts by the Indian government and the private players in these regards:



The Indian Government's Initiatives resulting in the overall affordable level in the country can be listed:

- Fiscal Incentives
- Tax incentives on interest and principal amount for home loan borrowers
- Interest Subvention Scheme
- Interest rate subsidy under the Credit Linked Subsidy Scheme [CLSS] widened to include middle-income groups
- Extension of timeframe and rationalisation of conditions under the CLSS
- Supply Side Incentives
- Incentives to developers to build affordable housing
- 'Infrastructure' status accorded to affordable housing
- Increased budgetary allocations for home refinance schemes

In the period under consideration, the government initiated many housing schemes to fight the housing affordability issue. These are tabulated as follows:

The Credit Linked Subsidy Scheme [CLSS] is one of the key components under the government's flagship programme, "Housing for All by 2022". In March 2017, the CLSS was amended to include the Middle-Income Groups [MIG], in addition to the Economically Weaker Sections [EWS] and Low-Income Groups [LIG]. The interest subsidy on the home loan is paid to the beneficiary upfront, thereby reducing the amount of the equated monthly instalment [EMI]. The important condition for being eligible for Housing for All by 2022 is that the beneficiary family should not own any home in their names.

HDFC, the driving force behind affordability – an overview

HDFC is India's first and most popular mortgage finance company and has created a very special place in India's housing finance and mortgage industry. It is also playing a very distinguished role and increasing affordability through financing.

It is also a strong driving force behind the government's flagship scheme, 'Housing for All'. It has increased its efforts towards granting loans to the Economically Weaker Section [EWS] and Low-Income Group [LIG].

It is committed to funding the developers build affordable housing, in association with IFC,

GOVERNMENT SCHEMES FOR HOUSING

URBAN				RURAL
"In situ" slum redevelopment	Credit Linked Subsidy	Housing in Partnership	Beneficiary led individual house	Construction linked subsidy
PPP model using government land	Interest Subvention Subsidy	For new projects developed by public or private entities	For low income groups constructing their own house	Centre-State split cost 60:40
Relaxed density norms to make projects financially viable	First time homebuyers	35% of housing units marked for economically weaker sections	Financial assistance linked to progress of construction of the house	Sanitation and rural employment schemes converged
Housing for slum dwellers	Houses up to 150 sq mt carpet allowed	Subsidy per unit: Rs 150,000	Subsidy per unit: Rs 150,000	Subsidy per unit: Rs 150,000
Subsidy per unit: Rs 100,000	Subsidy per unit: Rs 267,000			

PPP: Public-private partnership

while conducting impact assessment through enhanced environmental, social and governance norms.

HDFC has sponsored a property fund to provide long term, equity and mezzanine capital to affordable housing projects at land and pre-approval stage.

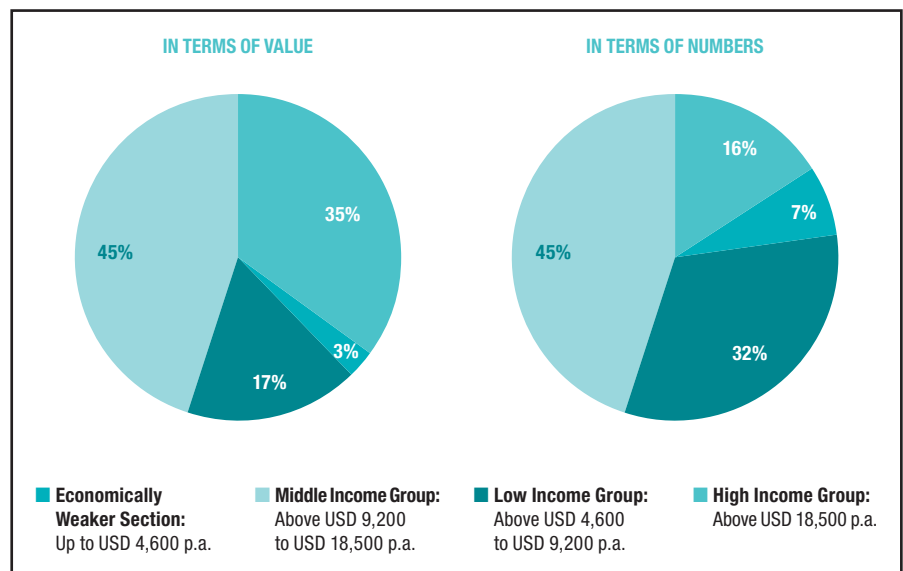
HDFC, besides being a mortgage finance company has also promoted a commercial bank, life and general insurance company, asset management, property funds and other value-added property related services.

HDFC's thrust for affordable housing can be gauged from the following chart:

Malaysia: property news update

In 2017, the property sector in Malaysia started to see a recovery amid a more positive sentiment among developers, evidenced by the 47% y-o-y increase in new property launches out of which 32.6% were sold. Kuala Lumpur, Selangor and Johor contributed the most launches with a total of 43,448 units. The majority of the launches are two- or three-storey terrace houses priced between RM500,000 and RM1 million.

The overall Malaysian property sector saw a fall in the number and value of property transactions in 2017. The number of transactions fell by 2.7% to 311,824 while the total value of transactions declined by 3.8% to RM139.8 billion.



Residential properties remained the key driver of the local market, occupying 62.4% of the market in 2017. The residential segment witnessed a 4.1% decline in the number of transactions whereas the value of transactions has increased by 4.4% to RM68.5 billion. It is worth noting that residential demand was heavily centred on properties costing RM200,000 and below, making up 45% of residential market volume.

House prices continued to increase but at a more moderate pace. The Malaysian House Price Index went up by 6.5% y-o-y to 187.4 points, compared with 176.1 points in 2016 with Selangor and Kuala Lumpur leading the pack where prices grew at 7.6% and 7.3% respectively.

The Malaysian Government has announced a freeze on the development of new luxury residential properties to rebalance the supply in the residential property market.

Cagamas has also intensified its efforts to increase awareness on ongoing housing schemes, such as *My First Home* and youth housing schemes via cooperation with Bank

Negara Malaysia, Agensi Kaunseling dan Pengurusan Kredit [AKPK] (Counselling & Debt Management Agency) and Credit Guarantee Corporation Malaysia Berhad [CGC].

Pakistan

KARACHI: Mr. Tariq Bajwa, the governor State Bank of Pakistan [SBP], said they had consulted all the stakeholders to evolve a policy framework for the low-cost housing finance.

“After the analysis and formation of policy low-cost housing financing will grow in the country,” the central bank governor said at the launching ceremony of the Pakistan Banking Awards 2018 at the Institute of Banking Pakistan [IBP] head office.

Housing finance in Pakistan as on December 31, 2017

For the year ended December 2017, the overall housing finance portfolio stood at Rs. 82.59 billion; an increase of 19.25% since

December 2016. During the current period, Islamic and private banks remained active in extending housing finance. This rise in the outstanding portfolio is the reflection of efforts to create an enabling environment for housing finance in Pakistan. This will be instrumental in increasing economic growth through positive changes in various industries allied to the housing sector. Keeping in view overall trends, housing finance in Pakistan is gradually growing.

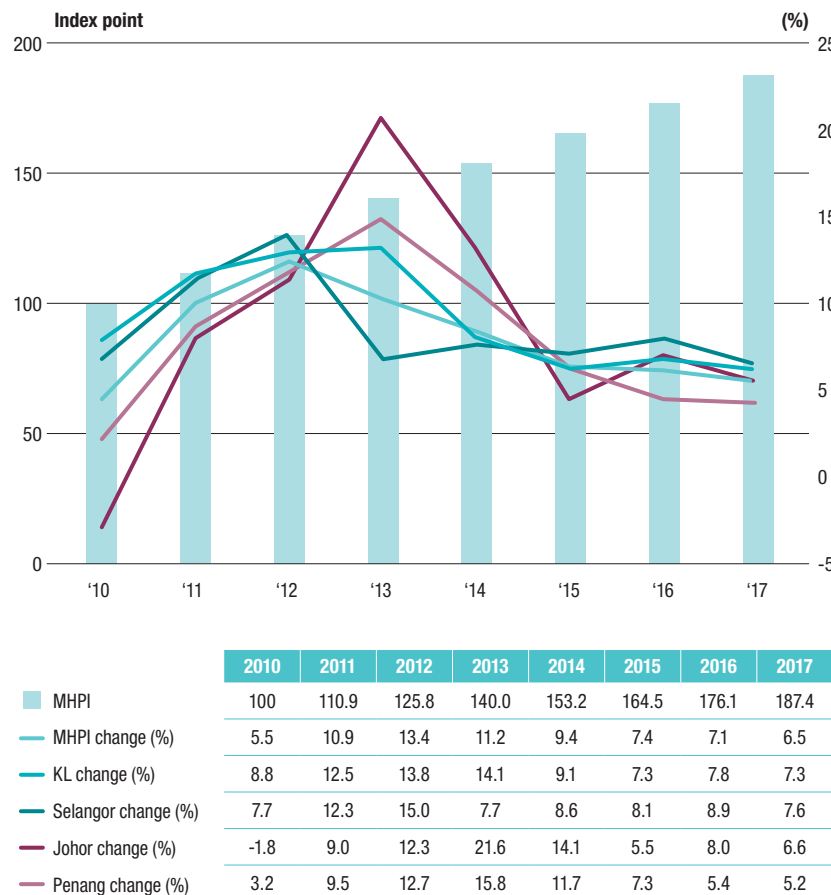
The World Bank approves \$145 million to expand home ownership including women and the poor through access to affordable housing finance in Pakistan:

The Pakistan Housing Finance Project [PHFP] will support the Government of Pakistan’s vision and strategy for housing development. The project will extend financial and technical assistance to the Pakistan Mortgage Refinancing Company [PMRC], the Planning Commission [PC], and other institutions to increase the availability of mortgage financing for households.

Offering a business model for Low-Income Habitat in Pakistan: the case of Ansaar Management Co. [AMC] Pakistan

Presently, the housing shortage in Pakistan is estimated at 10 million plus units (State Bank of Pakistan at 9 million in 2015), and 46% of the population lives in ‘slum’ areas (World Bank, 2014). Due to rapid urbanization and increase in population of major metropolitan cities, the housing shortage is likely to become more acute over the next 15-20 years. In Lahore alone, the population has more than doubled from nearly 5 million to 11 million between 1998-2017, which has added severe pressure on the existing housing stock. Over the same period, the formal housing market has failed to provide affordable housing solutions for low- to lower-middle income groups in the city, catering primarily to upper-middle to high-income groups and a speculative market. While the elected officials and political leadership tend to make large claims and pre-elections promises and promises at the start of the tenor, but soon let these promises fall. In the case of the Punjab Government in recent times, some steps were taken but never enough to develop momentum to take things forward in a manner that is replicable or scalable. The Punjab Government set up a land development company to facilitate affordable housing. The main premise of this initiative was to ensure that the government is an enabler for the private sector – not a developer in and of itself. The initiative was quickly

FIGURE 1 Malaysia House Price Index [MHPI]



Source: Central Bank of Malaysia, Ministry of Finance Malaysia, National Property Information Malaysia [NAPIC], The Edge Property

taken over by political (mal) intentions and some allegations of malpractices and has been able to build less than 500 affordable housing units in Lahore since 2011.

Apart of any malpractices, it seems that the business model also had some flaws in it.

The original initiative of the Punjab Government was a model many could perhaps learn from. The semi-governmental company was to function as a portal where the private sector would be incentivized to enter the market for affordable housing. Under this arrangement, the developer would do the following:

- Provide the land
- Develop infrastructure and housing at a fixed price on some portion of the land
- Develop and sell the remaining portion of land at market pricing

While the government would do the following:

- Efficiently facilitate all regulatory permits (which tend to take a lot longer than one would like)
- Provide external infrastructure to the sites
- Provide effective tax breaks
- Provide fixed rate mortgage financing for end-users on extremely reasonable terms

This framework engendered strong interest from the private sector – however as mentioned above, the political powers opted to keep the program as a purely government venture rather than a healthy public-private partnership. The abandonment of the original spirit led to failure of the entire program.

Since independence of the country in 1947 until today, the government has repeatedly tried to initiate housing programs for the lower income segments, both at provincial and federal levels, and each time they have resulted in complete failure. Some commendable success stories focused on providing rental housing and owner-occupied housing to low-income employees of the Government were seen in Karachi, the then capital of the country. However, the government has yet to comprehend its proper role in facing the challenge of housing shortage and housing supply – that is, the government has yet to realize that its role is as a facilitator/enabler and not a contractor/developer. Once the government accepts its role as a facilitator and lets the development industry play its role, the solutions will come forth in a much more free-flowing manner. The private sector has the material and finan-

cial resources for housing supply (capital and otherwise), the expertise, the human capital and the will to take on the challenge of affordable housing. However, the regulatory regime at times creates disincentives for the private sector to play its due role.

It is well known that the private sector will always require a clear evidence of potential profits prior to entering enthusiastically into a sector. The stigma around affordable housing discourages entrants into the market, even though there is an extraordinary demand and a huge potential for the same.

Realizing that, there are only two ways to catalyze the private sector to enter this market:

- a) Government incentives, and
- b) A working model for private sector with clear evidence of viability and sustainability.

Ansaar Management Company [AMC] has been working since 2009 to supply low-cost affordable housing for economically weaker segments of the society. With no private sector entrants since the founding of the country, the struggle to establish a model has been an uphill battle. After nearly 10 years, AMC is on the verge of providing a groundbreaking model that can serve as a benchmark for policy makers and for private sector investors.

The AMC model is based on market driven principles with a healthy dose of social consciousness – driven by data analytics of our work to date. The model can be summarised as follows:

- **Purchase of land in the periphery of the city center:** Land not less than 25-acres resulting in 500-600 units (lower income populations have established that they are willing to travel as much as 40-KM from their homes to place of work provided the location of the home is in close proximity to public transport, markets and other basic social necessities of life like basic health and primary education for the family).
- **Infrastructure:** Develop main infrastructure and build out a block of 20-35 homes (the master planning strategy and the resultant social dynamics is a subject of another article).
- **Sell the initial homes:** At-cost or at slight discount on an in-house financing basis, with a condition of immediate occupancy for a period of 4 years (the owners cannot rent, sell or leave vacant for that time period). That gives faith to the potential clients that it is a livable place.

- **Recycle the Funds:** The immediate occupancy of the initial block of homes catalyzes the marketability of the next block of 20-35 homes which will then be sold at a near-cost price but through an external mortgage provider. The funds from the second block provide for financing to the developer (AMC) of the third block – and so forth. The recycling of funds for further units can be continued for up to 70% of the total stock of plots (with similar conditions of occupancy in exchange for near-cost pricing).

- **Leverage the Occupancy:** The result of the occupancy of the homes (along with the quality of the newly-created community) naturally drives the prices of the remaining 30% of the plots. Those remaining plots are sold at market rates with no conditions of occupancy – thus allowing for an aggregate ROI of 10-15%

- **Develop the Community i.e., Social Integration:** As a central part of the process, the developer envisages and enacts a community development process that will directly impact the long-term sustainability of the development with a focus on maintenance (security, gardening, sweeping, Sewerage, Water etc.) and conflict resolution within the community

The core principles that drive the AMC Business Model are two key elements that are too often ignored in most affordable housing solutions, which are run by ghosts or speculators and are situated in ghettos or slums. AMC has coined them as the TWO G's (or the TWO S's). If any affordable housing model fails to address these two factors, all of the financial modeling and green building in the world will not allow the model to succeed. So, the plan for the affordable housing model should include:

- How do you avoid Ghost Towns (Land speculators)?
- How do you avoid Ghettos (slums)?

If the proposed model, by the private sector or the government, does not address these two issues in a concrete manner, then the model will likely to collapse.

AMC has to its credit 6000 units across 5 projects in two big provinces, Punjab and KPK, of Pakistan, a country which is the sixth most populous country in the world. Hence, AMC is well on its way to establishing a model that can be replicated and scaled – provided the government starts to play its role as a facilitator.

Jawad Aslam CEO

Philippine: housing sector faces herculean challenges

THE country's housing sector is facing colossal problems that have caused headaches not only to the current but to past administrations, as well. Foremost among the challenges is the estimated backlog of 6.9 million units. Furthermore, industry figures indicated that the demand is far greater than the supply as the increase in the number of households seeking housing is running at 435,000 per annum as compared to the 233,000 units completed in the same period.

It is estimated in the Housing Industry Roadmap of the Philippines that by 2030, the housing need will be at 10.1 million units. The roadmap recommended the following solutions: increasing housing production; enhancing shelter affordability through a comprehensive housing subsidy program for targeted beneficiaries; mobilizing and generating housing finance for end-user financing support; and improving the regulatory environment for housing.

Nonetheless, the dearth in affordable housing needs to be addressed to enable millions of Filipinos, especially those belonging to the lower strata of society, to have a roof above their heads. However, the country does not have a full-time housing body that can take charge of the problem. Thus, industry experts believe a Cabinet-level body needs to be established.

Experts' Opinion

Christopher Narciso, president of the Subdivision Housing Developers Association [SHDA] stressed the importance of having a Cabinet-level organization that can tackle the huge housing challenge. "We have been clamoring and begging for a Department of Housing for the last 10 to 20 years," Narciso said in a recent briefing held in Makati City.

If a government wants an agency to be effective, Narciso believes that it should have a budget and teeth. As far as the proposed Department of Housing is concerned, he said a Cabinet-level housing body is going to be more effective in implementing housing programs because it has the clout and support.

Architect and urban planner Felino Palafox Jr. wants to raise the bar higher in establishing the housing body. He pointed out that it should be more comprehensive. Palafox said that a Cabinet-level body dealing simultaneously on housing and urban development will be more effective because it will be reducing

bureaucratic red tape and corruption. Putting all agencies dealing with housing and urban development under one roof will bring more efficiency and greater coordination.

Having done several international projects overseas, Palafox urged the country to implement a world-class housing and urban-development program. He said that the Philippines must be at par with the best of the world like Singapore, Hong Kong, New York, Boston, London, Paris and the Scandinavian cities.

Felixberto Bustos Jr., president of the National Home Mortgage and Finance Corp., said the right approach in the shelter-development program is to integrate housing and urbanization programs

He also agreed that there is an urgent need to put up a Cabinet-level housing body. Although there are several agencies involved in housing development, the Housing and Urban Development Coordinating Council [HUDCC] is only a coordinating body. If you have a Cabinet-level housing body, there will be a coordinated and simultaneous action on the housing program.

Another challenge for the housing sector is the planned imposition of value-added tax for housing units valued P2 million and below. Narciso said this will adversely affect the development of affordable housing projects. Meanwhile, Bustos remains optimistic that the issue would be settled by both Houses to have a win-win situation among the stakeholders.

Robert Juan
ADFIAP Information Office

Thailand

Thai condominium and low-rise home market buoyant

Thailand's overall residential market in 2018 is expected to continue improving with growth of 7.9% on the demand side and 10.9% on the supply side, largely because of increased stronger confidence and a strong economic recovery.

Dr Vichai Viratkapan, acting Director General of the Real Estate Information Center [REIC] told the Bangkok Post that the market this year will continue to grow, with improving figures across the board.

New residential house building this year is forecast to rise by 3.4% to 265,500 units from 256,600 in 2017, including 111,300 condomini-

ums, up 5.9%, and 154,200 low-rise houses, up 1.8%.

In Greater Bangkok, the number will rise by 4.3% to 154,200 units, including 79,900 condo units, up 8.6%, and 74,300 low-rise houses.

In the provinces, residential supply will total 111,300 units, up 2.2%. Low-rise house building will rise by 3.4% to 79,900, while condos will drop 0.6% to 31,400 units.

The REIC estimates the amount of new residential supply this year from the number of land allocation permits for low-rise housing supply and the number of building construction licenses for condominiums.

The absorption rate of residential units nationwide this year is expected to rise to 39.9% from 38.8% last year. Condominium and low-rise homes absorption rates will rise to 47.9% and 33% from 46.5% and 32%.

Thai housing developers predict a robust 2018

The Thai housing market is expected to thrive this year, driven by government spending on megaprojects and growth in tourism and exports.

Atip Bijanonda, president of the Housing Business Association told the Bangkok Post the housing market is forecast to end the first quarter with a 5% rise in supply, driven by large developers that still dominate the market and the continued launch of new projects.

He said that while the luxury market this year may slow by 30%, sales of units priced below Bt 5 million baht (\$156,000) will continue to grow.

The association and two other real estate groups, the Thai Real Estate Association and the Thai Condominium Association recently held a four-day House and Condo Show at Queen Sirikit National Convention Center.

The associations expect sales to rise to Bt 8 billion (\$US250 million) after the event. A key driver will be relaxed bank mortgage rules that will help more homebuyers qualify while interest rates remain low. Locations with strong sales included Greater Bangkok and key provinces like Chiang Mai, Nakhon Ratchasima, Chon Buri and Songkhla.

The Home Builder Association expects a rise of 3% in housing prices in the second half because of an increase in construction materials prices driven by demand from infrastructure projects.

Residential market in Greater Bangkok and nationwide (2016-17 and 2018 trend)

	2016		2017		2016 (forecast)			
	Greater Bangkok	Nationwide	Greater Bangkok	Nationwide	Greater Bangkok	Growth	Nationwide	Growth
DEMAND SIDE								
▪ No. of transferred units	175,315	328,795	163,468	315,102	178,000	8.9%	340,000	7.9%
▪ Value of transferred units	444.11 billion baht	697.72 billion baht	427.73 billion baht	674.12 billion baht	487 billion baht	13.9%	746.9 billion baht	10.8%
▪ New housing loans	332.88 billion baht	585.05 billion baht	360.1 billion baht	634 billion baht	370.37 billion baht	2.8%	652 billion baht	2.8%
SUPPLY SIDE								
▪ No. of newly registered units	126,543	223,478	111,032	184,771	128,000	15.3%	204,900	10.9%

Source: Real Estate Information Center

GH Bank targets new loans of Bt189 bn (\$US5.9 bn) for 2018

Chatchai Sirilai, GH Bank President has announced new loan targets of Bt189 billion (\$US5.9 billion) for 2018, an increase of six per cent over 2017.

GH Bank's mortgages outstanding at the end of 2017 were Bt1.02 trillion (\$US31.875 billion).

At year end December 2017, GH Bank's total assets increased 8.7% to Bt1.06 trillion (\$US33.1 billion). Total deposits increased 10% to Bt 858 billion (\$US26.8 billion).

Non-performing loans [NPLs] were Bt 42.1 billion (\$US 1.3 billion) or 4.21% of total loans while the capital adequacy ratio was 14.9% of risked weighted assets.

GH Bank to host New Urban Agenda seminar

The Government Housing Bank of Thailand will be hosting a housing and urban development focused seminar as its contribution to Habitat III's New Urban Agenda on Friday, July 6, 2018 at the Queen Sirikit Center in Bangkok.

Dr Vichai Viratkapan, the Real Estate Investment Center's [REICs] acting Secretary General said well-known housing experts from throughout the globe have been invited to present their perspectives on urban strategies for achieving sustainable development goals in today's economic environment. About 300 guests from around the region have been invited. Everyone is invited to attend. Please contact GH Bank for your reservations.

K.I. Woo, CEP Pathfinder, Thailand

Europe: a shifting regulatory landscape

↳ By Mark Weinrich

As part of the European Union's efforts to overcome the financial crisis, the European banking union was set up with the aim of enhancing the stability of the financial system. In this context, some goals were put forward. The two most important were, first, to end the era of taxpayer-funded bank bailouts and the perception of organisations being 'too big to fail'; and, second, to break the nexus between bank debt and government debt that exacerbated recent crises in certain member states. The banking union is based on a common set of rules, the so called Single Rulebook which comprises of a set of European legislative acts. As of today, the banking union mainly consists of two main initiatives, the Single Supervisory Mechanism and the Single Resolution Mechanism. The European Commission believes however, that the banking union has to be completed by a third element, a European Deposit Insurance Scheme.

Strengthening the supervisory regime

The Single Supervisory Mechanism provides a European-level perspective on banking supervision with the objective of ensuring consistent supervisory practice by EU member states. Under the Single Supervisory Mechanism, the European Central Bank [ECB] is the central prudential supervisor of financial institutions for the euro area and for non-euro EU countries that choose to join the Single Supervisory Mechanism. So far, no countries have exercised this "opt-in" option. The ECB directly supervises the largest banks, while the national supervisors continue to monitor the remaining banks. ECB and the national supervisors should work closely together, but so far, this cooperation has not run smoothly.

One of the key instruments for harmonising supervisory practices is the Supervisory Review and Evaluation Process [SREP], which will ensure that all euro area banks are super-

vised on the basis of the same methods and standards. As part of the SREP, supervisory authorities review whether credit institutions:

- (a) conduct adequate internal evaluations of risks, and
- (b) manage these risks properly.

To the extent necessary, individual banks may be subjected to additional capital and liquidity requirements beyond Pillar 1 minimum requirements (as set out in the Capital Requirements Regulation of the European Union, which reflects Basel III rules on capital measurement and capital standards).

Creating a resolution mechanism

The Single Supervisory Mechanism is augmented by the Single Resolution Mechanism as the second pillar of the European banking union that is responsible for the recovery and resolution of credit institutions. A bank resolution occurs when authorities determine that a failing bank cannot go through normal insolvency proceedings without harming the public interest and causing financial instability. The Single Resolution Mechanism is based on the Bank Recovery and Resolution Directive [BRRD] and installs the Single Resolution Board [SRB] as the competent resolution authority for significant institutions, comparable to the role of the ECB as the competent supervisory authority. It is the ECB that decides to classify a bank as significant based on regular reviews of all banks authorised within the participating countries. While the ECB and the national competent authorities are responsible for the "going-concern" supervision, the SRB and the national resolution authorities focus on the task of crisis prevention and management. The SRB also administers the Single Resolution Fund [SRF], a further essential part of the Single Resolution Mechanism. Where necessary, the SRF may be used to ensure the efficient

application of resolution tools and the exercise of the resolution powers entrusted to the SRB. The SRF is composed of contributions from credit institutions and certain investment firms in the participating Member States within the banking union.

Moreover, the BRRD introduced an approach that is similar to the global standard for minimum amounts of Total Loss-Absorbing Capacity [TLAC] but can be applied to basically all institutions in the European Union, not only systemically important ones. Minimum requirement on own funds and eligible liabilities are also referred to as MREL. Both approaches, TLAC and MREL focus on the same key aspect: increasing the loss absorption capacity in the banking sector by means of a binding minimum ratio for loss absorbing liabilities. Credit institutions which the authorities have determined ex-ante that, if they were to fail, would not be put into resolution but would be liquidated or put under insolvency proceedings, do not need a specific MREL requirement. The implementation of the resolution regime affects institutions to a vast extent: recovery and resolution strategies need to be developed and to be kept up to date as well as handling a huge amount of additional information and data requirements that will form the basis for the supervisors to fulfil their tasks.

However, the Single Resolution Mechanism is still under development. It works already on resolution plans with support from the ECB, but the work is still incomplete. The SRF became operational in 2016 but it will take until 2014 until its target level (around €55 billion) has been gradually built-up. A clear mandate for a workable backstop is still missing. Moreover, target levels for capital in resolution [MREL] are still being set and their phase-in will take years as, first, not all credit institutions are easily able to access the debt market, and, second, domestic markets have only limited capacity to absorb the necessary issuances.

A special European path: a deposit insurance scheme for the European Union

Although the second pillar of the banking union, the Single Resolution Mechanism, is still under development, and although only marginal progress has been achieved with the proclaimed goals of the banking union, talks about “completing” the banking union have intensified recently. By “completion” what is meant is the creation of a European Deposit Insurance Scheme, as it is considered to be the final important and still missing element of the banking union. Mario Draghi, president of the ECB, and Valdis Dombrovskis, European Commission Vice-President for the Euro and Social Dialogue, have recently called for the introduction of a European Deposit Insurance Scheme to begin this year by arguing that the quality of banks’ assets, which reflects the risks, has improved markedly in recent years. It is true that the ratio of non-performing loans [NPL] had decreased from 5.8% in the last quarter of 2015 to 4% in the last quarter of 2018 on a European Level. However, this ratio differs widely from country to country. In Germany the ratio was 1.9% at the end of 2017, in Luxemburg only 0.9%, while in Greece it was 44.9%, in Cyprus 38.9% and

in Italy 11.1%. Clearly, banks’ balance sheets have to be cleared of legacy risks, before moving to the full mutualisation of losses with the European Deposit Insurance Scheme. As long as there is no appropriate cover for the risks that have amassed under national supervision, the wrong incentive would be created by distributing these risks on a European level. A consistent and faster approach to reduce NPLs is therefore necessary. This is of particular importance as it is very likely, that all banks of participating countries will become members of the European Deposit Insurance Scheme at the beginning, so that no penalties against undercapitalized banks fraught with risk can be applied. The supervisory expectations for new NPLs have been already set out, stressing the need for timely provisioning and write-off practices. However, there are so far no rules for legacy NPLs and it is not yet clear when they will come. The Single Supervisory Mechanism aimed at March 2018 for publication of the guidelines, but this date has already expired without any result.

There is another obstacle: substantial gaps in the national deposit guarantee schemes. Under rules passed in 2014, member states of the European Union need to have funds in deposit guarantee schemes equivalent to at least 0.8%

of the covered deposits. The countries have until July 2024 to reach this target. All bank deposits in the European Union are guaranteed up to €100,000, regardless of how much is in a member state’s fund. European countries have in the past had different policies for guarantee schemes. Some countries did not have an ex-ante funding in place, so they will have to catch up with the new requirement. At the end of 2016, Italy had for example guarantee funds equivalent to just 0.09% of covered deposits, in Ireland the level was 0.1%, in Germany 0.3% and in Cyprus 0.43%. In only 7 out of 19 countries were the guarantee funds already above the 0.8% minimum target. Starting to introduce the European Deposit Insurance Scheme before the shortfalls in the national schemes have been addressed seems hard to justify.

Many in the European Commission and the ECB press for a decision with respect to a European Deposit Insurance Scheme to be made at the European Council meeting this June. Given the fact that many countries still have substantial gaps in their national deposit guarantee schemes and that appropriate cover for legacy risks is not yet in place, it appears to be unwise to press for a premature decision. It will therefore be important to watch the outcome of the June meeting.

Housing shortage: a persistent reality in Latin America and Caribbean

↳ By Claudia Magalhães Eloy

Housing deficit figures are still very high in urbanized Latin America and the Caribbean: 59 million people live in dwellings that are either unsuitable for habitation or are built with poor materials and lack basic infrastructure services, according to the Inter-American Development Bank [IDB] 2012 report on the housing deficit in the region¹. This report also estimates that as many as 2 out of the 3 million households that spring up annually in the region's cities are forced to settle in informal housing, such as slums, because of insufficient supply of adequate and affordable dwellings. IDB concludes that LAC countries need to foster greater private sector investment to increase the supply of housing; improve land regulation and boost financing.

A more recent study by UN Habitat² defines housing deficit as an indicator or group of indicators that describes the set of housing needs of a population that cannot be satisfied based on the stock of adequate housing, which is available and accessible at present. Their 2010 deficit estimates for a group of 11 countries in the region were:

The qualitative deficit takes into account units that are considered inadequate by a set of minimum standards³. According to the table below, it tends to be equivalent to twice the quantitative deficit. The quantitative deficit generally refers to the lack of housing in absolute terms and, in LAC countries, often encompasses improvised/precarious dwellings and family groups sharing the same housing unit. In those 11 selected countries, in 2010, it totaled around 23 million units, an impressive figure that exceeds the total number of dwellings in each of these countries, except for Brazil and Mexico.

Yet, the methods for producing such an estimate may vary from country to country⁴. In Brazil, for instance, the quantitative deficit includes rented units that absorb more than 30% of gross income of low-income families (up to three times the minimum wage). In 2015, this component corresponded to 42% of the total deficit, while the remaining components were: shared units, another 42%, precarious units, 12%, and overcrowded rented units for 4%.

According to the UN study, housing deficit is a “descriptive concept, which accounts for a negative balance situation between:

- (1) the stock of adequate housing in a country/city/region or a given territory; and,
- (2) the housing needs of its population.

In this sense, the notion of housing deficit reflects an economic diagnosis in which the supply of housing is insufficient compared to a certain level of demand observed”.

It is worth noting that demand, in this case, is not equivalent to the traditional economic concept, but represents groups excluded from access to adequate housing.

Therefore, the issue is heavily intertwined with macroeconomics and difficult to tackle as the region's economic recovery travels a bumpy road alongside financial market volatility. FocusEconomics⁵ estimates that inflation in Latin America (excluding Venezuela) was 5.2%, down from March's 5.3% and the lowest since February 2013, but it is expected to rise by year-end, to come in at 5.7%. In South America, the cycle of interest rate cuts will come to an end in the second quarter of 2018, except for Argentina, where interest rates should fall once inflation is on a downward path.

Political noise in many countries in the region, as discussed in the previous LAC column, is another factor that prevents more sound and comprehensive long-term policies from taking hold and contributes to market uncertainty, discouraging private investment.

Mortgage to GDP currently stands at below 20% for most countries in LAC.

COUNTRY	POPULATION	DWELLINGS	HOUSING DEFICIT (NUMBER OF HOUSEHOLDS)	
			QUANTITATIVE	QUALITATIVE
Argentina	44,293,292	13,800,000	1,255,817	2,156,658
Brazil	207,353,392	60,790,000	6,900,000	13,000,000
Chile	17,789,268	5,640,000	495,390	—
Colombia	47,698,524	13,300,000	1,307,757	2,520,298
Costa Rica	4,930,258	1,210,000	25,017	145,099
El Salvador	6,172,011	1,410,000	61,260	416,648
Guatemala	15,460,732	—	712,100	1,061,900
Mexico	124,574,792	28,510,000	9,675,006	21,526,675
Peru	31,036,656	—	1,860,692	1,470,947
Dominican Republic	10,734,247	—	360,000	540,000
Uruguay	3,360,148	—	51,889	213,954

¹ Inter-American Development Bank (2012): HYPERLINK “<http://www.iadb.org/en/research-and-data/dia-publication-details,3185.html?id=2012>” Room for Development: Housing Markets in Latin America and the Caribbean.

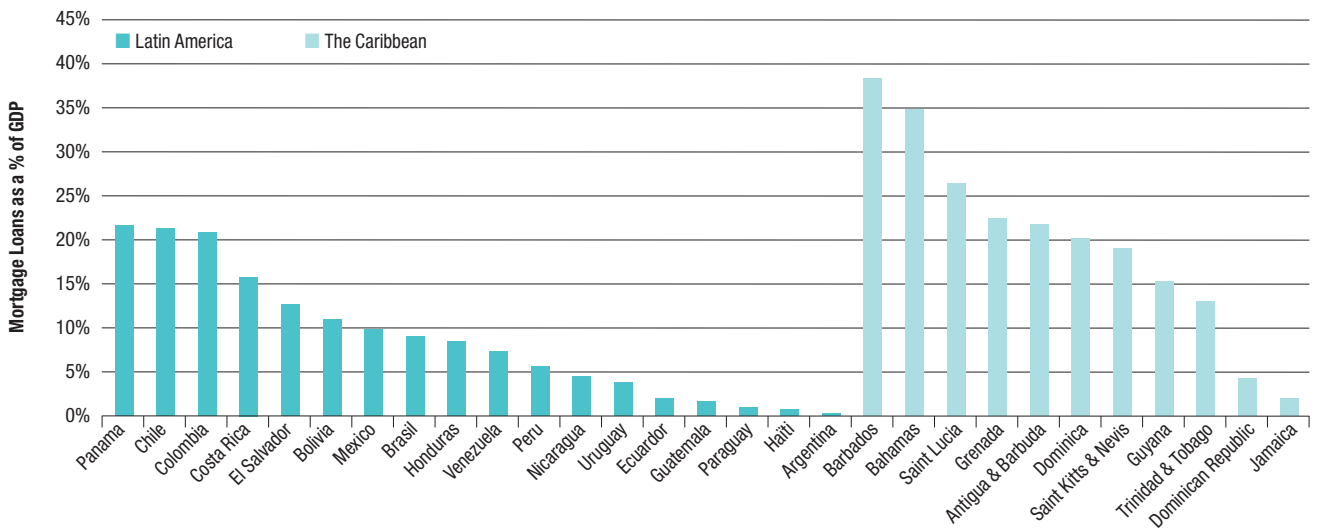
² Deficit habitacional em America Latina y el Caribe: Uma ferramenta para el diagnóstico y el desarrollo de políticas efectivas em vivienda y hábitat. ONU-Habitat, 2015.

³ A reference for that would be the Habitat Program, proposed in the UN Habitat II Conference in 1996.

⁴ One of the first references was produced by CEPAL (Déficit habitacional y datos censales sociodemográficos: una metodología”, 1996).

⁵ <https://www.focus-economics.com/regions/latin-america>

FIGURE 1 Mortgage Loans as a % of GDP for Selected Countries (2014-2016)



Source: Hofinet

Expanding housing finance down-market remains a challenge for the region due to a combination of factors: high and volatile interest rates, constraints on tapping into secondary markets to increase funding, informal labor and income inequality, among others. Altogether, these factors tend to exclude a significant number of families from qualifying for a mortgage. The Brazilian quantitative deficit, for instance, that totaled 7.7 million units⁶ in 2015, showed that 91% of those households had monthly incomes of up to USD 606.00⁷. Most of them were unable to qualify for mortgages at that point in time at an average interest rate of 9.5% per year (lowest

at 6.8% at FGTS) and acquire a home at an average price of USD 1,950/sq. m⁸.

We have long endured these issues and have not yet been able to come up with adequate solutions. It is necessary to think outside the box, seek the same kind of innovative thinking that has found us reinventing ways of doing things in the age of startups. The debate conducted by the Harvard Joint Center for Housing Studies, entitled “How Could Changes in Design, Construction, and Regulation Reduce the Cost of Housing?” (April 2018) discussed promising approaches to design, construction techniques, financing, regula-

tion and other housing related fields. This year’s World Bank 8th Global Housing Finance Conference debates new ideas for financing affordable housing and the major challenges in bolstering housing finance markets. Among the topics on the agenda: ways of fostering a creative environment for housing finance systems, financing the upgrading of informal settlements, crowd funding for affordable housing developments, harnessing technology to reach underserved income groups and new approaches for underwriting informal income earners. The next issue of this journal will bring you an update on these discussions regarding the LAC region.

⁶ Conjuntura da Construção, FGV, Junho/2017.

⁷ In 2015 the minimum wage was BRL 788.00.

⁸ BRL 7604/m² according to FipeZap based on data of 20 major cities.

North America update: a bubble and a boom both nearing their ends?

↳ By Alex J. Pollock

North America certainly presents an interesting housing finance picture with big house price inflation in both Canada and the United States.

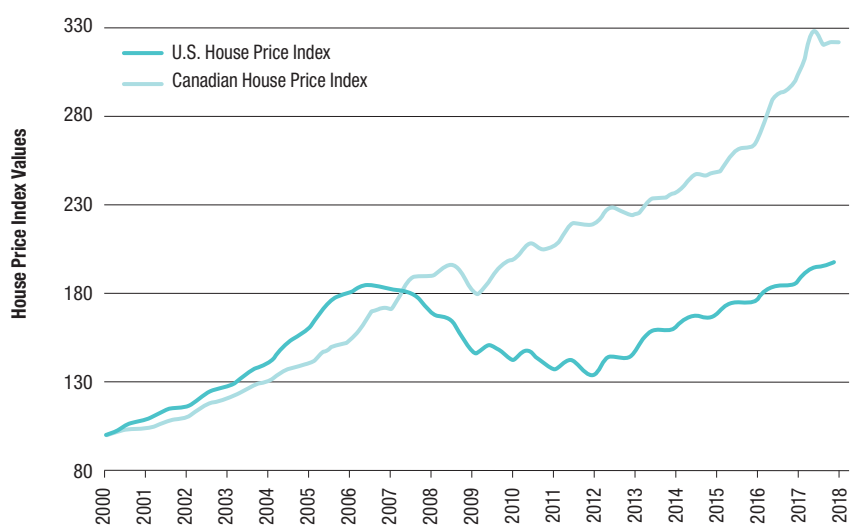
Canada's house price inflation is bigger. Indeed, Canadian house prices surely qualify as a bubble. They have ascended to levels far higher than those at the very top of the U.S. bubble. The increases have been remarkable, and the many years of their run, with hardly a pause, has kept surprising observers (like me) who thought it would have to end before now. Canadian government officials have been worried about it for some time and have tried to slow it down by tightening mortgage credit standards and putting special taxes on foreign house buyers in Toronto and Vancouver. Meanwhile, in the U.S., house prices since 2012 – for about six years, have again been booming, fueled by the cheap mortgage credit manufactured by the Federal Reserve. Average U.S. house prices are now over their bubble peak of 2006. However, they are nowhere near the records set in Canada.

Graph 1 shows the paths of average Canadian vs. U.S. house prices in the 21st century, with the price indexes set to the year 2000 = 100.

The housing finance crisis in the U.S. caused average house prices to fall for about six years, which seemed like forever, with a cumulative drop of 27%. For them to regain their previous peak, which in 2012 seemed unlikely, took about five years. The Canadian crisis experience, in contrast, appears a blip: a fall of about 8% in eight months, then only eight months after that, house prices regained their previous peak, and went on up from there.

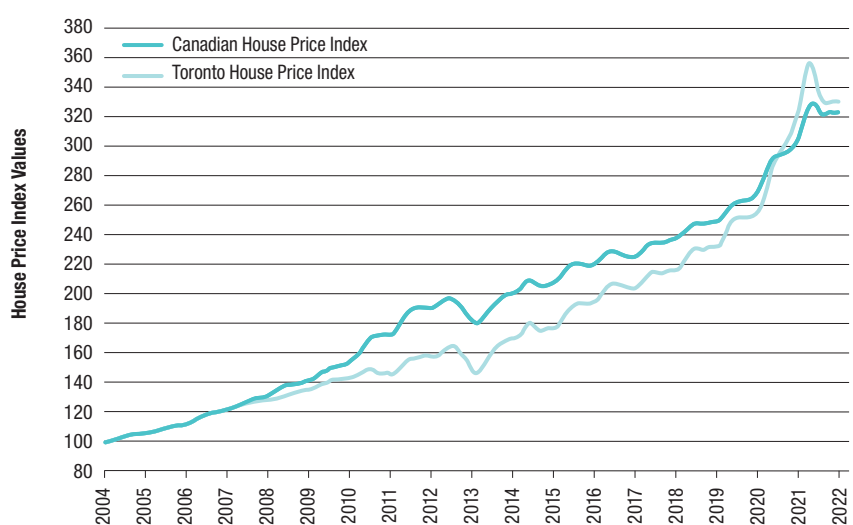
“Prices have ballooned for 18 years, interrupted by only one brief dip during the financial crisis, and the rule has been that prices will always go up and that you cannot lose money

GRAPH 1 House Prices in Canada and U.S. – 2000-2018 (2000 = 100)



Sources: S&P Case-Shiller U.S. National Home Price Index; Teranet-National Bank (11-city) Canadian Home Price Index.

GRAPH 2 Canadian Average House Prices vs. Toronto – 2000-2018 (2000 = 100)



Source: Teranet-National Bank Canadian Home Price Indices.

in real estate,” wrote the financial letter “Wolf Street” in May 2018. That indeed describes the belief which is induced by, and also drives, all real estate bubbles. At the same time, Canadian household debt is at a record high.

Is the Canadian bubble finally getting close to ending? The Canadian Real Estate Association reports April 2018 house sales activity was down 13.9% from the year before and the national average sales price declined by 11.3%. Its national home price index was, however, up 1.5%. This combination implies that the mix of sales shifted away from higher-priced houses. “Wolf Street” asserts the bubble’s approaching demise, at least in Toronto:

“Home sales in the Greater Toronto Area, Canada’s largest housing market, and among the most inflated in the world, plunged 32% in April, compared to a year ago,” it related. “The sales slowdown was particularly harsh at the higher end.... Prices follow volume. ...The average price in April for the Greater Toronto Area plunged 12.3% year-over-year.”

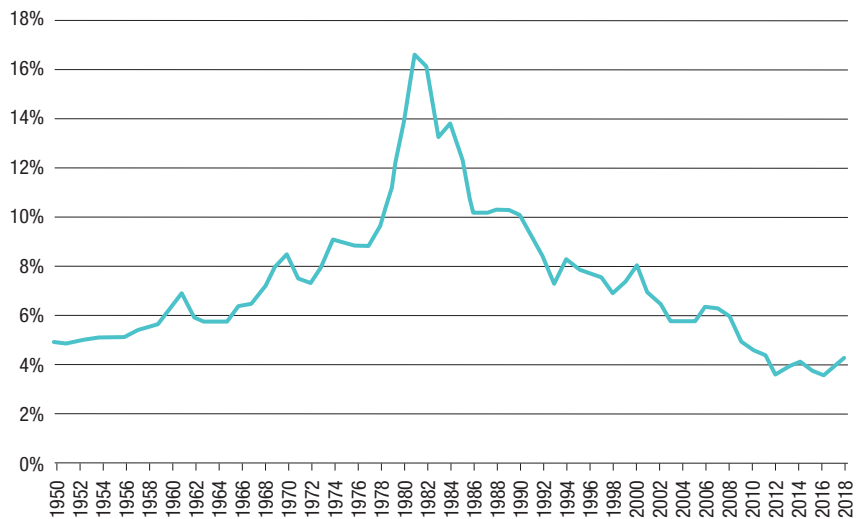
for Toronto, with a 7% drop afterward, but that has been followed by a flattening, so far. The Canadian national index peaked in August 2017, went down a little, and has been pretty flat for the last six months. “After a difficult second half of 2017, the Index has stabilized in recent months,” says a National Bank of Canada commentary. “Moderate rises will likely continue,” it predicts. Maybe.

Unfortunately, viewing the past shape of wavy lines doesn’t tell us just where they will go next. On a long view of historical financial cycles, however, we would have to guess it will be down, at some point. Now or later?

Turning to the U.S., the most notable fact about U.S. mortgage debt over the last eight years is how very cheap it has been. Graph 3 shows the interest rates on long-term fixed rate mortgages, the most common U.S. mortgage loan, from 1950 to now. The average level of 2010-18, about 4%, is the lowest by far in this history, significantly lower than even the 1950s, and a whole lot lower than subsequent decades. Consider the distance between the solid line drawn at 4% and most of the graph.

The record low mortgage borrowing rates naturally turned into higher house prices. This was exactly the plan of Federal Reserve Chairman Ben Bernanke: to induce higher house prices by artificially low mortgage rates. In this, he and the Federal Reserve succeeded.

GRAPH 3 U.S. Long-Term Mortgage Rates – Annual Average, % (1950-2018)



Sources: Federal Reserve, Annual Statistical Digest and Federal Reserve Bulletin (listed in Homer and Sylla, 1991, A History of Interest Rates); Freddie Mac, Primary Mortgage Market Survey.

They produced a feeling of wealth in house owners but made it harder and harder for first-time buyers to afford the prices.

Now U.S. interest rates are rising, including mortgage rates. How high will they go? How much of the Bernanke effect will go into reverse?

Table A shows average U.S. long-term mortgage rates by decade averages since 1950.

Using the starting digit of the decade averages for simplicity, we get this interesting pattern across seven decades: 5%, 6%, 8%, 12%, 8%, 6%, and 4%.

The 1980s stick out as abnormally high (may they not repeat!). Leaving out the years in which mortgage rates got into double digits (1979-90), the average U.S. long-term mortgage rate was 6.4%, or 1.7% over the average 10-year Treasury note rate of 4.7%. With the winding down of extreme monetary actions by the Federal Reserve, it is certainly not difficult to imagine U.S. mortgage rates returning to 6%.

Working in a related fashion to try to guess at what “normalized” interest rates would be, we can use the historical average real short-term interest rate of 1.3%. With an inflation rate of 2%, we then estimate normal short-term rates

TABLE A

DECADE	MORTGAGE RATES	10-YEAR TREASURY RATES	DIFFERENCE
1950-1959	5.22%	3.00%	2.23%
1960-1969	6.47%	4.67%	1.79%
1970-1979	8.82%	7.50%	1.33%
1980-1989	12.70%	10.60%	2.11%
1990-1999	8.12%	6.66%	1.45%
2000-2009	6.29%	4.46%	1.83%
2010-2018	4.09%	2.43%	1.66%
TOTAL	7.44%	5.66%	1.77%
TOTAL (WITHOUT 1979-1990)	6.40%	4.68%	1.72%

Sources: Federal Reserve, Annual Statistical Digest and Federal Reserve Bulletin (listed in Homer and Sylla, 1991, A History of Interest Rates); Freddie Mac, Primary Mortgage Market Survey.

of 3.3%, a 10-year Treasury note rate of 4.4%, and a long-term mortgage rate of 6.2%.

In round numbers, these guesses are quite consistent with the very old joke about the savings and loan business as “3-6-3” – that is, “take in deposits at 3%, make mortgage loans at 6%, and be on the golf course by 3:00.”

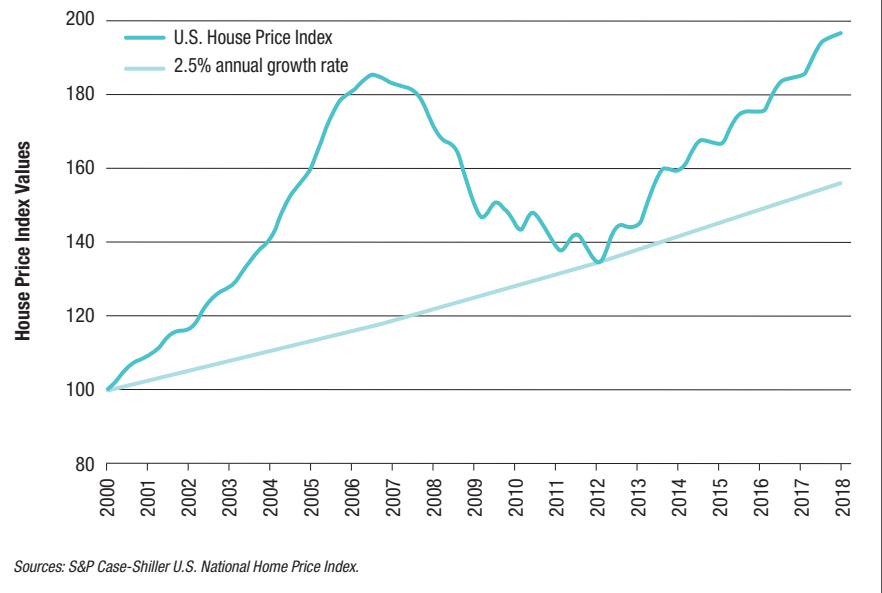
If mortgage rates go to 6% from 4%, it seriously reduces the house buying power of the borrower. What will the effect on house prices be? You could think they might go sideways in nominal terms, while falling in real terms to adjust. This would be a soft landing and is presumably what the Federal Reserve is hoping for. Or it might be a hard landing instead.

Since 1900, the average annual increase in U.S. house prices in real terms has been calculated as 0.3%. The average U.S. inflation rate from 2000 to now has been 2.2%. That means the trend rate of increase would be 2.5% in nominal terms. Graph 4 shows this trend growth rate against the actual prices in the U.S. bubble and the post-2012 boom. Note that in the bust after the bubble, prices fell to the trend line, then under the influence of the Federal Reserve’s treatment, took off again.

If the current level of house prices regresses to the trend very quickly, it implies a hard landing. If it regresses to the trend in any fashion, it implies a significant adjustment. Of course, we never know how the timing of such things will work out.

In sum, both Canada and the U.S. pose the hard question of how to adjust to extended house price inflation. Stay tuned.

GRAPH 4 House Prices in U.S. vs. Trend (2000 = 100)



Educational qualifications as a predictor of home loan success: 15 years of HomeStart's Graduate Loan

↳ By Andrew Mills and John Oliver

1. Introduction

HomeStart Finance is a statutory corporation owned by the Government of South Australia with the mission of 'making home ownership a reality for more people in more ways'. Operating since 1989, HomeStart achieves its mission through the provision of home loans under a unique product design which breaks the link between instalments and interest rates.

HomeStart has assisted more than 70,000 South Australian households into home ownership and plays a significant role in helping first home buyers, and people on lower-moderate incomes. In addition to providing lower deposit loans, HomeStart also provides subsidised rate loans to low income households and delivers innovative finance products such as shared equity where it has been an Australian pioneer for the last decade.

Since 2003, HomeStart has utilised educational qualifications as a part of its lending criteria via a low deposit product called the "Graduate Loan". Initially lending to customers with tertiary (university) qualifications, the program has been so successful it is now available to customers with vocational (e.g. trade) qualifications. HomeStart's experience with the use of education as part of a credit decision shows it can be an effective and alternative means of helping qualify a person for home finance.

The arrears and credit loss performance of Graduate Loans has outperformed HomeStart's wider portfolio, and a similar high loan-to-value ratio [LVR] product launched by HomeStart at the same time. It also performs well against

prime mortgages as measured by Standard & Poor's. HomeStart's data set represents a potentially valuable source of experience which may be of interest to home ownership programs in other jurisdictions.

Additional information on HomeStart, including its relationship with the Government of South Australia and environmental factors can be found in *Appendix A: Organisational background and context*.

2. HomeStart's Graduate Loan

HomeStart has offered a Graduate Loan product since 2002. The core principle of the loan has remained unchanged since then in that borrowers with some form of educational qualifications are eligible for a lower deposit. Nonetheless, the loan has undergone substantial renovation in that time to maintain relevance in the market and it has also been used to unlock new customer segments for HomeStart. The purpose of the product is to reduce upfront costs (specifically deposit) for home buyers, thereby addressing one of the key barriers to purchase.

The genesis for the idea came from research highlighting a growing loss of young people from the state of South Australia, with many seeking employment and other opportunities interstate or overseas. One report¹ for example showed that 17% of SA university graduates moved interstate or overseas, although 50% of those who did leave intended to return. Although not able in itself to address the core reasons for young, talented people leaving the state, HomeStart believed it could create

something for those who remained, to encourage the remainder who wished to return, and perhaps tilt the decision for those weighing whether to stay or leave.

Consultation was undertaken with Professor Andrew Beer, then of Flinders University and head of the Southern Research Centre within the Australian Housing and Urban Research Institute [AHURI], who provided early stage advice on product targeting and development. Further engagement with higher education institutions revealed an appetite to partner with HomeStart as well as generating additional feedback used in the design process. As part of this a conscious decision was taken not to target certain professions – doctors, lawyers, accountants – as it was found they were already well catered for by the major banks. Instead, the product was designed to be as inclusive as possible so as to appeal to as wide a group of graduates as it could. Essentially, the product was originally intended to be taken out reasonably shortly after a person gained their qualification and began working in their field of study or a related area.

Analysis of estimated market size found that across South Australia's three major universities – University of Adelaide, University of South Australia, and Flinders University – there were more than 51,000 students, so even with 1 in 5 expected to leave the state, a substantial market was therefore present. At the time, the SA government offered grants to first home buyers of up to \$9,130² which, given the median property price was around \$200,000 or less, represented immediate equity and thus helped with structuring the product.

¹ Hugo Centre for Migration and Population Research, 2000, *Bringing them back home*, University of Adelaide.

² A full history of grants and concessions to first home buyers in South Australia can be found here: http://revenue.sa.gov.au/___data/assets/pdf_file/0019/7309/FHOG-TABLE.pdf

Thus, the Graduate Loan was launched in November 2002 with a maximum LVR of 100%, later reduced to 97% in October 2008³. As with all HomeStart lending, no lenders mortgage insurance was required, apart from HomeStart's relatively modest form of "self-insurance" known as the Loan Provision Charge. Initial eligibility was limited to holders of a Bachelor degree or higher, equivalent to at least 3 years full time study at an Australian university⁴.

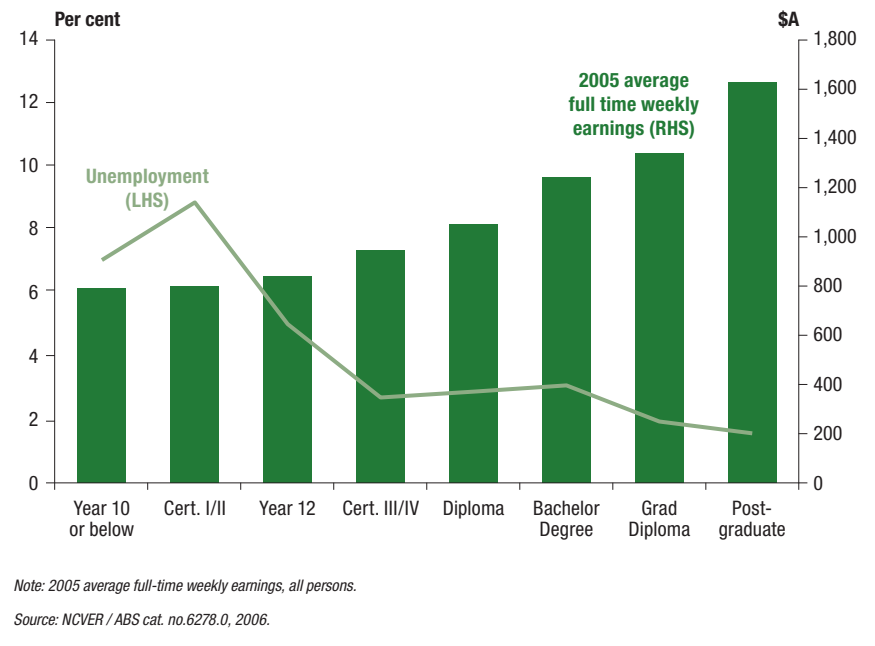
Just 9 loans were settled in the first financial year ending June 2003, but 160 were written in the first full financial year of operation (2003-04)⁵ which represented a success. Eligibility was quickly broadened, with Diploma holders and above able to apply from late 2004.

With high employability for certain trades, particularly in light of growth in the mining sector, HomeStart considered that the original theory of the Graduate Loan – that a qualified person was worth investing in, because their employability and income would rise over time – could potentially extend to customers with vocational qualifications (specifically Certificate III/IV qualifications⁶) and these began to be added to lending criteria on a case-by-case manner from 2012.

The field of qualifications from Certificate III/IV is vast, and ranges from clearly highly employable qualifications (e.g. trades, aged care) through to those which may have less certain or stable prospects. Uncertain of the potential risks, initially HomeStart offered a restricted list of Certificate III/IV qualifications which it would consider accepting for Graduate Loan applications. In reality, maintenance of the list became unwieldy, was difficult for brokers to work with, and quite subjective.

The simplest solution was to make the Graduate Loan available to all Certificate III or IV qualifications. In the course of researching this problem, Australian Government data was found which, at the time, showed Certificate III/IV qualifications represented an inflection point for employment and income (reproduced below as Figure 1, sourced from the National Centre for Vocational Educational Research). From this qualification level and above, income grows and unemployment remains broadly the same. With this data, and further lending experience,

FIGURE 1 The correlation of education with employment and wage outcomes



HomeStart gained confidence in opening the product up more widely and from October 2014 eligibility was widened to accommodate all Certificate III/IV.

More recent data published by the Grattan Institute (Mapping Australian Higher Education, 2016) shows the positive relationship remains in place with Bachelor Degree holders reporting an unemployment rate of 3.4% against 4.8% for holders of Certificate III/IV, and 8.7% for unqualified people. Workforce participation rates are also materially higher for people with some level of qualifications.

Data in the Australian Census (2016) shows that 16.7% of the South Australian population aged over 15 (at census date) held a Certificate III or Certificate IV qualification (15.7% for Australia). A further 26.8% of South Australians aged over 15 held Diploma, Advanced Diploma, Bachelor Degree or higher qualifications (30.9% nationally).

Appendix F: Graduate Loan eligibility criteria 2003 and 2018 provides a table showing evolution and standardisation of lending criteria over the last 15 years. Lending criteria was originally

quite distinct for the product when compared with HomeStart's standard loans, an understandable approach given the novel risks being taken. These differences have progressively been ironed out of product criteria since launch, but the main distinctions are restrictions to the metropolitan area and large regional centres, as well as qualifications limits.

Around the same time as the Graduate Loan, HomeStart also launched a Low Deposit Loan. Although with the same initial LVR (100%, before falling to 97%), the two products were positioned for slightly different segments, with education being the key difference between them. Key differences between the products are:

- The Low Deposit Loan had no educational criteria: in essence it was for customers without qualifications, and with limited savings
- The Low Deposit Loan was priced with a 1% interest premium for the first 12 months, unlike the Graduate Loan which was – and still is – priced at HomeStart's standard variable rate
- The Low Deposit Loan offered customers lower borrowing power relative to other products.

³ The LVR was reduced as a prudential measure following the onset of the global financial crisis, with concerns as to property price growth becoming more pronounced in South Australia around this time.

⁴ Appendix E: Australian Qualifications Framework (AQF) contains information about how Australian qualifications are structured and how the Graduate Loan fits around them.

⁵ HomeStart's experience is that long build ups after new product launches such as this are quite common. After launch a "quiet" period of 6 – 9 months can be expected as the product reaches market, lenders become accustomed to it. Often the main driver is that it is reaching a new segment not currently attracted to HomeStart, and therefore it takes time for the message to reach potential customers, coupled with the long lead times of home buying.

⁶ These qualifications are obtained education providers, known as TAFE (Technical and Further Education)

The fact that two high LVR loans were launched in the same market, at similar times, provides a unique opportunity to compare and contrast their relative performance. Hence the Graduate Loan will be analysed both in the context of HomeStart's overall loan portfolio but also against the Low Deposit Loan. Ultimately, expansion of the Graduate Loan cannibalised customers from the Low Deposit Loan and contributed to the latter now reaching its end of life.

3. Graduate lending and portfolio development

Figure 2 shows new lending volumes for both the Graduate and Low Deposit products from

the first full financial year (2003-04) through to 2016-17. Although the product now represents over 30% of HomeStart's new lending, much lower volumes were experienced initially. In part this reflected substantial caution on HomeStart's part in the early stages.

Additionally, the market at the time was quite competitive: house price growth in Adelaide rose 21% from December 2006 to December 2007⁷ compared to just 5% the year prior (2006). Around this time some other lenders experimented with offering 97% loans, although with the onset of the global financial crisis such spirit for adventure was quickly curtailed. The Low Deposit Loan customer base was more insulated from this

competition because it was less qualified, and therefore likely to have less options.

For these reasons, the Low Deposit Loan matured later, and for longer, reflecting an initially much broader market than was initially available for the Graduate Loan, even after expansion of the latter to Diploma holders in 2004-05.

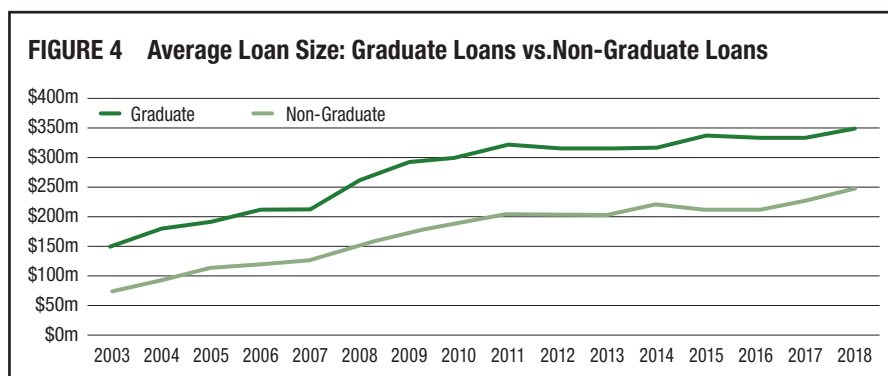
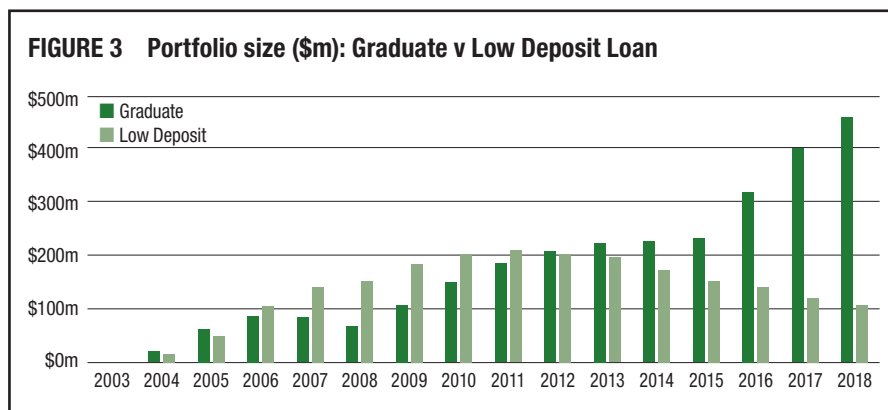
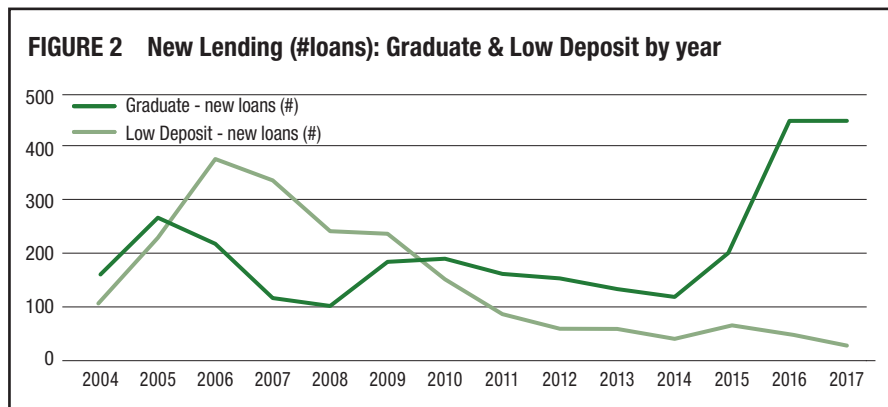
The LVR reduction from 100% to 97% for both products in 2008, coupled with subsequent withdrawal of state government grants for first home buyers had much more significant impact on Low Deposit Loan customers than Graduate Loan, although both ultimately suffered.

Lending volumes entered long decline from 2010–2014 until the Graduate Loan was expanded in 2015 to allow for Certificate III/IV qualifications holders. This move has effectively ended market potential for the Low Deposit Loan in its current form, but the additional volume gains to the Graduate product from being able to access this new market have proven substantial. By 2017, more than 1 in 3 new HomeStart customers took the Graduate Loan product compared to just 1 in 10 five years ago, and volumes are continuing to grow.

The lending experience is somewhat borne out in the portfolio development curves of the two loans (Figure 3). In the absence of product expansion in 2015, it is likely the Graduate Loan too would have effectively entered run-off alongside the Low Deposit Loan.

Taking a wider look at the Graduate Loan versus HomeStart's overall lending, including reasons for portfolio growth, one of the key drivers is the average loan size. Generally, loans to Graduate customers are 50% larger than to non-Graduate customers (Figure 4). Recent growth in Graduate numbers and lending value has contributed to a growing portfolio, and both lower deposit products have tended to result in higher than average loan sizes.

Analysis of census data from the Australian Bureau of Statistics [ABS] shows that from 2001 – 2016 the proportion of South Australians aged 15 or older with no qualifications fell from 58.1% to 43.7%. Tertiary skills increased substantially, with the proportion holding a Bachelor degree or higher rising from 10.7% to 18.5%. Similarly, the proportion holding vocational qualifications rose from 15.8% to 20.1% over the same time horizon. These trends are largely mirrored nationally, although South Australia's



⁷ Source: Real Estate Institute of Australia Market Facts bulletin, HomeStart internal data.

vocational skills proportion (20.1%) outweighs the national figure of 18.8% and reflects the underlying industry base of the state.

4. Graduate LVR, loan life and breakeven

Most Graduate customers have an LVR close to the maximum of 97%. LVR is also captured at discharge⁸, indicating market risk appetites and equity accumulation by customers. Figure 5 shows the maximum LVR of incoming Graduate customers has remained constant, as has the LVR as they leave (for those refinancing) albeit narrowing recently. Equity available at the time of refinancing is a function of loan life, property price growth and interest rates.

This can be contrasted with the incoming and outgoing LVRs of non-Graduate customers (representing customers of all other products except Graduates), as shown in Figure 6. The patterns are not dissimilar, although non-Graduate customers tend to accumulate more equity prior to refinancing than Graduate customers.

The average Graduate customer refinanced after improving their equity position by 4.6% in 2017 whereas the average non-Graduate customer who refinanced improved their equity position by almost 11% prior to refinancing.

The willingness and propensity of Graduate customers to refinance is, on balance, a positive for the operation of the program. It enables HomeStart to assist greater numbers of people with far lower capital intensity than might otherwise be the case, and certainly less than housing programs which rely on physical investment in real property. A key issue for monitoring though is to ensure the loans remain in the portfolio long enough for origination and operating costs to be recovered, and so that the organisation can earn sufficient margin to generate its overall required rates of return.

A Graduate Loan is estimated to reach breakeven at around 1.7 years after origination compared with almost 2.5 years for a standard loan⁹. On that basis, it is acceptable for the book to turn over faster than the average, and this is because the Graduate Loans are, as shown in Figure 4, significantly larger than standard lending. Higher incomes are the primary reason the loan sizes are materially higher.

Figure 7 shows the average age of loans both Graduate and all non-Graduate leaving the portfolio

FIGURE 5 LVR of new loans vs. LVR of loans refinancing out (Graduate)

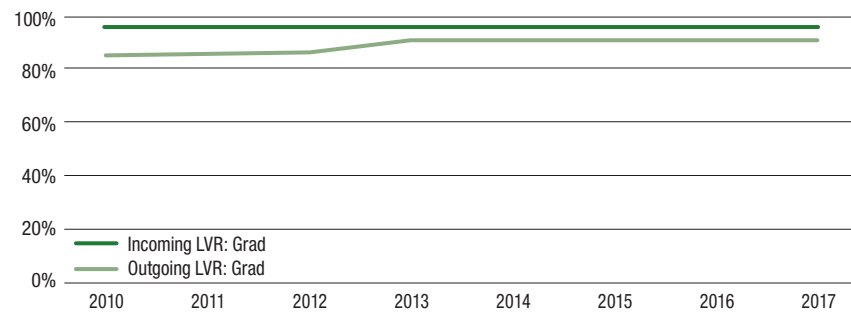


FIGURE 6 LVR new loans vs. LVR loans refinancing out (non-Graduate)

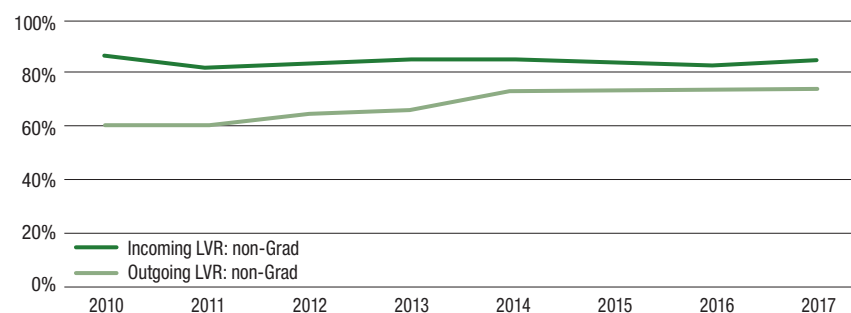
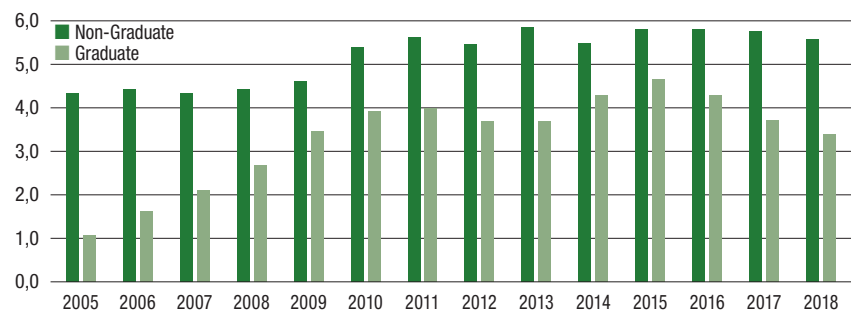


FIGURE 7 Average loan life (yrs) at discharge due to refinancing



due to refinancing to another lender. The average age of a Graduate refinance discharge has been between 3–4 years, although trending down since 2015. It remains well in excess of break-even. The data shows Graduates tend to exit relatively quickly after getting started; thus, the approach perfectly complements HomeStart's market positioning. It is likely that refinancing activity and promotion by other lenders has a significant influence on these measures. The data supports the notion that the customers can quickly build a sound credit history and become bankable for other lenders in a short period of time.

5. Graduate customers and behaviour

Since expansion to Certificate III/IV customers HomeStart has been able to track the type of qualification possessed by the customer. Figure 8 shows the number of new loans by qualification type in the past three years, including YTD (annualised) figures for the financial year ending 30 June 2018. Bachelor degree holders remain significant but are substantially overshadowed by the Certificate III/IV holders¹⁰.

⁸ The LVR at departure is calculated using current loan balance and either last formal valuation by a licensed valuer, if conducted less than 2 years ago, or government valuation by Valuer General.

⁹ On a fully absorbed cost basis.

¹⁰ Data from 2015 represents only partial results for the year.

Notwithstanding expansion has itself contributed to growth in volume, it is also evident from Figure 8 that the product has become more popular since the change. This is attributed to the fact that widening the criteria for the loan enabled HomeStart to take the product to a more mainstream audience, thereby reaching even more customers. For example, specific advertising messages for the Graduate Loan have now been created and used far more expansively than previously thought possible. Thus, the expansion in lending criteria has elevated it from a niche to a mainstream product with corresponding volume pick up.

Analysis of average incomes between Graduate and other customers (Figure 9) shows Graduate incomes far higher than standard loans (thereby supporting Figure 1), reaching almost double by 2008 although falling to less than 1.5 times in 2017. The graph shows the impact of broadening product eligibility criteria several years ago, with incomes falling (again, supporting the central tenet of Figure 1 of lower incomes for lower qualification levels, while also underpinning the higher average loan size seen in Figure 4).

Closer analysis (Table 1) of Graduate incomes by income band¹¹ shows the eligibility expansion entrenched two distinct income profiles: an existing higher income cohort (mostly higher qualifications) earning \$75,000 – \$100,000, constant for the six years to 2015, and lower income cohort earning \$50,000 – \$75,000 previously relatively low in volume. Table 1 uses blue and red shading to highlight high and low points in volume and draw out these trends. This data reflects to some extent the changing composition qualifications noted in Figure 8.

HomeStart only collects data on incomes at the time of application for credit, and thus it is unable to ascertain the extent to which Graduate customers experience income growth relative to the wider population or customer base.

Analysis of applications by Graduates for 2017 against applications for non-graduates shows Graduate customers typically have much higher levels of credit card appetite: \$3,625 was the average limit at the time of loan application compared with \$1,432 for non-Graduates.

Drilling further into credit card usage shows that over 77% of non-Graduate customers reported no credit cards at the time of

FIGURE 8 Graduate Lending by qualification type (number of loans)

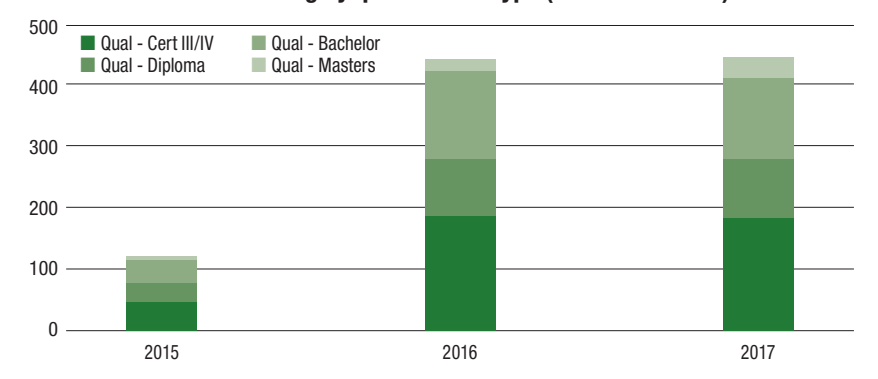


FIGURE 9 Avg income: Graduate vs. non-Graduate customers (constant 2003 \$)

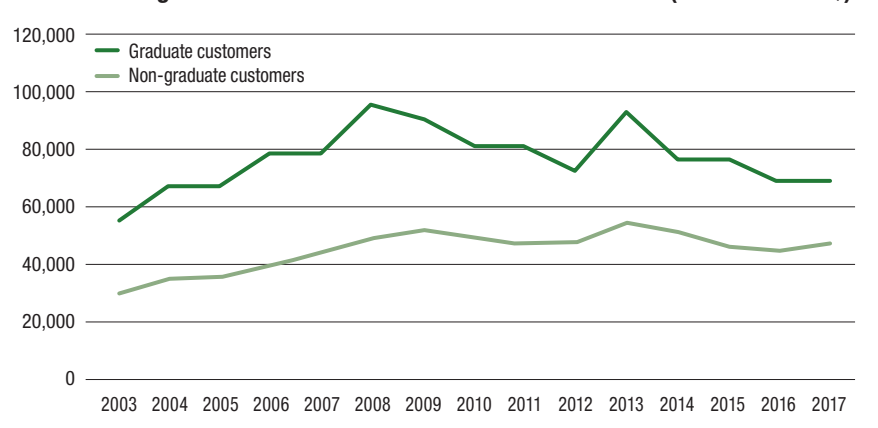


TABLE 1 Graduate Nominal Income by Income Band (no. new loans by household income bucket p.a.)

NOMINAL INCOME (\$)	2009	2010	2011	2012	2013	2014	2015	2016	2017
<=\$43,000	6	8	2	5	—	6	7	27	37
\$43,001-\$50,000	12	11	5	2	1	5	7	30	30
\$50,001-\$65,000	41	46	34	29	5	16	33	94	92
\$65,001-\$75,000	23	36	17	33	12	18	26	60	54
\$75,001-\$100,000	71	51	60	43	54	36	69	134	120
\$100,001-\$125,000	24	26	34	33	25	22	36	62	75
\$125,001-\$150,000	5	10	11	7	18	9	11	27	27
\$150,001-\$175,000	—	1	1	1	11	5	11	8	14
>\$175,000	—	1	1	1	6	3	3	5	5
Number of loans	182	190	165	154	132	120	203	447	454

application compared with 57% for Graduates. Less than 14% of non-Graduates had a credit card limit of \$1000 – \$5,000 compared with 22% for Graduates, while 10% of Graduates had a limit of more than \$10,000 versus less than 4% of non-Graduates.

While these numbers are self-evidently higher, as shown above the Graduate cohort has materially higher income levels than other customer groups. They have both the capacity to take on debt, and a willingness to do so. Analysis of monthly commitments and expenses as a

¹¹ Dollars are nominal.

Educational qualifications as a predictor of home loan success

FIGURE 10 % lending by Adelaide metro area: Graduates vs. non-Graduates

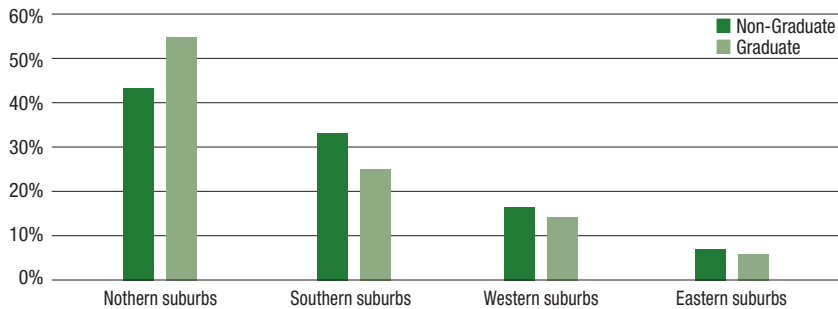


FIGURE 11 Numbers of arrears loans: Graduate vs all loans, by loan age

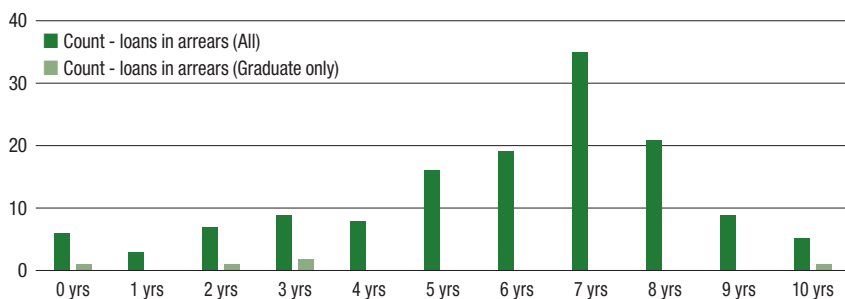


FIGURE 12 Graduate portfolio (\$m) by financial year settled

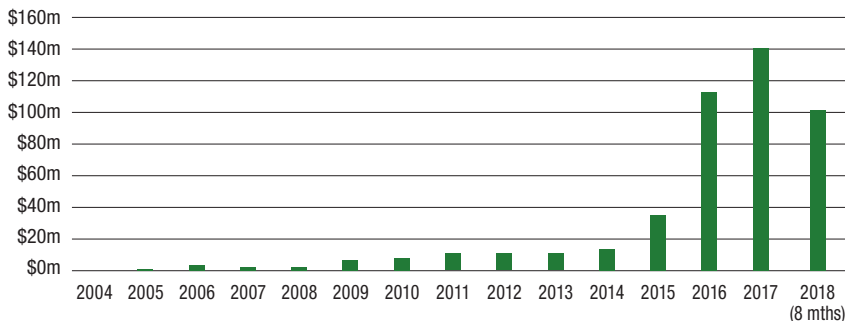
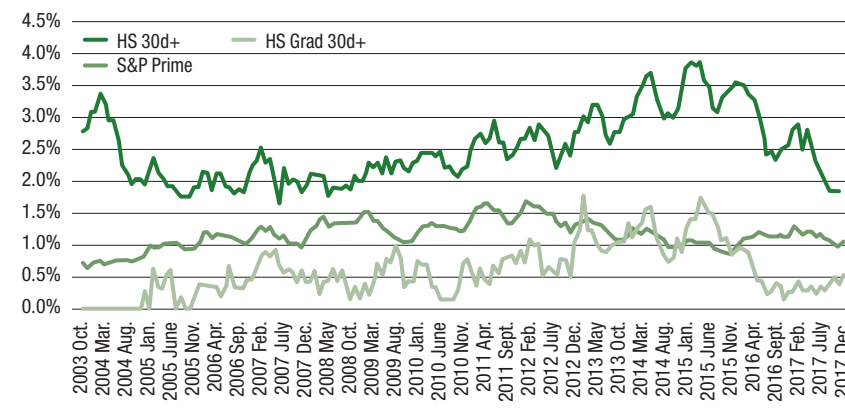


FIGURE 13 S&P Prime Australian SPIN vs. HomeStart 30d+ arrears, vs. Graduate 30d+ arrears (2003:2017)



ratio shows that in fact the Graduate cohort has a lower commitment of monthly net income (60%) than non-Graduates (62%) reflecting the higher incomes.

Graduate customers also exhibited higher levels of other commitments, with 6.0% of income committed to other liabilities at the time of loan application compared with 2.4% for non-Graduate customers. Reflecting higher commitment levels, Graduates utilised more borrowing capacity available to them, drawing almost 77% of the maximum available during 2017 compared with less than 65% for the non-Graduate applicants.

Both customer types had similar employment duration prior to loan application at around 3.5 years (HomeStart's lending criteria allow as little as 3 months or completion of employment probation, typically 6 months).

A review of 2017 loans of both Graduate and non-Graduate products allows for geographic comparisons of where the two customer types are purchasing (Figure 10).

Across almost all areas the two are quite similar, with one significant difference: Graduates are significantly less likely to purchase a home in the northern suburbs, as opposed to the southern suburbs. HomeStart has experienced substantial market share gains in certain southern suburbs and the data suggests the increase is substantially driven by the Graduate product. Historically, Adelaide's northern suburbs¹² have had a lower socio-economic profile than other areas, although this is changing.

6. Graduate Loan credit quality analysis

The credit experience with Graduate Loans is an order of magnitude better than that of HomeStart's wider portfolio. Figure 11, showing number of loans in arrears by age of loan across HomeStart's entire portfolio as well as the Graduate product specifically, demonstrates a significant lack of Graduate arrears for most age bands. A large number of age buckets have no Graduate Loans in arrears at all. In part, this reflects rapid turnover of the loan book (Figure 12): almost 80% of the Graduate Loan portfolio has been settled since 2016, meaning the back book is relatively small and thus prone to volatility in arrears numbers. Notwithstanding this, there is no evidence that Graduate Loans remaining in the portfolio are any more likely to

¹² The northern and southern fringes of the city are approximately 40-50km distant from the CBD.

encounter repayment difficulty. While Figure 9 above shows the loans are tending to leave the portfolio before reaching peak arrears experience, notwithstanding this phenomenon, those that remain tend to perform relatively well.

Analysis of Graduate Loan arrears performance has been undertaken against the Standard & Poor's [S&P] Performance Index [SPIN], which measures the weighted average arrears of more than 30 days past due on prime mortgages in Australian Residential Mortgage Backed Securities [RMBS]. Figure 13 illustrates a simple three-way comparison of SPIN versus arrears on HomeStart's overall portfolio, against the overall Graduate product over the period October 2003 to December 2017¹³.

It shows that HomeStart arrears are consistently operating at a level above Prime SPIN, with the gap widening particularly from 2013–2015. During this period, the HomeStart arrears rate was approximately 3 times that of Prime SPIN but the increase in arrears rates was driven by portfolio decline: the number of accounts in arrears fell by 15 (4%) between June 2013 and June 2015 whereas over the same time period the number of loans in the portfolio fell by over 1,300 (9%). More recently, the gap has narrowed substantially, with the HomeStart arrears rate being approximately 2 times Prime SPIN.

A number of factors may explain the changes in trends over time. Firstly, changes in lending and portfolio growth play a role. During 2009 and 2010 HomeStart experienced substantial lending growth reflecting both a withdrawal and tightening by other lenders, as well as the impact of various economic stimulus programs implemented by governments. These loans are generally expected to reach peak arrears experience around 3–5 years after settlement (Figure 14 below). HomeStart is also a somewhat countercyclical business: demand tends to move inversely to credit risk appetites of other lenders, particularly given the relatively concentrated nature of the Australian banking landscape. Banking regulation in Australia has tightened significantly in the past few years, supporting market demand for loans from HomeStart and non-bank lenders generally. Demand also tends to move inversely to interest rates, with a rising rate environment tending to increase customer interest in HomeStart's loan product. From 2015 HomeStart also tightened arrears and collection procedures including additional resourcing and improved practices which is also believed to have made a significant contribution. Lastly,

TABLE 2 Correlation of HomeStart portfolio and HomeStart Graduate arrears to S&P SPIN

	HOMESTART	HOMESTART GRADUATE	S&P PRIME SPIN AUST.	S&P NC SPIN AUST.	S&P SA PRIME + NC SPIN
HomeStart	1.00	0.61	-0.39	-0.50	-0.58
HomeStart Graduate	0.61	1.00	0.25	-0.34	0.17

the South Australian economy experienced – and continues to experience – higher unemployment than the rest of the country, particularly as the state economy endeavoured to pivot from a manufacturing base to alternative industries. A downturn in commodity prices created a further headwind, particularly in regional areas.

The arrears experience of the Graduate Loan has remained generally below that of the Prime SPIN, albeit gradually trending upward for much of the time series. From 2012–2015, Graduate arrears exceeded Prime SPIN for brief intervals, before falling below the latter curve from late 2015 onward. This peak coincided – and appears visibly correlated to – movements in overall HomeStart arrears (including the effect of portfolio changes), and likely reflects the economic and other factors identified above. More recent falls in Graduate arrears would also reflect strong portfolio growth in the past two years, which, coupled with shorter than average loan life (see Figure 7) has helped to keep a lid on slow paying loans.

Correlation analysis was undertaken between HomeStart portfolio arrears, Graduate Loans, and three S&P SPIN data sets over the data shown in Figure 13, specifically:

- S&P Prime SPIN (Australia)
- S&P Non-confirming (NC) SPIN (Australia)
- S&P Prime and Non-confirming SPIN (South Australia)

The analysis, shown in Table 2, displays some surprising relationships. HomeStart's portfolio arrears are generally negatively correlated with all three SPIN measures – including the South Australian composite of Prime and Non-confirming loans¹⁴. Given HomeStart's niche and the fact that South Australia represents less than 7% of the national economy a lack of correlation with the national data is somewhat less surprising, however the relatively high and negative correlation with the South Australian data is unexpected.

Graduate Loan arrears behave somewhat more as expected, notwithstanding some caution should be applied as it is a much smaller data set than the overall portfolio. Graduate Loans show a mild positive correlation with Australian Prime SPIN and South Australian Prime & Non-conforming SPIN. A negative correlation is evident against Australian Non-conforming mortgages, and this is also not entirely a surprise.

There are several possible explanations for the correlation – or general lack thereof – between HomeStart arrears and data from the wider economy. One hypothesis might be that given a significant proportion (at least a third) of HomeStart customers rely upon social security payments as their primary income source, the drivers of loan non-performance are factors other than those experienced by the wider economy. For example, the key drivers of arrears might have more to do with other social factors, such as marriage breakdown, health, or other personal issues, than loss of income. Anecdotally, this tends to be a common theme amongst mortgagee in possession properties, but no data analysis has occurred. The contrasting correlation of the Graduate Loan, with a far larger proportion of employed customers, who are more readily bankable by the private sector much faster than HomeStart's wider customer base, and exhibit a mildly positive correlation to Prime SPIN, could support this theory.

A second hypothesis might be that HomeStart's indexed loan instalment structure provides borrowers with a level of protection against interest rate movements, thereby creating a shield during upward rate cycles (Australian rates last peaked in 2008, within the data set analysed).

HomeStart engages an external actuary to undertake an assessment of expected future loan losses and loss development curves, and the results of this work show Graduate losses running at just 10.7% of actuarial expectations.

¹³ SPIN data for Australia can be downloaded from https://www.spratings.com/en_US/topic/-/render/topic-detail/australia-new-zealand-structured-finance-surveillance-1.

¹⁴ S&P does not publish Prime data for South Australia only, so the combined data set of both Prime and Non-confirming South Australian mortgages was used.

Although this figure is expected to grow in time, particularly with the expansion to lower qualifications tiers, it remains well inside projections. By contrast, the 'standard' HomeStart loan has experienced losses to 80.3% of actuary expectations, while HomeStart's alternative 97% lend product, the Low Deposit Loan, has incurred losses to 71.8% of actuary projections. Clearly the Graduate product is behaving very differently to the rest of the book, and to the other high LVR product available in the portfolio.

Figure 14 shows the actuary projected loss development curve by half year, illustrating the 'standard' HomeStart loan loss projection in black and what is expected to occur from a 97% loan product in orange. Actual losses from the Graduate Loan, by age of the loan at the time of loss in half years, are shown in the blue columns. It highlights a relatively small number of losses and it can readily be seen

that the cumulative loss on the Graduate Loan is significantly well inside both standard and high LVR lending projections.

By contrast, Figure 15 presents the same data for the alternative high LVR product, the Low Deposit Loan. The blue bars represent actual losses on the Low Deposit Loan, showing that while losses are also inside the expectations for the product, they are both well over the standard HomeStart Loan loss curve, and interestingly demonstrate a much longer tail.

The analysis shows the Graduate Loan outperforms both standard HomeStart Loans, the alternative high LVR loan (the Low Deposit Loan), and behaves similar or better than Prime mortgages as shown by S&P. Not only is the propensity to fall into arrears much lower, when losses are experienced they remain substantially inside loss projections.

7. Replicability and possible constraints

The essence of the concept is that attaining education to a certain level represents a reduction in credit risk of an individual due to their higher employability and income earning capacity. It is also considered likely that a person who has committed to completing a qualification is also more likely to show the discipline and commitment necessary to sustain home ownership.

Notwithstanding that educational systems and structures vary dramatically around the world, the concept could be readily replicated in a number of countries. Key ingredients to make this happen are thought to include:

- Structured, consistent educational pathways which are accessible to a wide cross section of population
- Robust data collection agencies, capable of providing policy makers with evidence of a relationship between employment, income and education
- A supportive environment for mortgage finance including options for assistance delivery either directly to the home buyer, or to the financier
- Growing housing unaffordability, particularly for younger people, across both private rental markets and in accessing opportunities to purchase a home

OECD countries such as Canada, the UK, New Zealand and the EU are likely to have these ingredients already present. Other countries may face a variety of barriers or constraints to replicating this program. Such constraints – and some thinking as to potential solutions or workarounds – might include:

- Significant and expensive student debt loads – Australia offers students an income-contingent borrowing scheme (Higher Education Loan Program or HELP) which enables deferral of tuition costs until income exceeds a certain threshold. Repayments and balances are collected through the taxation system. In 2015-16 the average HELP debt was \$19,100 and took just under 9 years to repay¹⁵. In countries where student loan schemes are less generous, and are not income-contingent, the student loan itself may severely inhibit borrowing capacity. In these cases,

FIGURE 14 Graduate expected v actual loss development, by half year

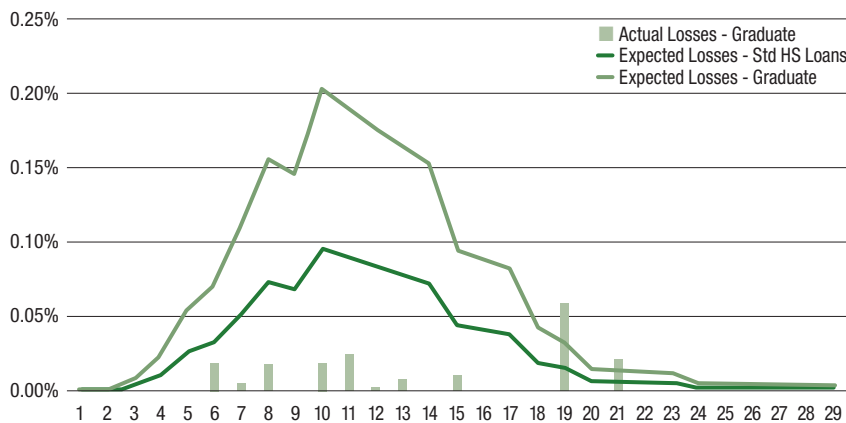
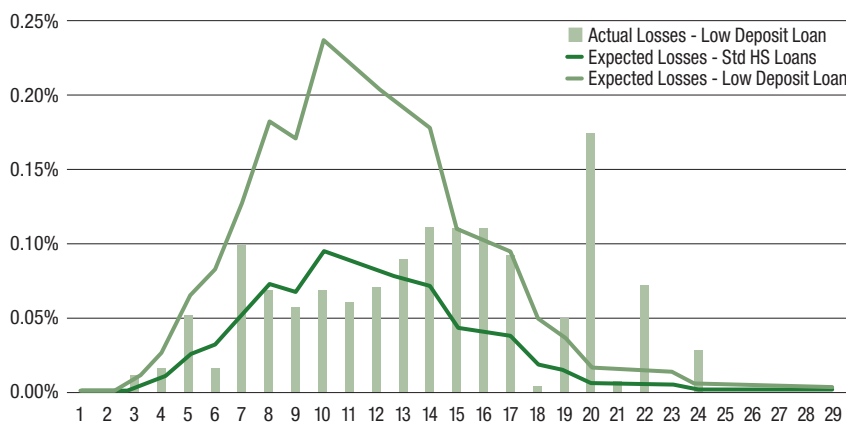


FIGURE 15 Low Deposit Loan expected v actual loss development, by half year



¹⁵ A useful discussion of Australia's student loan system and comparisons with other OECD countries is at: <http://theconversation.com/factcheck-does-australia-run-one-of-the-most-generous-student-loan-schemes-in-the-world-52696>.

it may be that a two-pronged approach to assistance is necessary so as to enable people to purchase even whilst servicing student debts: for example a shared equity or deferred repayment product could be used to bolster purchasing power (and compensate for servicing capacity consumed in repaying student loans) whilst a Graduate-style loan could offer a lower deposit option, thereby acknowledging the difficulty a student might face in accumulating savings at that stage in their life.

- Unclear relationships between employment and education level – factors other than education could be better indicators of employability or income earning capacity. Further research into this possibility may be warranted particularly in developing countries. Investment in data collection across the population to identify correlations between outcomes and levels of education may be a useful first step.
- Less developed mortgage markets – within Australia only two states run a home lending program. A variety of models for delivering such assistance are available around the world, and alternatives might be to incorporate qualifications or education as credit risk underwriting / acceptance criteria, or introducing repayable deposit assistance. The latter could be offered in less sophisticated markets, perhaps where home mortgage finance is not necessarily readily available.

8. Conclusions and future direction

The paper has shown how development of the Graduate Loan has supported and grown HomeStart's role in achieving its home ownership mission. It has then undertaken a deep dive into the customer base making use of the loan's unique features, and then assessed the credit performance against the market, HomeStart's portfolio as well as an alternative high LVR product launched by HomeStart at the same time which provides a useful contrasting data set. The Graduate Loan has proven to be a highly successful loan product with wide market appeal, particularly once expanded in 2015 which represents a pivotal moment in the history of the product, and in HomeStart's overall market presence and positioning. Over the past 15 years the South Australian economy has weathered the extremities of

interest rate, property, employment and global cycles yet the Graduate Loan product remains robust and continues to perform well.

With the major difference in criteria to other loans being that of the educational qualification, HomeStart believes it creates a case for this feature to be used more readily in housing finance systems across the globe. In particular for jurisdictions seeking to improve the overall wellbeing of their constituencies, the conjunction of education and home ownership represents a positive step towards building a stronger, more prosperous and resilient community. HomeStart is willing to continue to share relevant data and expertise with any other party seeking to replicate a similar program in their region, or to work constructively on providing ideas on how to adapt the concept to local conditions.

Appendix A: Organisational background and context

A statutory corporation¹⁶ established by the South Australia [SA] state government in 1989 with the purpose of operating a home ownership assistance program, HomeStart creates home ownership opportunities for credit worthy customers who would otherwise be unable to access finance. In almost 30 years of operation, the organisation has provided over 70,000 loans with an estimated 90% of customers unable to obtain finance elsewhere, typically for reasons of income or deposit. HomeStart is best described as a low deposit lender and does not undertake so-called "sub-prime" lending.

It offers a completely unique loan structure: loan instalments are set at an affordable level at the outset, and subsequently increase each year at a rate equivalent to inflation. As interest rates go up and down, the loan term increases or decreases, which means that a home loan remains affordable throughout interest rate cycles, and in lower interest environments customers are able to build up equity even faster. Implicit in this structure is that high interest rate environments carry a risk of loan balance capitalisation (i.e. negative amortisation).

HomeStart by the numbers

Currently HomeStart's loan portfolio is just over \$2bn, supported by equity of around \$165m and borrowings of \$1.835 bn. The loan portfolio includes over 13,000 existing customer

accounts and last year 1,674 new loans were settled representing around 4-5% of property transactions in SA and worth more than \$430m.

Summary achievements of HomeStart over the last 28 years include:

- More than \$7bn lent since 1989
- 70,000+ households assisted
- \$600m+ returned to the SA government in dividends and other payments
- 1 in 6 first home buyers in SA use HomeStart (2017)
- \$20.2m pre-tax equivalent profit in the financial year ending 30 June 2017
- 0.41% expected total loss rate on loans written since 2002¹⁷

Customer base and core loan product

HomeStart's customers tend to face barriers to home ownership which fit into one or more groupings:

- **Purchasing power** – can the household muster enough purchasing power to access the market through savings and debt, without over-committing their finances?
- **Upfront costs** – can the household obtain sufficient funds prior to purchase to cover deposit and purchase / settlement costs?
- **Confidence** – does the household genuinely believe home ownership is actually viable?

Appendix B: HomeStart customers and market contains more information about HomeStart's customer base, including the approach to designing solutions to overcome these barriers, market segments and lending by demographics over time.

Descriptions and the mechanics of HomeStart's unique product are contained in *Appendix C: Product suite* and *Appendix D: Product Mechanics*, which also includes loan amortisation (and capitalisation) under different rate scenarios. Figure 16 summarises lending by individual product groupings from 2002–2017¹⁸.

Organisational context

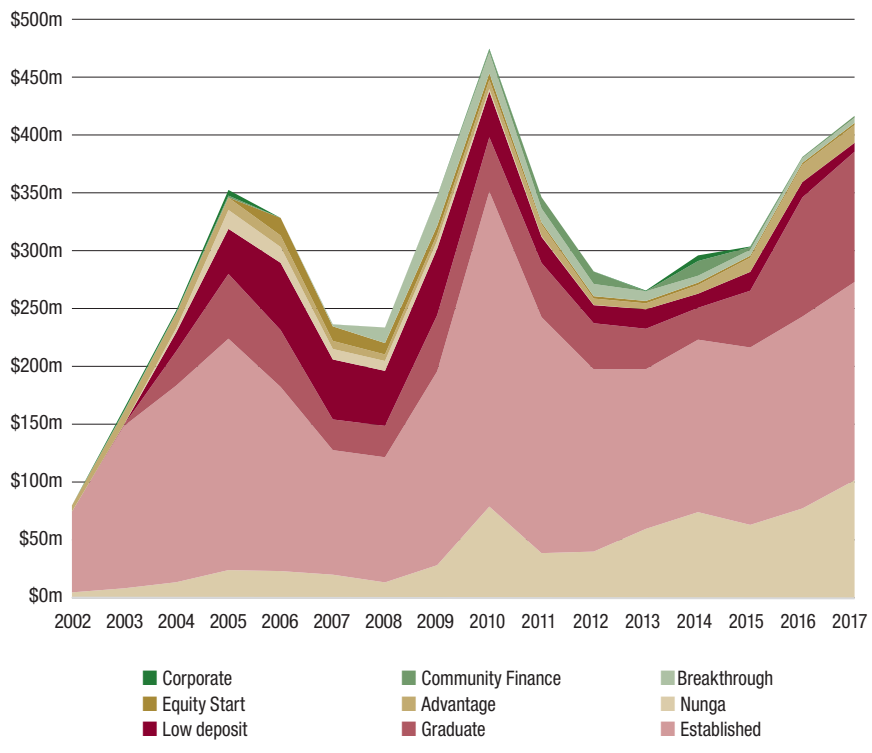
As a statutory corporation, HomeStart's lending operations are restricted to the state of South

¹⁶ Pursuant to the Urban Renewal Act 1995 and Housing and Urban Development (Administrative Arrangements) (HomeStart Finance) Regulations 2007.

¹⁷ PurHomeStart internal statistics are supplied in the Annual Report. HomeStart is willing to supply more detailed analysis or statistics on request.

¹⁸ Breakthrough Loan is HomeStart's shared equity product; Nunga was a special loans program for Indigenous people; EquityStart is a loans program for public housing tenants.

FIGURE 16 HomeStart new lending by product group (\$m)



average year HomeStart contributes over \$40m to the SA government's net operating balance although in 2016-17 it was closer to \$60m and around \$55m is expected in the current 2018 financial year. An annual performance agreement is made with the Minister for Housing and Urban Development which includes financial performance metrics such as a pre-tax return on equity minimum of 9%, a cost to income ratio target of 55% or less and a capital adequacy ratio in excess of 12%²⁰, along with other arrangements. HomeStart has exceeded all these measures on a regular basis.

Appendix B: HomeStart customers and market

Figure 17 illustrates HomeStart's customer-centric approach to designing and assessing product and other solutions to overcome these barriers. The process starts with customer segmentation, across which there can also be a further slice depending on the nature of the household. Key Graduate Loan issues are highlighted in red in the diagram below.

Appendix C: Product suite

HomeStart Loans are available for owner-occupiers in South Australia. The HomeStart Loan is fundamentally different to 'normal' home loans. It is designed to be affordable throughout interest rate cycles and this is achieved by generally only adjusting the instalment once per year, typically in line with inflation. This means that when rates go up, the loan term will increase and vice versa. By contrast, a standard home loan is written with a defined term (e.g. 30 years) and the instalment will go up and down with interest rates so that the loan term is always paid off in that time. Variations of the core product include:

HOMESTART LOAN (MAXIMUM LVR OF 95%)

Available for customers to buy an existing property or build a new home in South Australia. Some geographic restrictions apply.

GRADUATE LOAN (MAXIMUM LVR OF 97%)

Limited to holders of qualifications down to Certificate III (vocational) qualifications.

LOW DEPOSIT LOAN (MAXIMUM LVR OF 97%)

An interest premium of 1% is charged in the first year of the loan.

Australia. SA is the 4th largest state in Australia by area, yet with a population of 1.7m (7% of the national total) it is the 6th largest (ahead of only Western Australia and the Northern Territory). Intriguingly, it is also one of the most centralised: 76% of people live in the capital city, Adelaide, and outside the greater Adelaide metropolitan area the next largest urban centre, Mt Gambier, is located 450km south east and home to just 25,000 people.

The state includes large tracts of sparsely populated desert and outback country, with major industries being agriculture, mining, defence, and food production. It is also known as a sporting, cultural, food and wine centre with world class wine regions such as the Barossa Valley located only an hour from the Adelaide CBD.

Housing policy in Australia is largely the domain of the states, although in practice there are funding and other agreements between the Australian Government and the states on how certain policy levers are run, but ultimately each state has capacity to chart its own course. As a consequence, several states experimented with similar home ownership programs from the late 1980s onward, but only South Australia and

Western Australia (WA) have been successful in establishing sustainable models, both of which are in operation today (HomeStart in SA, and KeyStart in WA). Affordability in SA is significantly better than the more populous cities of Melbourne and Sydney, each with populations around 5m people. This is a function of a much slower economic growth experience in SA, leading to lower employment and migration (both interstate and overseas).

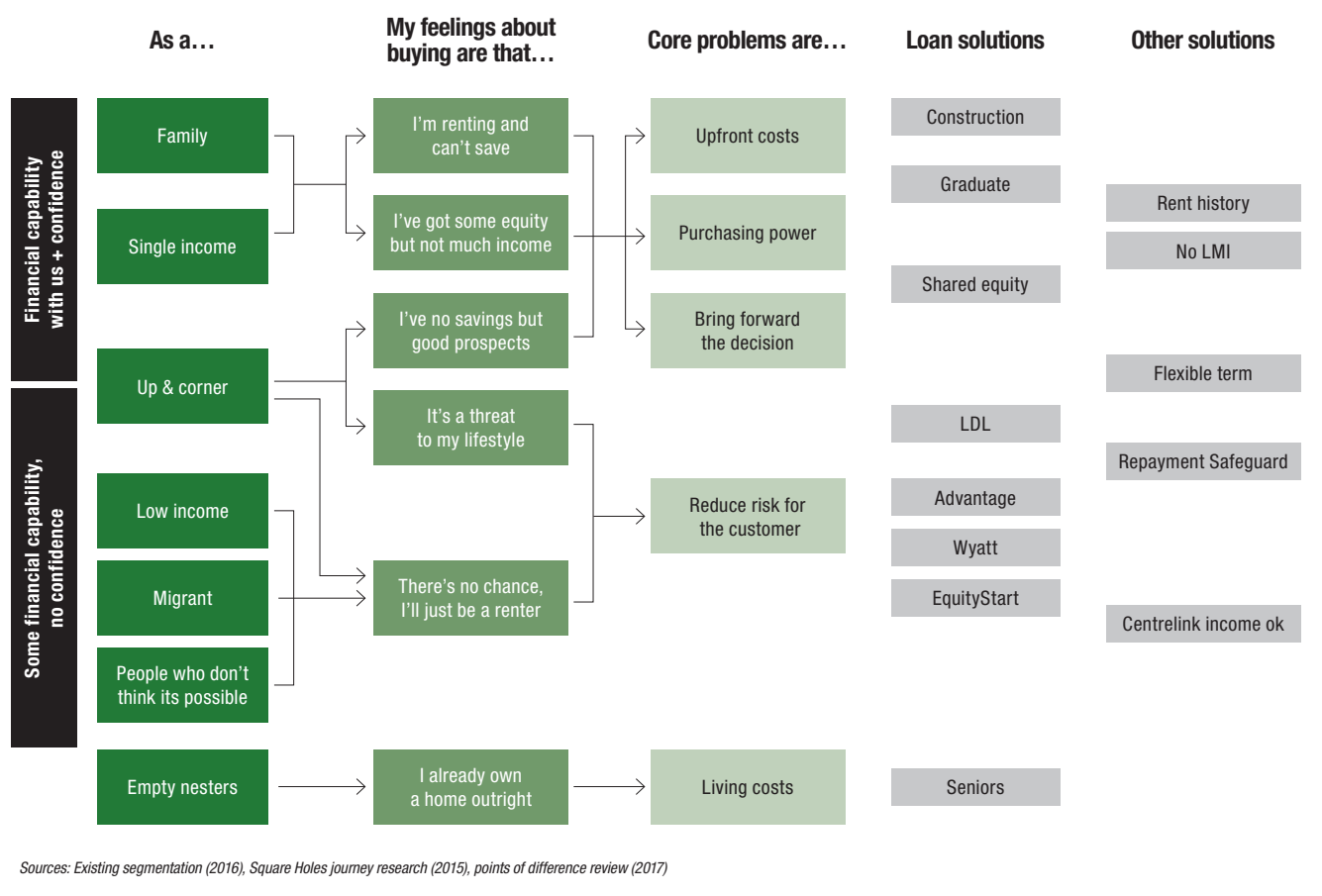
All of the organisations funding is borrowed at market rates via the SA government centralised borrowing authority [SAFA] and is subject to a borrowing limit of \$2.105bn at present. HomeStart's raw cost of funds is therefore that of the SA government as if it was borrowing in its own name. In line with Australian government principles around "competitive neutrality"¹⁹ HomeStart is required to pay a guarantee fee (currently 1.88%) on top of the raw cost of funds to ensure it does not enjoy a competitive advantage over the normal commercial market.

HomeStart also pays an income tax equivalent (30%) to the SA government, along with dividends (typically a payout ratio of 60% is applied), and other fees. In aggregate, in an

¹⁹ The theory being that a government body should not obtain a competitive advantage by virtue of being a part of government.

²⁰ Although HomeStart is not an authorised deposit taking institution and therefore not subject to prudential supervision by the Australian Prudential Regulatory Authority (APRA), it elects to voluntarily follow APRA's capital adequacy framework applied to banks. In doing so it ensures sufficient capital remains in HomeStart to insulate the state of SA from credit loss events.

FIGURE 17



SUBSIDISED INTEREST RATE PRODUCTS

These loans are taken in conjunction with one of the HomeStart Loans above. In the case of the Advantage and EquityStart products interest accrues on these loans at a rate generally equivalent to CPI and repayments are not due until the HomeStart Loan has been paid out.

- **Advantage Loan** – A subsidised rate loan of up to \$45,000 available to households earning less than \$60,000 p.a. The amount available scales downward between net incomes of \$37,500 and \$60,000.
- **EquityStart Loan** – A subsidised rate loan of up to \$50,000 available to public housing tenants to purchase their existing HousingSA property or another home.
- **Wyatt Loan** – Delivered in partnership with the Wyatt Trust which provides funding for the loans and HomeStart provides administration, credit assessment, and distribution. Wyatt Loans are interest free and available for a term of up to 5 years to specifically targeted customer groups. The Wyatt Loan is available to assist with upfront costs associated with purchasing a home. Total funds available are capped.

SHARED APPRECIATION PRODUCTS

These loans are taken in conjunction with a HomeStart Loan. They are designed to significantly lift customer borrowing power and HomeStart (or another party) receives a share of the capital gain on the property in lieu of interest on the shared appreciation portion.

- **Breakthrough Loan** (withdrawn December 2017) – This product sits on HomeStart's balance sheet. The customer pays an annual fee of 3% of the Breakthrough Loan value and shares a portion of the capital gain with HomeStart on sale or refinance. HomeStart holds approximately \$70M (face value) of these loans and has a limit of \$100M. Geographic restrictions apply.
- **Shared Equity Option** (from 2018) – Replacing the Breakthrough Loan, the product has a simple structure with pro-rata sharing of capital gains and losses. A further significant change to the Breakthrough Loan was the removal of the 3% annual fee. The shared equity portion can be maximum of 25% of the total facility.
- **Shared appreciation loans** (various) – HomeStart has partnered with local

government (e.g. City of Salisbury and Adelaide City Council) to offer shared appreciation products for specific developments. Under these arrangements the shared appreciation portion is retained by Council and represents an off-balance sheet item for HomeStart.

REVERSE MORTGAGES

Seniors Equity Loans are provided to customers who own their properties outright and are commonly termed "asset rich and cash poor". The maximum loan to value ratio available for the customer is scaled up to a maximum of 35% at age 85 or above. These ratios are determined by age and supported by mortality and life expectancy analysis. There are no scheduled payments and customers are protected by a "no negative equity" guarantee.

Appendix D: Product mechanics

The loan product is the key point of difference to the market. Fundamentally, the HomeStart Loan – in any flavour – is not a credit foncier product. By contrast, it is in an indexed loan structure that offers a flexible term where the loan instalment

is based off income and indexed upwards by inflation (CPI)²¹ thereafter. Therefore, as interest rates rise or fall, the loan term will increase or decrease and the instalment simply goes up by inflation each year (generally).

The reason for persisting with this structure lies in HomeStart's origins: in 1989 the organisation was launched at a time when mortgage rates were extremely high. According to Reserve Bank of Australia [RBA] data, the average owner-occupied mortgage rate peaked at 17.0% in September 1989, an increase of 250bp on a year prior. The ensuing recession in Australia saw rates fall to 8.75% by mid-1994.

Through offering an indexed loan structure, HomeStart therefore insulates borrowers from the effect of interest rate shocks. Given a large proportion of customers have relied upon government payments for income which are also indexed upward by inflation, the instalment tends to move more or less in lockstep with income. Thus, if the loan is affordable at the outset, and the borrower is already at safety-net level then, *ceteris paribus*, it should remain affordable for the life of the borrowing.

Net income is used to calculate loan servicing capacity, with ratios established for single and double incomes, and borrowing capacity reduced per dependant. A "loan multiplier" is then applied to net income available for loan servicing to determine borrowing power. For example, at the time of writing the multiplier is 190, which means that for every \$1,000 per month available for loan servicing the customer can borrow \$190,000. For much of the organisation's history borrowing power was calculated as a multiple of household income, e.g. 3.0x, however this was substantially changed in 2010 due to legislative reform by the Australian government.

Because the loan term is sensitive to real rate movements, HomeStart sets the multiple around long term expected interest rates and inflation so as to achieve a notional loan term of around 30 years. With rates below long-term levels the actual loan term will typically be much shorter, if the product is held till maturity, with the balance amortising quickly. If rates begin to rise as expected later in 2018 then the amortisation rate will slow.

There are pros and cons to such a structure, and while valued by customers in a rising rate environment it can become problematic with

FIGURE 18 Loan amortisation: HomeStart loan balance vs credit foncier, monthly. Current rate: 5.24%

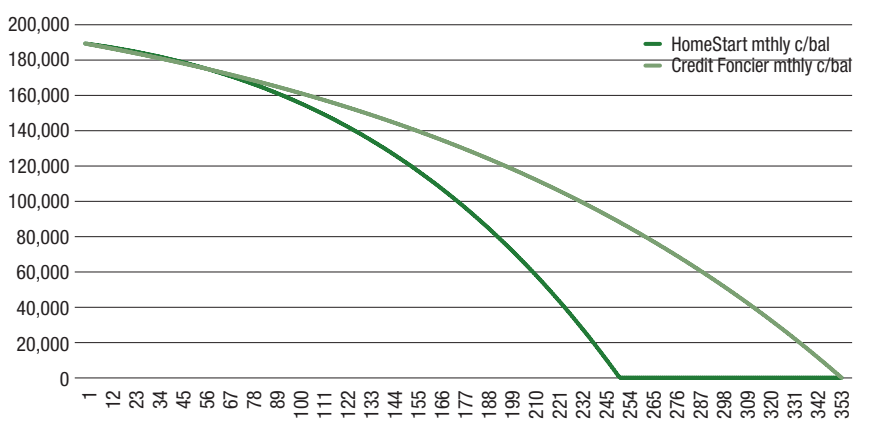
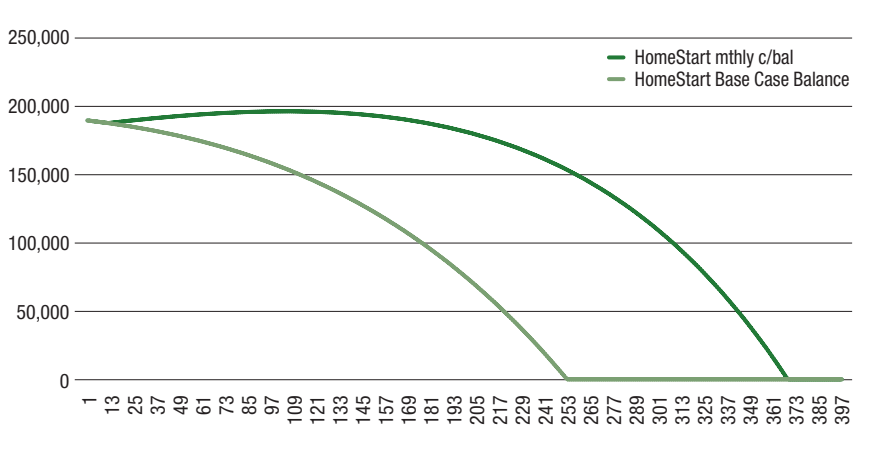


FIGURE 19 HomeStart Loan amortisation: Rate=5.24% to month 12 then 7.50%



low or falling rates. Some customers become frustrated by instalment indexation, whereas others appreciate the benefits of helping them build equity faster. Generally, most customers have a preference to repay their loans as fast as possible, and a majority seek to make voluntary payments in addition to scheduled instalments.

From a financial perspective, the rapid amortisation of the loan book creates financial headwinds during falling rate environments, and while "retention" is not part of HomeStart's playbook initiatives have been undertaken to slow (but not halt) portfolio run-off. For example, at times HomeStart has run campaigns offering customers opportunities to reduce or restructure their payments in order to realign their experience with the market. Such campaigns have occurred at times when the real rate has been well below expectations for a sustained period.

Notwithstanding the above the product has performed extremely well through almost 30 years of interest rate volatility including recession and property booms.

Figure 18 illustrates the performance of a HomeStart loan in a constant interest rate scenario, using pricing as at the time of writing. It shows how the standard credit foncier loan repays over a 30-year term, whereas the HomeStart product amortises much faster and is repaid in 21 years 3 months²².

The effect of a higher interest rate environment, including the potential for capitalisation (negative amortisation) arising from the HomeStart structure, can be seen in Figure 19 which shows a scenario where rates increase by 226bp just 12 months after settlement. In the scenario modelled, the loan balance begins to rise after the rate increase because HomeStart's indexed

²¹ Consumer Price Index, as published by the Australian Bureau of Statistics.

²² These calculates assume monthly repayments. In practice most customers repay fortnightly, and therefore will amortise their loans somewhat faster.

loan instalment only increases by inflation. The balance capitalises from month 13 until month 108, at which point continual indexation of the loan instalment has allowed it to “catch up” to interest charges. Amortisation of the loan begins again, until it is fully repaid by month 372, or 12 months longer than the average 30-year mortgage term in Australia. Notwithstanding the increase in loan term, this loan would likely have remained affordable for the household in question. By contrast, a credit foncier customer would have faced a 26% increase in their loan instalment.

A key lesson from the scenarios is the role of the real rate in defining ultimate loan term. A higher real rate leads to a longer loan term, and vice versa. HomeStart has established careful processes to regularly monitor the rate and inflation outlook and adjusts the loan multiplier prudently. In practice the multiplier is the main control mechanism to manage loan term and capitalisation risks. HomeStart accepts capitalisation risk as part of offering the product, structuring it conservatively so as to accommodate unexpected changes in the real rate over a loan life.

In essence the product structure provides borrowers with significant cash flow protection against volatile interest rates. While this feature is under-valued by customers in times of low or falling rates, it also enables them to build equity when compared with credit foncier loans, thereby assisting to truly own their own home and delivering on HomeStart’s core brand value of “sooner”.

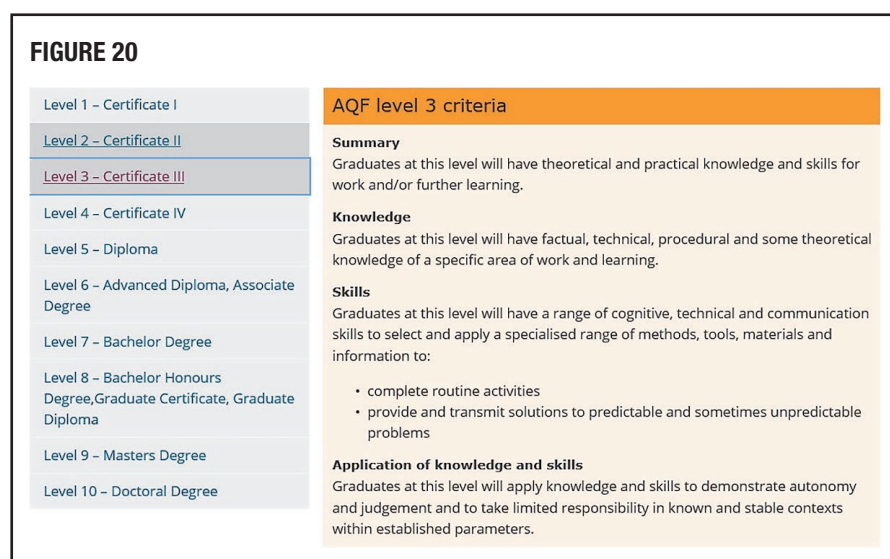
Appendix E: Australian Qualifications Framework [AQF]

The Graduate Loan is built around the Australian Qualifications Framework [AQF], the policy for regulating qualifications across the Australian education system. There are 10 levels of the AQF rising in complexity from Level 1 - Certificate 1 (“Graduates at this level will have knowledge and skills for initial work, community involvement and future learning”) through to Level 10 – Doctoral Degree (“Graduates at this level will have systematic and critical understanding of a complex field of learning and specialised research skills...”). Figure 20 shows the hierarchy including an explanation of Certificate III qualifications²³.

Upon launch in 2002 the Graduate Loan was positioned for people holding a Bachelor Degree

which typically represents at least three years of full time study at an Australian university and corresponds to Level 7 in the AQF. Several years later, the qualification threshold was reduced

to Level 5 (Diploma) where it remained through until 2012. Current thinking is that the qualification criteria threshold is unlikely to be lowered any further.



Appendix F: Graduate Loan eligibility criteria 2003 and 2018

CRITERIA	2003 SETTING	2018 SETTING
Eligible Applicants	University qualifications	Certificate III or higher
Max Loan Amount	Borrowings set at 3.7x single income or 3.4x joint income. Max \$200,000	Standard criteria, determined by net available income for loan servicing, times a multiplier (190)
Employment	Continuously employed with same employer for 18 months in a field of study	Standard criteria (3 months or past probation whichever is longer)
Maximum LVR	100% whilst FHOG available	97%
Max Instalment	30%	Calculated by income and household type
Max Commitment	38% – this will allow for the maximum HECS debt of 6 %	Varies by net income, maximum of up to 58.3% of net income
Min Savings	\$1000 over 3 months or regular rent record	Min. \$3,000 genuine savings
Credit check	Must have a clear credit record	Clear
First Home Owners Grant	Contributed to fees and charges. LVR not to exceed 100%	If available
Proof of Graduate Status	Academic record or parchment, copy of employment contract	Transcript or parchment, employment criteria must be met
Construction Loans	Yes	Yes
Distribution	In-house channels only	All channels have access

²³ Australian Qualifications Framework, <https://www.aqf.edu.au/aqf-levels>, accessed 23 Jan 2018.

The role of development banks in financing sustainable and affordable housing: The EcoCasa program

↳ By Ernesto Infante Barbosa, Andrea Hernández, Claudia Castillo and José Cruz Triay

1. Introduction

Given its demographic growth, Mexico must double the size of most of its cities over the next decades. This means, new homes, workspaces, public spaces, and infrastructure. This generates huge opportunities for the housing sector, and that is why it is one of the main challenges in the country's public policy agenda. The Mexican government is tackling the quantitative and qualitative housing shortage through several initiatives, many of which count on Sociedad Hipotecaria Federal [SHF], as the relevant agent capable of implementing and providing them with continuity.

Cutting the housing deficit while addressing the quality of houses is a double opportunity that SHF is exploiting through its sustainable housing portfolio, led by the EcoCasa Program. As the development bank for the housing sector in Mexico, SHF is one of the most important players tracing the path and setting the standards for sustainable social housing, creating a successful model which can now be replicated.

The EcoCasa Program is a SHF initiative with the partnership of the German Development Bank [KfW] and the Inter-American Development Bank [IDB], along with concessional funds and grants from the German Government, the European Union and the Clean Technology Fund. It is the first Program in Mexico and Latin America designed to finance the construction of low-emission houses (EcoCasas) achieved through energy consumption simulations and the incorporation of energy efficiency measures. EcoCasas provide low-income families the benefits of having a formal, affordable house that can cut their expenses in gas and electricity, and increase thermal comfort without incremental cost.

SHF's large-scale financing mechanisms are powering meaningful transformational impact through the implementation of energy efficiency measures in the mass housing sector, acting from the supply side through several financial incentives and on the demand side through the availability of affordable houses with improved performance levels at the same cost as standard houses.

2. The Mexican context

Mexico is a country with more than 120 million inhabitants, whose population and internal gross product has been in relative constant growth over recent decades. However, it is a country with high levels of inequality, 43.6% of the population lives in conditions of poverty (CONEVAL, 2016) and the country has a Gini Coefficient of 48.2 (World Bank, 2014). Additionally, Mexico is experiencing a rapid urbanization process. By 2010, 78% of the total population was already living in urban areas (INEGI, 2010).

The average Mexican is 26 years old. In 2010, 47 million Mexicans were of working age, and estimates show that the number will increase to 60 million by 2030 (CONAPO, 2012). With this increase in the working-age population, an important growth in housing demand is expected to occur in the following years.

2.1. The housing sector

The housing sector is recognized as one of the main economic engines in Mexico. In recent years, significant breakthroughs have been achieved in the development of a strong institutional framework and financing system. During 2016, the total housing stock in the country amounted to a total of 38 million units; the homeownership rate reached 70%; and

29.1% had a mortgage with public or private financial institutions. In the same year, individual credit loans for house acquisition increased by 18.1% reflecting the dynamism in the sector. It is important to add that the construction sector had a 3.2% increase, while the real estate sector (housing, commercial and health, among others) had an increase of 4.2%, both in real terms (CIDOC, 2017).

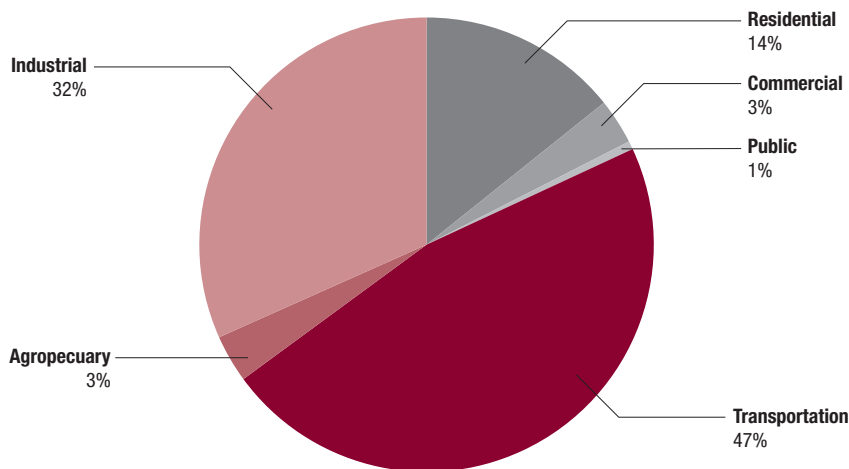
Despite the housing sector's positive indicators and a housing backlog decrease in the last two decades, there is still a deficit of 9.2 million households – affecting more than 36 million persons. This demands the following solutions: (1) improvements (34.9%); (2) self-build (5.4%); and, (3) acquisition of new or existing housing (59.7%).

The government has played an important role in supporting the housing market through the National Housing Commission (CONAVI); significantly increasing aid to low-income families, and helping to reverse a downward trend in the construction market (YALE, 2018).

Since the year 2000, more than 2 million dwellings for low-income families were built with a unit price around USD \$12,000 and \$24,000¹, appropriate for the affordable housing sector. The vast majority of affordable housing receives some kind of public subsidy for workers, in addition to personal co-financing (INCAE, 2015). Persons with monthly incomes lower than USD \$363 are eligible for receiving CONAVI's federal subsidy for housing acquisition (CONAVI, 2018). Traditionally, housing developers have sought the highest profitability when constructing projects to serve this client sector, exploiting scale economies with standardized architectural and urban designs which are replicable, and simplifying significantly the process of land acquisition, construction, and selling. Once the house is sold, the new owner keeps the medium-term relationship

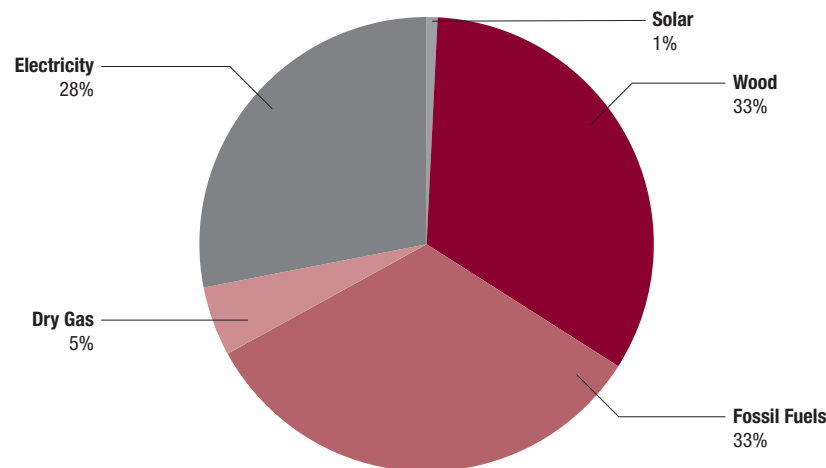
¹ The exchange rate MXN-USD used in all the document is 18.9 (average 2017).

GRAPHIC 1 Total energy consumption in Mexico by sector



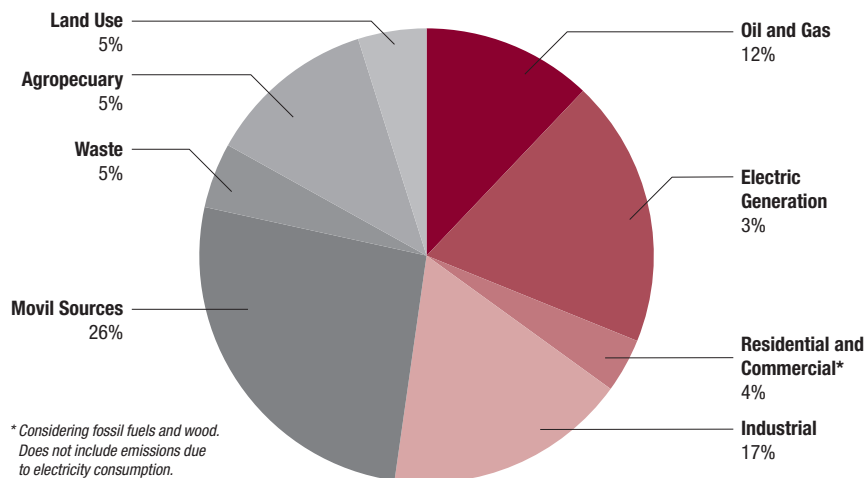
Source: Energy Information System, Energy Ministry (SIE, 2016)

GRAPHIC 2 Energy sources - residential energy consumption



Source: Energy Information System, Energy Ministry (SIE, 2016)

GRAPHIC 3 Total national GHG emissions by sector



* Considering fossil fuels and wood. Does not include emissions due to electricity consumption.

Source: National Greenhouse Gases Emissions Inventory 2013. National Institute of Ecology and Climate Change (INECC, 2013)

with the financial institution providing the credit loan (INCAE, 2015).

2.2. Climate change and housing

The housing sector is responsible for 14.2% of energy consumption in the country (SIE, 2016) and, together with the commercial sector, it accounts for 3.9%² of total national emissions (INECC, 2013). See Graphic 1, 2 and 3. Due to the expectations for housing demand in the following years, it is important to consider this as an opportunity for improving energy efficiency in the sector. Local and federal public administrations have the challenge of implementing the necessary mechanisms to obtain the best from this opportunity.

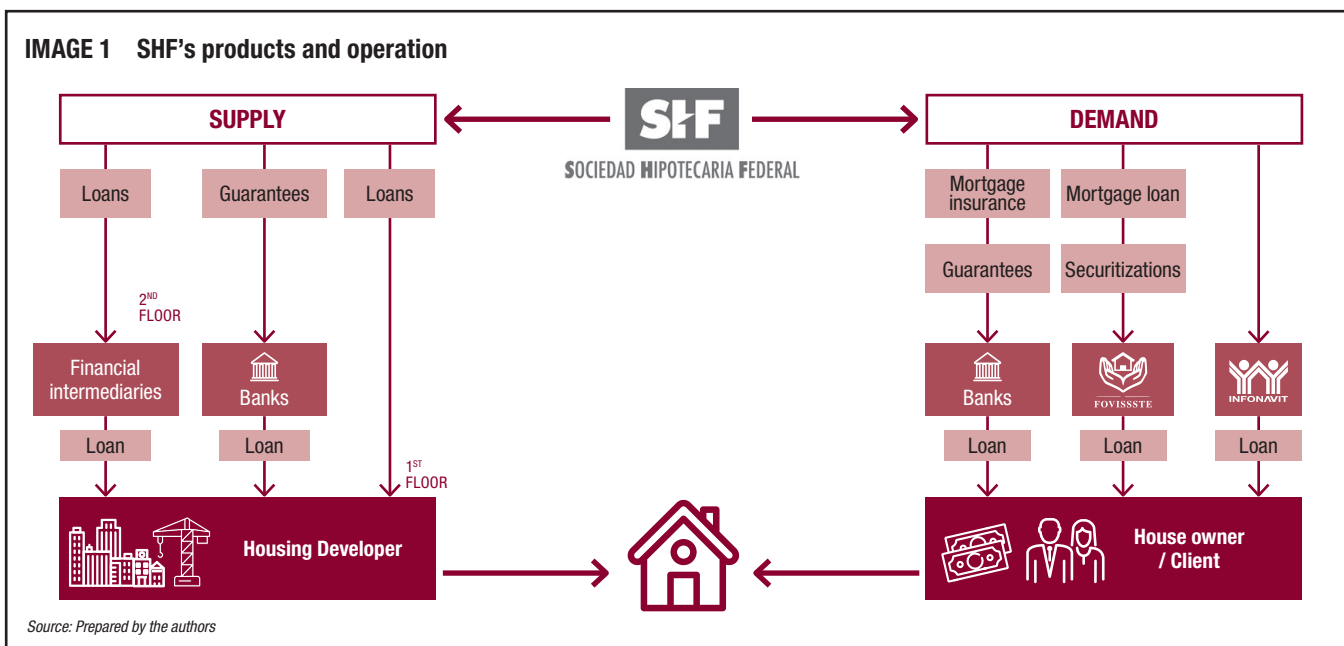
Mexico is one of the countries with the highest levels of vulnerability to climate change. The country acquired important international commitments during COP 19 and COP 21 for contributing to climate change mitigation. The goal established on its NDC's is to reduce by 50% (below 2002 levels) the total national Greenhouse Gases (GHG) emissions by 2050. Regarding energy efficiency, the reduction target is of 3.7% in energy intensity by 2050 (CONUEE, 2017). To achieve these objectives, significant measures are being introduced to build technical capacity, implement projects, and coordinate key actors and decision makers.

An example of national-international collaboration for climate change actions are the NAMAs, developed as part of the national voluntary commitments before the United Nations Framework Convention on Climate Change (UNFCCC). In 2012, the Mexican Government designed the NAMA for Sustainable Housing to supplement its existing initiatives on energy-efficient new housing, by extending the penetration of basic energy efficiency standards to the entire housing market through supporting housing developers and by upgrading standards to more ambitious levels (ASHDEN, 2015). SHF was the first institution to bring the NAMA for Sustainable Housing to life through the EcoCasa Program, achieving bigger results than expected and reinventing sustainable housing beyond the initial concept stated in the NAMA for Sustainable Housing.

3. Sociedad Hipotecaria Federal

SHF is a Mexican second-tier development bank with a mandate to develop the primary and secondary markets for housing finance, by providing credit loans and guarantees for construction, acquisition and improvement, as well as to

² Considering fossil fuels and wood. Does not include emissions due to electricity consumption.



increase the productive capacity and technological development of the homebuilding sector. It is linked to the Mexican Ministry of Finance.

SHF was created in 2001 with the aim of strengthening the mortgage market and facilitating the access of low and medium-income families to housing solutions through three main actions:

- (1) to develop the housing market for the low-income sectors;
- (2) to develop bonds backed by mortgages to attract investors; and
- (3) to provide liquidity to the market.

To achieve this goal, SHF participates in the primary and secondary housing markets, through banking and non-banking financial intermediaries, providing credit loans and guarantees for construction, acquisition and house improvements. See Image 1.

During the past five years, SHF has significantly expanded its participation in financing the housing sector, and reinforced its presence by participating with the National Housing Organisms [ONAVIs], banks, multilateral development banks, and housing developers. The intention was to reinforce interinstitutional coordination and align programs focused on the housing sector (INFANTE, 2016).

One of the actions SHF took in 2013 as part of its reorganization was the creation and implementation of the EcoCasa Program. The Program provides low-interest construction loans to developers to build 'EcoCasas' – affordable

new homes that cut CO₂e emissions by at least 20% – without passing on extra costs to purchasers. Developers may cut CO₂e emissions in whatever way they choose, but are encouraged to focus on the building fabric, for example through insulation and shading. SHF supports them with guidance and training and uses an energy model to check that sufficient CO₂e savings will be achieved (ASHDEN, 2015).

4. EcoCasa program

4.1. History

In line with Mexico's national policy on climate change and the huge opportunity on the supply side of the housing sector, SHF promoted and launched the EcoCasa Program in 2013, with the purpose of:

1. Making environmental and energy efficient homes affordable.
2. Creating awareness and disseminating among society the benefits of the optimal use of energy resources in reducing consumption and avoiding emissions of CO₂e.
3. Providing housing developers with design tools that allow them to negotiate better prices on materials and eco technologies with suppliers.
4. Generating indicators to support the conversion of consumption subsidies through investment subsidies for the incorporation of energy and water eco technologies.

Recognizing that the production of sustainable housing was already partially met on the demand side through the Program *This is your*

House of the National Housing Commission (CONAVI) and the *Green Mortgage Program* of the National Housing Fund Institute for Workers (INFONAVIT), SHF promoted the creation of a financial scheme on the supply-side that could promote the production of energy efficient housing through technical assistance and financial incentives. These would allow developers to adopt these solutions without affecting the final price of housing for the population with lower incomes. See Image 2.

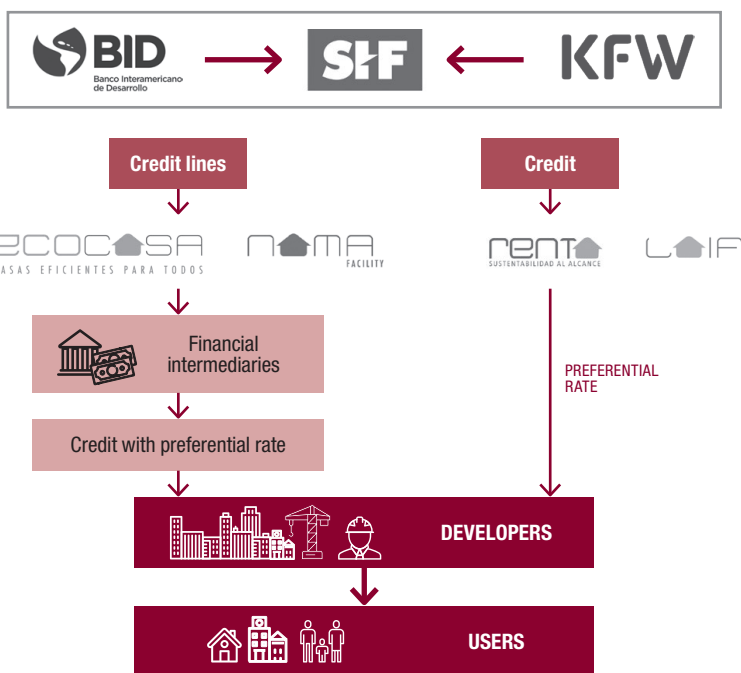
During this period, the tool that would later be used in EcoCasa and throughout the sector for energy and water simulation of homes was being developed: *The Green Housing Assessment System* (SISEVIVE-EcoCasa), whose development was supported by several international organizations and led by the INFONAVIT with the participation of SHF, in coordination with the ONAVIs.

4.2. Partnerships and investors

As commented before, the EcoCasa Program is an initiative of Sociedad Hipotecaria Federal [SHF] in conjunction with the Interamerican Development Bank [IDB] and the German Development Bank [KfW]. Between 2013 and 2018, KfW (with resources from the German government) granted SHF three concessional loans for a total amount of USD \$ 245.1 million, and the IDB (with resources from the Clean Technology Fund, CTF) two concessional loans for a total amount of USD \$ 99.50 million. In addition, the program has non-reimbursable financial resources equivalent to USD \$ 2.26 million from the CTF for technical assistance, which amounts to a total of

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IMAGE 2 EcoCasa financial mechanism



Source: Prepared by the authors

IMAGE 3 SHF sustainable housing portfolio – investments and goals

	INVESTMENT	2019 - 2023 GOALS
	\$USD MILLIONS	HOUSES
LOANS	BMZ + KfW: \$ 245.10	27,600 casas (EcoCasa)
	CTF CLEAN TECHNOLOGY FUND: \$ 49.51	800 casas (LOIF)
	CTF CLEAN TECHNOLOGY FUND: \$ 2.26	11,000 casas (NAMA Facility)
SUBSIDIES	BID: \$ 50.00	5,000 casas (EcoCasa 2)
	Componente LOIF: \$ 8.00	8,500 casas (EcoCasa 3)
	NAMA Facility: \$ 11.30	1,500 casas (Renta)
	Total Financing : \$ 366.46	Total: 60,000 energy efficient houses
	Total Investment¹ : \$ 1,037.14	Mitigation: More than 2 Million ton CO₂ in 40 days

¹ Total Investment considers 4 turns of the revolving funds.

USD \$ 346.86 million in loans for the implementation of EcoCasa in its three stages: EcoCasa I, II and III (this last one recently signed in December 2017). SHF received an USD \$ 8 million grant from the European Union for the creation and implementation of the LAIF component of the EcoCasa Program (houses with Passivhaus Standard). Additionally, the NAMA Facility Fund provided USD \$ 11.3 million in grants for the financial component of the NAMA Facility program focusing on small and medium housing developers. See Image 3.

The role of KfW and the IDB is to support SHF with technical and financial advice to enable the Program to operate in a fluid and efficient manner. The relationship between the three partners has always been collaborative, the correct implementation of the Program and the correct use of the resources obtained from the German Government and the CTF are monitored together, with results reported as per agreed indicators.

In this context, “the Programme has been achieved through multilateral partnership and

attractive incentives for public-private sector co-operation, which have enabled the development of technical and financial mechanisms to strengthen sustainable housing as public policy support framework” (INFANTE, 2015).

4.3. Objectives

EcoCasa has managed to set ambitious objectives aimed at contributing to Mexico’s efforts to reduce GHG emissions related to the housing sector, specifically through the increase in production of low carbon-emission housing, through financing with a preferential rate and through subsidized guarantees on loans to developers that include eco technologies in the homes they build.

Consequently, the expected results of the Program in the financed houses are:

- (i) Reduction in GHG emissions,
- (ii) reduction in electricity consumption,
- (iii) increase in the comfort level of its inhabitants and,
- (iv) decrease in energy costs.

The EcoCasa Program seeks to lead the country towards a model of sustainable development, transforming construction standards and fostering an energy efficient housing market. Complementing financial incentives for developers, EcoCasa offers free technical assistance to support them in generating their housing proposals.

Along with these objectives, the intention is to help develop the theoretical and technical knowledge of the developers, suppliers and users; as well as to strengthen the capacities of the construction industry and financial institutions for the financing and development of low-carbon housing. EcoCasa can provide inputs to promote the development of sustainable public housing policies; for instance, we can obtain indicators to incentivize subsidies that promote the use of efficient technologies, instead of subsidies that promote energy consumption as it is nowadays. Additionally, EcoCasa aims to improve the practices of evaluation, supervision, monitoring and labeling of energy efficient homes; and disseminate the knowledge generated in the Program among the general public, industry, research institutions and government institutions at different levels.

4.4. Innovative model

EcoCasa can be considered a unique case of innovation at a global level, since it has successfully entered the housing construction

industry in Mexico with a proposal that integrates widely-known and used practices by developers and the financial sector, such as credit loans through financial intermediaries, with sustainability criteria. In other words, one of the great innovations of EcoCasa is taking advantage of existing structures and mechanisms and complementing them with tangible and attractive benefits for the agents involved, in order to introduce sustainability measures in the housing sector. This approach has allowed the alignment of incentives to these agents to ensure that the implementation of the Program flows smoothly. See Image 4.

The financial mechanism developed by EcoCasa promotes from the supply side, the construction of sustainable housing. In this mechanism, the transfer of the benefit occurs through the line of credit that SHF grants to the financial intermediaries who, in turn, transfer the benefit to the housing developer. This interest rate reduction is up to 260 base points below the traditional funding, which compensates the incremental costs by the incorporation of energy efficiency measures in such a way that the sale price of the EcoCasa is not altered. See Image 5.

In this context, EcoCasa succeeded in designing the following package of benefits:

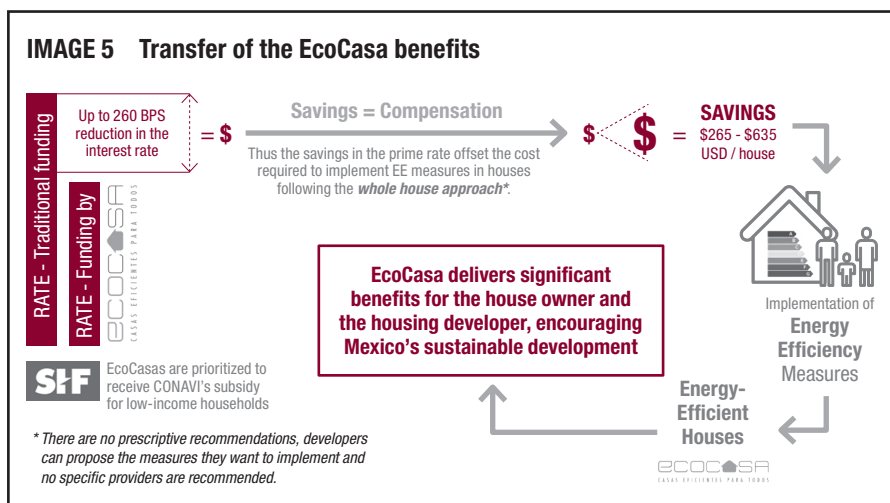
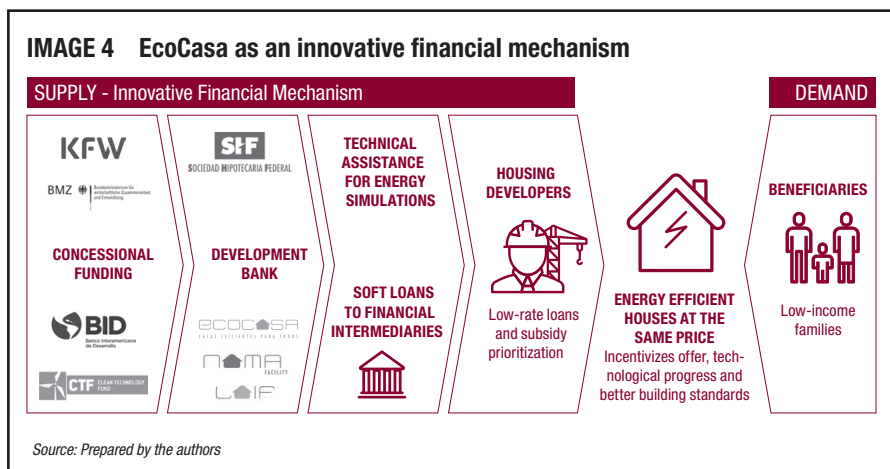
- Preferential Rate of:
- EcoCasa I up to minus 260 bps
- EcoCasa II up to minus 115 bps
- EcoCasa III up to minus 110 bps
- Prioritized Federal Subsidy (CONAVI)
- Technical assistance: The developer has the support for the simulation of the first projects with supervision throughout the certification process

On the other hand, unlike other initiatives that have focused on promoting the development of housing that contemplates the implementation of a specific eco-technology package (resorting to such resources as an early solution to design), the EcoCasa program addresses energy efficiency in construction based on the whole-house performance approach. From this perspective, standards are set for the total demand for primary energy considering the prototype and the bioclimatic zone, exploring the most valuable tool in the

construction of sustainable housing: the passive bioclimatic design (contemplating the location, thermal insulation, ventilation, and natural lighting). Based on these premises, it is possible to quantify ex-ante the savings in electricity and gas consumption (and thus the GHG reduction) that are generated, and the inclusion of additional equipment that unnecessarily increases energy consumption of the home can be avoided. Some of the energy efficiency measures that have been implemented to date include thermal insulation of slabs and walls, reflective paint and solar water heaters, among others. The measures to improve the envelope and reduce energy consumption increase between MXN \$ 2,000 (USD \$ 112.5) and MXN \$ 15,000 (USD \$ 844) the total cost of housing. "These measures allow to reduce the expenses associated with the maintenance and use of the houses, allowing the owners to have a lower expenditure on energy" (ASHDEN, 2015).

The focus of the Program is on numerous proposals that promote innovation and the evolution of the sustainable housing market, particularly with the following virtues:

- It allows a simple and effective measurement system that monitors the improvements in the net efficiency of a wide range of eco-technologies, design and construction materials.
- It evaluates the integrated performance of housing systematically. Without limiting itself to prescriptive criteria, it encourages both SHF and the developer to investigate and analyze new paths in construction and technological terms, including new passive techniques, more efficient eco-technologies, exploration of materials and giving a guide to innovation in housing.
- By not having prescriptive criteria, it allows the interaction between specialists, suppliers, technicians and developers to achieve the desired result, generating a synergy that allows the awareness and capacity building of all actors.
- It encourages developers to be innovative and find the most cost-efficient and appropriate combination to meet the objectives of the Program. Instead of promoting specific measures, it generates demand for new suppliers and technologies that can be integrated into the current market, indirectly benefiting Mexican companies.
- Under this system, it is possible to integrate different measures included in other sustainable housing programs, positively improving housing projects to reach higher standards of sustainability.



- In addition, the phased model approach allows funds to be invested in specific levels of efficiency and CO₂e savings aligned with their development priorities, while giving flexibility to the implementers to increase the demand of the program over time.

4.5. Impacts and expected benefits

The EcoCasa Program is designed to make a relevant impact on the three axes of sustainable development: environmental, social and economic. It has proven the potential to achieve transformational effects in the housing construction industry in Mexico, fostering the supply of energy efficient homes, promoting the national policy of sustainable housing, increasing the demand for eco-technologies, promoting innovation technology and raising awareness of users and developers about the importance and benefits of this type of housing.

The achievement of the program's objectives is being measured with the following indicators:

1. The construction of approximately 60,000 sustainable and efficient homes by 2023 that meet the established eligibility criteria.
2. The energy consumption of the homes financed by 2023 have a reduction of 36% of the energy consumption compared to the baseline scenario.
3. The electricity costs (in USD) of the homes financed in the year 2023 have a reduction of approximately 36% of the costs compared to the baseline scenario.
4. CO₂ emissions from financed housing (tCO₂e/m²) by 2023 represent approximately 69% of emissions in the baseline scenario.
5. The average interior temperature in the financed homes should range between 20 and 25° C for a minimum of 40% of the year for homes that are located in warm humid climates, a minimum of 60% of the year for homes located in dry and very dry climates and a minimum of 80% of the year for housing in temperate climates. In no case, should comfort be worse than that of the baseline. Defining a demanding but realistic comfort indicator has been a challenging task for EcoCasa because of the high investment needed to reach an optimal level of comfort and the limitations of the EcoCasa benefit to cover all the energy efficiency measures in that scenario. This is particularly important to prevent an increase in the housing price that low income households would not be able pay; but, at the same time, increasing their comfort level and the related spending on air conditioning.

The implementation of EcoCasa offers benefits that can be divided according to the sector that they favor: at country level, at the level of housing developers and at the level of end users. The following are the main observed benefits:

BENEFITS FOR THE COUNTRY

- Comply with GHG mitigation commitments.
- Permeate knowledge and experience to other sectors and levels of government, promoting a transformational change in the sector.
- Economic growth; the change from traditional housing to a sustainable housing market can generate new jobs and contribute to economic growth.

BENEFITS FOR DEVELOPERS

- Capacity building and technical support in the incorporation of sustainable design and construction, serving as preparation for modifications in the national policy for sustainable housing.
- Positioning as an innovative developer.
- Competitiveness by offering a better-quality product at the same price.
- The costs of eco-technologies are dropping, providing a wider range of options to developers.

BENEFITS FOR THE USER

- Thermal comfort inside the house and improvements in its inhabitants' quality of life.
- Access to high standards of energy efficiency and, consequently, significant reduction in consumption and electricity and gas expenses of families. Considering the current prices of electricity and gas, the bills are expected to be 28% or USD \$ 200/year on average lower in an EcoCasa. Since the target households earn between USD \$ 4,000 and 20,000 per year, this can represent a significant saving.
- In interviews with EcoCasas owners, they have reported savings in gas consumption of 50% due the solar water heater; as well as being comfortable in warm weather (KfW, 2017).

Additionally, EcoCasa is generating the following long-term benefits in the housing sector in Mexico:

- 1) by being an integral part of the NAMA for Sustainable Housing, the efforts that are carried out together with other relevant actors in the sector are tending to

permeate the criteria of sustainability in the construction and housing policies;

- 2) other international governments may take the Program as a reference to structure their own sustainability policies;
- 3) financial intermediaries began to offer financial products aligned with the particularities of sustainable housing;
- 4) an increasing number of buyers know the benefits that this type of housing offers;
- 5) the construction industry is developing greater knowledge about sustainable construction techniques and bioclimatic design; and,
- 6) contributing to the development of the eco technology market.

“Only a program like EcoCasa could have brought in the needed expertise to make it happen. It's no less than transformational change” (SUKI, 2015).

4.6. Evolution and operations

Given the success of EcoCasa, SHF's sustainable housing portfolio has attracted more concessional funding and evolved with new components targeted to specific markets with the goal of achieving higher efficiency standards and reaching a broader group of beneficiaries (Infante; Reyes, 2017). As new concessional loans for EcoCasa II and III have been signed with KfW, experience has been gained through implementation of the program, and the market has developed. EcoCasa has evolved by incorporating additional components and sustainability evaluation criteria. The first important evolution is that a component for financing houses for lease was incorporated in EcoCasa II and III, which has the potential of achieving higher emissions reduction while attending to middle-income housing demand.

For the execution of EcoCasa in these second and third stages, given the different preferential interest rates each program offers (EcoCasa I, II and III), SHF proposed raising the standards established for sustainable housing via the public policy of the country. It was determined to increase the percentage of mitigation and the integration of new evaluation criteria, achieving the successful execution of new simulation tools that nowadays allow homes to qualify, integrating a broader and more ambitious vision for the benefit of sustainable housing development considering new attributes such as the location, the efficient consumption of water and the carbon footprint of building materials. “EcoCasa is going the

The role of development banks in financing sustainable and affordable housing

extra mile, looking at housing in its broadest context” (Suki, 2015). See Image 6.

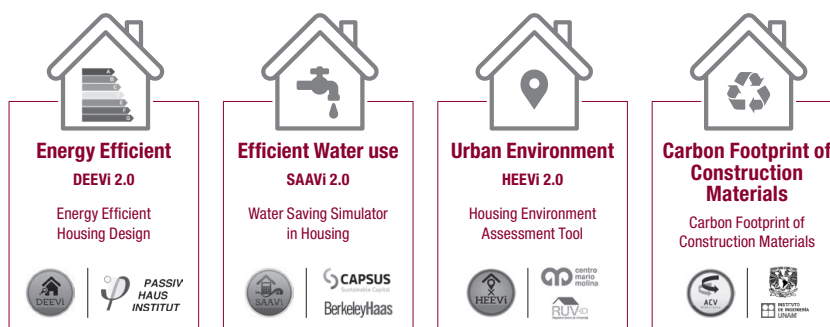
In this context, for the definition of the new evaluation criteria and standards, SHF has worked intensively with the sector to define criteria that validate sustainable housing evaluation procedures such as the new baseline, design of new levels of mitigation for the sector and the new version 2.0 of the simulation tools: DEEVi 2.0 (Energy Efficient Housing Design), SAAVi 2.0 (Housing Water Savings Simulator) and IDG 2.0 (Index bands of Global Performance, conformed by DEEVi and SAAVi results); as well as, new comfort ranges and comprehensive evaluation methodologies.

Eligibility criteria have been updated according to the evolution that the sector has presented for the generation of more efficient housing. This new strategy integrates different levels and financing schemes, such as EcoCasa I, II or III, as well as requirements and methodologies coordinated with the relevant actors of the sector, which allows us to join efforts and offer greater benefits for those developers who achieve a higher level of integral efficiency (in terms of energy consumption, water and location) in housing developments.

As can be seen in Image 7, the requirements for participating in the EcoCasa Program were updated in 2018 and establish levels of benefit proportional to the level of efficiency and sustainability reached by each project.

The procedure to participate in the EcoCasa Program takes an average of 2 weeks, depending on the developer, and consists of the steps shown in Image 8. In order to guarantee the correct installation of the measures in the houses, SHF, together with the Financial Intermediary, carries out permanent virtual supervision and monthly verifications on site, which guarantees the quality of the construction. The EcoCasa credits are then repaid from the sale of the housing units by the developers, in the same way that a standard construction loan is repaid. It is a fundamental condition for EcoCasa, that the sale price of each EcoCasa housing unit is not higher than the price of a comparable standard unit, which guarantees accessibility for low-income families and benefits the end user.

IMAGE 6 Simulation tools



DEEVi. (Energy Efficient Housing Design)	Through the DEEVi we have determined strategies and evaluation methodologies that allow us to know more accurately the energy performance of houses and the potential of different eco-technologies to reduce energy demand in homes. Elaborated by the Passivhaus Institute
SAAVi. (Water Saving Simulator in Housing)	It has been possible to consider the savings of efficient water use and the related reduction of CO ₂ emissions.
HEEVi. (Housing Urban Environment Assessment Tool)	The evaluation of the Urban Environment through the HEEVi tool developed in conjunction with the Mario Molina Center [CMM] and the National Housing Registry [RUV] has allowed us to identify the presence of urban equipment, transportation, municipal capacity, services, employment, among others, managing to encourage an appropriate location and degree of urbanization for each project.
Carbon Footprint of Construction Materials	The analysis of the most used construction materials has allowed us to generate a database of the carbon footprint. Elaborated by the Institute of Engineering of the National Autonomous University of Mexico [UNAM].

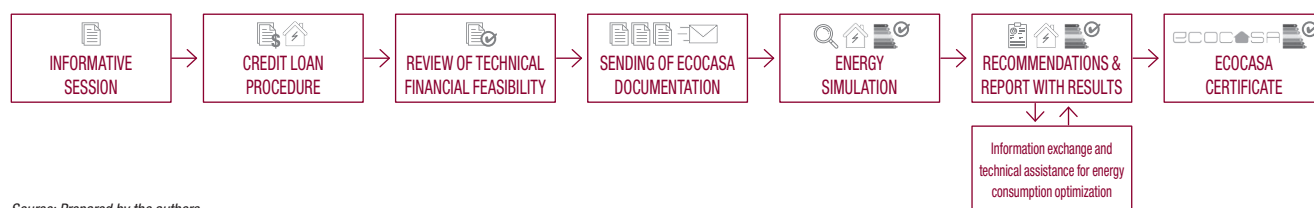
Source: Prepared by the authors

IMAGE 7 EcoCasa requirements by climate and house typology

PROGRAMS	BENEFITS	REQUIREMENTS									
		ALL CLIMATS		WARM AND VERY ARID (All Typologies)		ARID AND SEMI-ARID (All Typologies)		TEMPERED AND COOL (All Typologies)		TEMPERED VERTICAL	
		HEEVi	DEEVi	[IDG]	DEEVi	[IDG]	DEEVi	[IDG]	DEEVi	[IDG]	
			Comfort 40%		Comfort 60%		Comfort 80%		Comfort 80%		
ECOCASA I	1) Preferential rate -260 bps 2) Prioritized Subsidy 3) 150 Points ROP CONAVI 4) Technical assistance	45	-40%	C	-30%	D	-25%	D	-25%	E	
ECOCASA II	1) Preferential rate -115 bps 2) Prioritized Subsidy 3) 125 Points ROP CONAVI 4) Technical assistance	30	-30%	D	-20%	D	-20%	D	-20%	E	
ECOCASA III	1) Preferential rate -100 bps 2) Prioritized Subsidy 3) 125 Points ROP CONAVI 4) Technical assistance	15	-30%	D	-20%	D	-20%	D	-20%	E	
MA FACILITY	1) Investment subsidy 2) Prioritized Subsidy 3) 125 Points ROP CONAVI 4) Technical assistance	15	-30%	D	-20%	D	-20%	D	-20%	E	
LOIF	1) 70% Investment subsidy 2) Technical assistance	15									-80% / A-B

Source: Prepared by the authors

IMAGE 8 EcoCasa certification procedure



Source: Prepared by the authors

To secure the EcoCasa sale price, the following steps are being followed. All EcoCasa projects initiate the financing process with a thorough review from SHF. In this review the technical and financial feasibility of the project is analyzed, considering the value studies that determine the cost of housing and the project to define the amount of financing they can access (on average 65% of the total cost). Subsequently, the EcoCasa sustainability analysis is performed, obtaining the optimizations required to reach the standard and the developer evaluates whether the incremental cost of the optimizations will be covered by the financial benefit obtained by the Program. If the developer agrees, a certificate and a credit contract are issued for the amount established at the beginning of the financing process. Finally, the information on each house is submitted to the National Housing Registry [RUV]. The information registered includes the ecotechnologies used and the sale price. The average price of the EcoCasas is USD \$19,576.

Construction supervision and monitoring are a fundamental part of validating sustainability measures that ensure correct implementation and results. Regarding construction supervision, during 2017 SHF worked on the development of a supervision protocol specific for sustainable housing. In this protocol, the basis for a technical supervision on site of the eco-technologies installation was established. It is expected to implement this protocol in the internal SHF procedures for construction supervision in the coming months. Also, during 2018, SHF in coordination with the KfW will hire a consultancy for the monitoring, reporting and verification of energy consumption and measurement of temperature and humidity of EcoCasas, as well as for the development for the first time of an Environmental and Social Management System.

4.7. Results

EcoCasa has been established as one of the pioneer programs at the global level in terms of low-emission housing and today is setting the rules and making the application of public policy in sustainable housing in Mexico a reality. An important contribution of EcoCasa is that the methodology used for the evaluation of energy efficient houses under the NAMA for Sustainable Housing has been the result of the experience gained after several years of operation and coordinated efforts between SHF and the relevant actors of the sector.

As a proof of the great performance shown by EcoCasa in the first 4 years of implementation (EcoCasa I), it managed to exceed the goal set for 2019 of 27,600 financed homes,

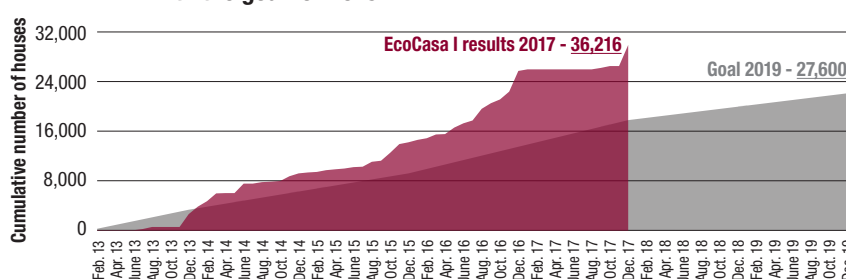
by November 2016. Since then, the program has maintained an evolution above what was projected during the subsequent months. This trend is also reflected in EcoCasa II. The current global goal for the operation of the EcoCasa Program (considering EcoCasa I, II and III) is 60,000 certified homes and more than 2.0 MtCO₂e over 40 years by 2023. See Graphics 4 and 5.

The general status of the Program can be seen in Table 1. Of the total 44,034 financed EcoCasas, 36,000 were built in their entirety by December 2017, benefiting more than 140,000 users. In total, 72 housing developers have participated in the Program, with a presence in 22 of the 32 states of the country (covering all the

climate regions). It is necessary to highlight that, thanks to the technical assistance provided to these developers, on several occasions their construction methods have been modified and improved, therefore, it is very likely that the number of energy efficient homes built in the country has increased considerably as a collateral effect of the Program.

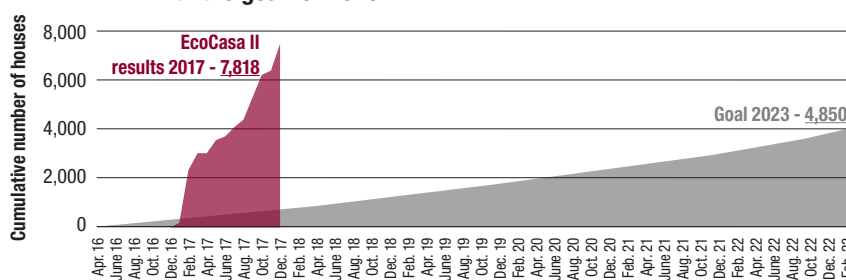
Significant progress has been made not only towards achieving the goals of the SHF's sustainable housing portfolio, it has also been proposed that standards be raised for sustainable housing in respect of participation under the public policy of the country. In this sense, SHF has worked on training the institutional

GRAPHIC 4 Progress of the EcoCasa I program in comparison with the goal for 2019



Source: Prepared by the authors

GRAPHIC 5 Progress of the EcoCasa II program in comparison with the goal for 2023



Source: Prepared by the authors

TABLE 1 EcoCasa status (December, 2017)

	Amount of the concessional loan (million USD)	Financed houses (units)	Amount of credit loans (million USD)	Resource allocation (times)	CO ₂ mitigation ² (Mton)
EcoCasa I	BID - CTF	36,216	421.64	2.36	1.16
	KfW - BMZ			4.02	
EcoCasa II	KfW - BMZ	7,818	125.93	1.90	0.25
EcoCasa III	KfW - BMZ	—	—	—	—
EcoCasa certification	—	9,005 ¹	—	—	0.29
TOTAL	294.61	53,039	547.57	—	1.70

¹ Certification of compliance with EcoCasa standard without EcoCasa credit loan.

² Considering 40 years of use of the houses.

and construction sectors, achieving a successful implementation of new tools that allow homes to qualify, integrating a broader and more ambitious vision for the benefit of sustainable housing development considering new attributes such as the environment, the efficient consumption of water and the carbon footprint of building materials. This will contribute to fully accomplishing the paradigm shift in the way houses are built by introducing the sector to new standards that generate progress in terms of the sustainable development of the country.

EcoCasa continues to position itself as a spearhead in the supply of innovative solutions for sustainable housing, having an important impact on the sector with the proposal of new evaluation criteria for sustainable housing, being a fundamental part in the definition of the new rules and processes of homologation with the ONAVIs.

The continuous work of SHF and the ONAVIs in promoting sustainable housing has been gradually changing the market by increasing the offer of eco-technologies for low-income households. Among the technologies that have been widely used in recent years, we can mention thermal insulation, reflective finish, solar water heaters, and efficient lighting. The clearest example of a technology evolution in the market is the case of solar water heaters. During the last decade, use of solar water heaters increased at an annual rate of 14% (SIE, 2016), while their cost decreased by approximately 28–33% (GiZ, 2015). This tendency has been accompanied by improvements in the technology and regulatory framework. Despite the important progress, further efforts are necessary to expand and strengthen the eco-technology market. For instance, it is estimated that around 20% of the new social housing has solar water heaters (GiZ, 2015). In this sense, SHF has also been promoting the incorporation by the Mexican market of higher energy efficiency technologies that are commonly used in international markets including efficient windows and air extractors.

As additional achievements SHF has successfully implemented pilot projects that promote sustainability measures in different niches, such as housing for rent and self-build in rural housing. Overall, EcoCasa sets a framework in which additional sustainable housing programs have been gradually implemented by SHF, contributing to a sustainable housing portfolio. These programs are:

- 1) The **LAIF component**, aiming to reach 80% of CO₂e emissions mitigation, as required by the international Passivhaus standard;

- 2) **NAMA Facility**, attending the Small and Medium housing developers market; and,
- 3) **Urbanization**, the first product in Mexico to finance urban infrastructure and public services buildings with sustainable characteristics in housing developments.

“All things considered, risk is an essential component of any innovative, large-scale initiative and we are confident that large-scale sustainable housing developments in Mexico are proving to be a successful example of how aligning the interests of public-sector entities with those of private sector developers will and can inspire confidence and set an example of collective action that will drive sustainable housing initiatives elsewhere” (INFANTE, 2015).

5. Challenges, solutions and lessons learned

Since its implementation in 2013, EcoCasa has demonstrated the feasibility of constructing energy efficient low-income homes in Mexico. There are many challenges ahead and there are daily barriers for EcoCasa. Nevertheless, the initial achievements and anticipated long-term impacts of EcoCasa arguably outweigh the challenges (INFANTE, 2015). Moreover, EcoCasa has led the way towards a transformational change in the housing sector. This has been a complex task since the program started in a context where sustainable housing was a novel concept in the country, meaning the program had very specific starting needs. For instance, before EcoCasa there were no incentives on the supply-side of the market; and there was no methodology for energy simulation which included a tool and a *whole-house performance approach* that facilitated its replicability in the different bioclimatic regions of the country. To tackle these challenges and to come up with solutions was the first success of the EcoCasa program. Since then, SHF has made a great effort to face the main challenges and trigger significant changes across the entire value chain of the housing sector. This has resulted in an enriching learning process. Some of the main challenges, solutions and lessons learned are described below.

5.1. Supply

The EcoCasa program had to learn from and adapt to its clients: the housing developers and financial intermediaries. One important challenge was to offer them a product that was compatible with the speed and standardization levels of the housing developers through the

stages of planning, construction, marketing and sales; as well as, according to the different sizes of the companies.

Housing developers usually present a lack of technical knowledge about energy efficiency optimization; materials, technologies, suppliers, and implementation. SHF has four lines of action to mitigate this barrier:

- 1) specialized technical assistance throughout the process of participating in the programs;
- 2) organization of workshops and fairs to bind together developers and technology suppliers;
- 3) in collaboration with other housing institutions, SHF arranges workshops to train developers in the use of DEEVi and SAAVi simulation tools;
- 4) development of a Supervision and Verification Protocol with the aim of stabilizing basic criteria for energy efficiency technologies implementation supervision during the construction stage to achieve high quality dwellings.

5.2. Demand

Due to historical support for policies that strongly subsidize fossil fuels and electricity consumption, the cost comparisons between the bills of energy-efficient and traditional homes do not reflect real savings. Therefore, households are not very conscious of the benefits of energy efficiency measures; they do not specifically demand them when looking to buy a house, and do not know how to maintain them. Additionally, because of those policies, there is still a limited offer of energy efficiency technologies for the housing sector (windows, efficient ventilation, etc.) and it is associated with high prices in some cases. For these reasons, SHF is working on providing the beneficiary families with a user's manual which explains the sustainable characteristics of the house, benefits and maintenance.

5.3. Regulations

The regulation framework in terms of energy efficiency and sustainability in the sector needs to be stronger. For instance, there is a lack of regulation that requires compliance with the Sustainable Building Code and there is opposition from the housing developers to the energy efficiency norms. Besides, there is a need for more energy-efficiency policies tailored specifically for the housing sector. There have been some policy initiatives directed to developing technical knowledge of energy efficiency

concepts, measures, and their implementation; however, they have been focused mainly on industry. Most of all, it is imperative to have a solid mechanism via CONAVI, to validate the correct enforcement of the existing norms.

EcoCasa is an example of the importance of international cooperation for the development of markets oriented towards sustainability. Without the concessional funds and technical assistance resources provided by the international partners to align incentives, it is possible that the changes accomplished in the sector would not have happened organically (Infante; Reyes, 2017). The joint learning process between different actors has been fundamental in comprehending the complexity of the housing market and developing adequate solutions and financial products for sustainability. Accordingly, it is indispensable to value the Know How acquired through the EcoCasa experience so that the construction of sustainable houses becomes the regular practice in the sector.

New lessons learned are a daily component of the EcoCasa program. EcoCasa will continue with this process of continual improvement and learning and looks forward to enlarging its scope and diversifying the product.

6. Key factors for success and potential for replicability

The on-going achievements and anticipated long-term impacts of the EcoCasa Program are proving that aligning the interests of public-sector entities with private sector developers will and can inspire confidence and set an example of collective action that will drive sustainable housing initiatives elsewhere (Infante, 2015). There is potential for replicability among the commercial banks in Mexico, as well as internationally. During the last three years, sectoral institutions, think-tanks, academia and development banks from Central and South America, as well as South Africa, have approached SHF, interested in learning more about EcoCasa and seeking to replicate the model. Below are the main factors promoting the Program's success, as well as possible impacts of replicating the Program and some suggested guidelines for using the EcoCasa model as a reference.

6.1. Key factors for success: housing developer and final user

One of the major difficulties Mexican housing developers face when trying to improve the quality of their housing prototypes is the impossibility of raising construction costs due

to inflexible prices in the sector and incentives related to final sale price ranges, such as CONAVI's federal subsidy for low-income families. EcoCasa addressed this issue by conducting a thorough analysis of the costs of energy-efficiency measures, and identifying interest rates that would make it affordable for developers to upgrade their housing prototypes with the incorporation of energy-efficiency measures.

The Program's success is largely due to its focus on the major market for mass social housing in Mexico. The fast pace of this sector, along with the great demand and the unavailability of financing options to support the offer, has made the EcoCasa financial product a profitable alternative for both financial intermediaries and housing developers, so much that there is now a significant number of collaborators within their workforces who are familiar with all processes involved, consolidating the internalization of the necessary administrative and technical knowledge in their organizations.

Reliability and transparency are of utmost importance for a sector as vulnerable to the economic climate as the construction industry is in Mexico. This issue is one of EcoCasa's greatest strengths. As one of the initiatives under the NAMA for Sustainable Housing, companies are confident of participating in the EcoCasa Program because the SISEVIVE-EcoCasa evaluation system is a very accessible and widely known resource, which favors the most cost-efficient solutions through a non-prescriptive process that allows an improved *whole-house performance approach* while it is sensitive to the economic and technical reality of the Mexican market.

Another important incentive that has made the program widely popular among housing developers is the additional benefit of making projects eligible for a prioritized delivery of CONAVI's federal housing subsidy. By law, NAMA-compliant projects are entitled to receive this subsidy before non-compliant projects do. With limited funds for these grants and strong competition in most Mexican states, this benefit of the program frequently makes the difference between receiving or not receiving the subsidy, which is passed on to buyers.

Developers face major technical challenges when trying to elevate their projects' standards. There is a lack of technical knowledge and a limited local availability of technologies, and most of the specialized know-how needs to be developed in-house. Thanks to EcoCasa,

project teams have access to technology suppliers, technology fairs, and workshops, and more importantly detailed planning and direct technical assistance from the EcoCasa team through the design, planning and execution phases of the projects. This support has long-term effects, since the know-how is internalized and can be applied in future projects.

From an accountability and project risk-assessment perspective, SHF's monitoring and control process for managing nearly a thousand simultaneous housing projects has been an exceptional support to the Program. Over the present administration, real-time platforms covering all stages of the projects have been developed or improved with outstanding results: so much that SHF's non-performing loan rate was lower than 0.5% in 2017. The complete lifespan of all projects is documented, revised, commented on, corrected and approved online through specialized tools that allow interaction between SHF and its clients, offering both lean management and high confidence of project success. Alongside control platforms, a robust body of on-site supervision and verification actions guarantees compliance with construction best practices, as SHF requires financial intermediaries, or developers, to follow several inspection protocols and a continuous stream of evidence in order to disburse funds. SHF also requires third-party random, periodical on-site inspections for all financed projects. This is all directed and monitored from SHF's headquarters in Mexico City by a large team of architects specializing in supervision and verification of housing construction. Such practices are additional and aligned to those required by government agencies such as CONAVI and INFONAVIT, which require mandatory third-party verifications to grant federal subsidies and housing mortgages to Mexican families. This is all supported, and data is controlled through the RUV, an autonomous organism of which SHF and INFONAVIT are founders and active board members.

Beyond these controls, SHF is also committed to complying with international protocols for its sustainable housing projects, such as the International Financial Corporation [IFC] Performance Standards on Environmental and Social Sustainability. The programs focus particularly on risk assessment and management by categorizing projects' impacts and risks using a three-level scale, developed by SHF's risk specialists following IFC's guidelines. The scale determines the degree to which projects are to be monitored and controlled. High-risk projects are never financed, moderate risk projects are required to present comprehensive

impact studies, and low-risk projects are subject to constant monitoring and reporting throughout their lifespans. As general rule, environmental and safety measures are also part of standard construction supervision.

On the commercial side, EcoCasa houses cost the same as other houses, they are more comfortable and reduce expenses on electricity, gas or both. These features are relevant to most participating developers, and many are including them in their marketing strategies and their corporate communications. Participating with EcoCasa is already an industry differentiator with national recognition and a positive reputational impact.

Finally, one of the clearest impacts and most important success factors for the program is the positive feedback loop that has been created with the eco-technology and energy-efficiency industries in the country. Prices for several eco-technologies and energy-efficiency solutions such as insulating construction materials have shown a significant decrease over the last few years, with a leading presence in the normalization and certification sector³ evidencing a healthy competition resulting from the growing demand for these products in the industry.

6.2. Key factors for success: financial institutions

International financial institutions are confident of working with EcoCasa because it is backed by a strong interinstitutional framework with all agents aligned to the National Housing Policy, setting common criteria, parameters and methodologies and creating a fair ground for all companies interested in obtaining the benefits and willing to improve their design and construction practices.

On the other hand, national financial intermediaries are receiving loans from SHF and from solid international organisms which assure the continuity of this initiative. Therefore, all the necessary resources to serve as intermediaries for the programs are a long-term investment with good returns and positive reputational effects for all participants.

The evolving industry described above and the constant improvement of sustainability objectives are two positive effects that also provide certainty to financial institutions about a healthy, self-sufficient sustainable housing market in Mexico.

6.3. Potential for replicability

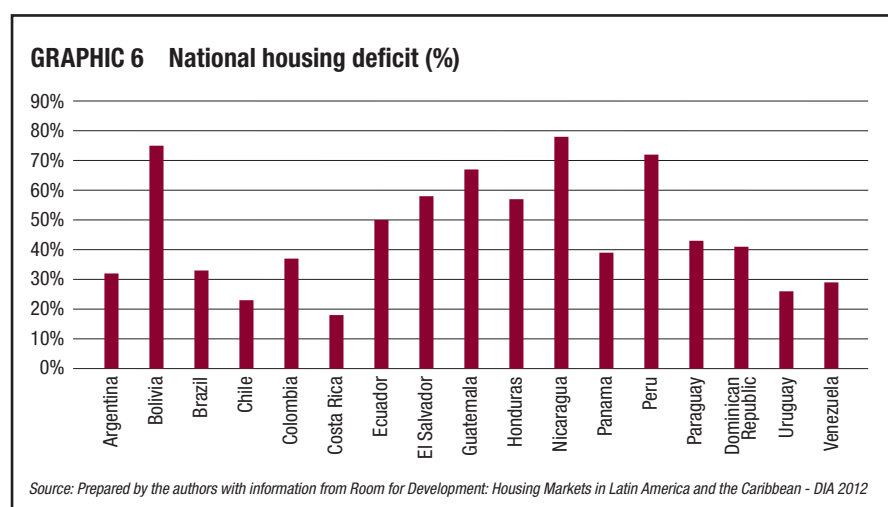
At a national level, important progress has been made in making financial intermediaries part of the sustainable housing efforts. Through their participation in the EcoCasa Program, they have appreciated the benefits of sustainable housing and develop the technical capacities needed to operate. However, there is an enormous potential for replicability in the commercial banks. This sector has the financial capacity to implement sustainable housing programs, nevertheless, it lacks the technical knowledge to design and operate them. Creating awareness about the benefits of having a sustainable portfolio among commercial banks and providing incentives would be an important step to motivate them to move in that direction. For instance, SHF has been pushing three of the biggest commercial banks in Mexico to implement EcoCasa.

At a regional level, the housing deficit in Latin America and the Caribbean [LAC] is still a major challenge. Of the 120 million families that live in cities, 5 million are forced to share a house with another family, 3 million live in unrepairable conditions, and another 34 million live in dwellings which lack property title, potable water, sanitation, and adequate floor area and space. It is estimated that 6% of houses present a quantitative deficit, while 31% have a qualitative deficit (DIA, 2012). See Graphic 6. To close the current regional housing gap, estimates show that an investment of at least USD \$310,000 million would be necessary, representing 7.8% of the region's GDP. Additionally, yearly investments of USD \$ 70,000 million would be necessary to meet future housing demand (DIA, 2012).

Population growth and the incremental increase in housing demand; as well as the improvement in the quality of life, are expected to cause growth in energy demand and GHG emissions. In LAC, GHG emissions account for 11% of global emissions. To prevent the global average temperature rising 2 Celsius degrees this century, it is indispensable that CO₂ emissions do not exceed 20 Gt by 2050 (IDB, 2013a). It is estimated that between 1.4 and 2.9 Gt from those 40 Gt can come from energy efficiency measures implemented in the construction sector and other new or existing sectors. Among the LAC countries, Argentina, Mexico, Brazil, Venezuela, Colombia, Chile, Ecuador, Dominican Republic and Peru have the highest CO₂ emissions for residential buildings and commercial and public services (IDB, 2013b). See Table 2.

Reinventing the housing sector could not only contribute to CO₂ mitigation and tackle the housing deficit, but also contribute to adaptation to climate change. Additional benefits could be improvements in quality of life, efficient use of water, sustainable urban development, reduction of urban residues, among others. One of the main challenges to achieving this is limited financial resources. Usually, sustainability measures cost more due to the technology or land costs. Through international cooperation, diverse mechanisms to mobilize climate funds have been established. In 2013 the goal was to reach USD \$100,000 million annually, although the use of this kind of resources in the housing sector has been limited (IDB, 2013b).

There are many strategies that governments and international agencies can adopt to leverage the experience of the EcoCasa Program.



³ From January 1st to April 30 2017, 10 out of 17 new norm-compliance certificates, 34 out of 60 updates and 17 out of 31 technical suitability certifications issued by the National Standardizing

Body for the Building Industry (ONNCCCE, 2017), corresponded to thermal insulation materials, solar water heaters and other energy-efficiency measures related to energy efficiency in buildings.

The following are general guidelines that might contribute to help SHF's counterparts in other countries develop new successful initiatives adapted to their own needs and existing conditions.

- Develop a cost analysis of available kick-off solutions to define financial incentives, linked to significant, achievable, performance improvements that can be measured following a practical, common methodology among all key stakeholders.
- Define a reliable mechanism for energy-efficiency evaluation, adequate to specific characteristics of the context such as the climate, construction practices, availability of solutions, and technical capacities of the local industry, adapted to the main housing typologies, cost-effective and simple to operate, which can be government-owned, to prevent additional long-term costs.
- Work along with all housing agencies to set the stage for an appropriate delivery of transparent subsidies and other incentives related to meeting expected performance goals.

7. Future prospects

Despite EcoCasa's success, its progress has been the beginning of a transformational change towards sustainability in the housing and banking sectors. To continue the paradigm change, and to increase its scope and influence, several actions are needed from a variety of actors.

7.1. Sociedad Hipotecaria Federal

From SHF's perspective, the program will continue to evolve to promote higher sustainability standards. The expectation is to incorporate superior energy efficiency standards as well as to integrate the assessment of different sustainability indicators, ranging from efficient use of water to neighborhood design, achieving a more holistic approach. It is fundamental to continue the efforts focused on capacity building and technical knowledge transference for developers and financial intermediaries; improving awareness amongst home owners; supervision and monitoring; and, an integral urban perspective on the projects. Additionally, the emphasis of the program is right now placed on new social interest housing. Nevertheless, it is necessary to promote energy efficiency programs in other market segments; such as, residential housing, refurbishment, and urban infrastructure. SHF plans

TABLE 2 GHG emissions in residential building and public and commercial buildings (million metric tons)

COUNTRY	2005	2006	2007	2008	2009
Antigua y Barbuda	—	—	—	—	—
Argentina	20,35	22,67	24,07	23,4	23,35
Aruba	—	—	—	—	—
Las Bahamas	—	—	—	—	—
Barbados	—	—	—	—	—
Belize	—	—	—	—	—
Bermudas	—	—	—	—	—
Bolivia	1,09	1,12	1,17	1,17	1,17
Brazil	19	18,99	19,66	19,7	19,41
Canada	91,37	85,99	90,42	90,9	74,9
Islas Caimán	—	—	—	—	—
Chile	4,02	4,06	4,45	4,54	4,71
Colombia	4,54	5,32	5,31	5,22	4,94
Costa Rica	0,21	0,23	0,24	0,24	0,24
Cuba	1,35	0,84	0,62	0,65	0,62
Dominica	—	—	—	—	—
Repúb. Dominicana	2,03	2,16	2,24	2,7	2,3
Ecuador	3,06	3,11	3,08	2,96	2,92
El Salvador	0,52	0,62	0,5	0,52	0,55
Granada	—	—	—	—	—
Guatemala	0,55	0,57	0,59	0,6	0,56
Guyana	—	—	—	—	—
Haiti	0,27	0,28	0,24	0,24	0,21
Honduras	0,42	0,38	0,28	0,26	0,25
Jamaica	0,35	0,4	0,39	0,29	0,26
Mexico	24,18	24,64	24,2	23,8	22,8
Nicaragua	0,32	0,34	0,29	0,26	0,33
Panama	0,35	0,48	0,49	0,38	0,47
Paraguay	0,19	0,19	0,19	0,18	0,19
Peru	2,05	1,8	1,83	1,97	2,13
San Cristóbal y Nieves	—	—	—	—	—
Santa Lucía	—	—	—	—	—
S. Vic. y las Granadinas	—	—	—	—	—
Surinam	—	—	—	—	—
Trinidad y Tobago	0,39	0,5	0,47	0,49	0,7
Islas Turcas y Caicos	—	—	—	—	—
Uruguay	0,53	0,54	0,6	0,57	0,62
United States	568,2	514,3	545,5	553	547,9
Venezuela	7,67	5,84	10,68	6,21	6,01

Source: Prepared by IDB 2013b, with information from World Bank.

to address these topics through the continuous improvement of EcoCasa I, II, III and its next stage, EcoCasa IV, which is contemplated to be signed with KfW in 2019 for an amount of up to EUR 120 million.

For SHF it is fundamental to ensure the medium and long-term sustainability of the program

when the concessional resources from the KfW and IDB end their pay off period in 2030. Two alternatives that are being analyzed are: the issue of green bonds, and the development of a "green" guarantee scheme.

Finally, it is worth mentioning that EcoCasa not only aims to transform the housing sector, but

also to transform the internal structure of SHF. Thanks to the recent signing of EcoCasa III with KfW, SHF acquired a commitment to design and implement over the next three years an Environmental and Social Management System that complies with international standards.

7.2. Housing sector

The long-term success of sustainable housing depends on the cooperation and alignment between the different housing institutions in the country. Through the creation of the Interinstitutional Committees SHF has actively promoted the homologation of methodologies and tools for assessing sustainability criteria, and although there have been advances, further work is needed. Additionally, it's essential to strengthen the regulatory framework of the National Housing Policy by developing official guidelines for the construction process supervision and monitoring of sustainable houses, official regulations that require the compliance with the Sustainable Building Code at a local level, and policies that encourage better education and training of energy experts.

Nowadays, the incorporation of sustainability measures in low-income homes is highly dependent on CONAVI's federal subsidy for housing acquisition since it represents an incentive for housing developers. It is desirable to implement different mechanisms that make possible the construction of sustainable housing that does not rely on federal subsidies.

Home buyers may be unable to accurately assess the energy efficiency of a home, causing buyers to be unable to incorporate future energy expenditures into their purchasing decisions, and therefore sellers may prefer to not invest in energy efficiency improvements (AYDIN, 2017). A study conducted in the Dutch housing market shows that as the level of energy efficiency increases by ten percent, the market value of the dwelling increases by around 2.2% for an average dwelling (AYDIN, 2017). A reform of the housing appraisal system and the incorporation of "green labeling" are fundamental to recognize and capitalize the efficiency attributes dwellings have. Distinguishing sustainable houses from traditional ones in the appraisals would contribute towards stimulating the incorporation of more and better eco-technologies, when the user incomes allow it, without increases in the mortgage value.

Housing is a fundamental component of cities and Mexico is going through an intense urban growth stage. During the 2000-decade housing policies encouraged unregulated urban

growth and the consequences of that still have impacts today. Housing institutions and urban development institutions must create coordinated policies to prevent urban sprawl, secure resources provision, and improve living conditions for the population.

7.3. Other sectors

One of the main challenges for securing sustainable housing implementation in the future is the participation of commercial banks. The lack of know-how and consciousness of the financial benefits of efficient dwellings is a barrier to the adoption of sustainable housing programs by the commercial banks. In this sense, commercial banks should start looking at sustainability as a way of reducing the risk in their portfolios and the possibility of having more paying capacity for the mortgages due to the savings in housing service bills, such as energy and water.

Regarding the energy sector, energy subsidies must change to encourage the implementation of energy efficiency measures and renewable energies, instead of stimulating electricity and fossil fuels consumption. This will contribute to developing the energy efficiency and renewable energies markets, as well as, to making the consumer more conscious of the importance of energy-efficient houses. In addition, mechanisms to verify the compliance with official norms such as NOM-020-ENER (Energy Efficiency in buildings – housing envelope) would be a great contribution to transforming the sector. Finally, another significant push towards sustainability in the housing sector would be the implementation of a national carbon market, which is expected to start operations on a short-term period.

8. Conclusions

The EcoCasa Program is a world-class initiative that brings together the public sector (SHF), the private sector (developers and financial intermediaries) and international financial institutions (IDB and KfW) with the same objective: the fight against climate change, achieving on the way great advances that have allowed the insertion, permeation and strengthening of sustainability criteria in the housing sector in Mexico, as well as significantly improving the quality of life of thousands of low and middle-income households. In this way, EcoCasa has managed to establish the foundations for linking financial and credit criteria with those of sustainability and climate change on the supply-side of the housing construction industry in the country. This achievement is of notable

importance not only because of the reduction of emissions generated by construction, but also because of the growing demand for housing and the financial products that it requires, given the existing housing deficit in the nation.

This project will contribute directly to the reduction of more than 2 MtonCO₂e emissions during the life cycle of homes. However; EcoCasa might be seen as only the beginning; a cutting-edge project that has taken the first step towards the transformation of the housing sector in Mexico, which will represent millions of tons of CO₂e saved each year.

Undoubtedly, the achievements will increase the scope of the program, which will allow SHF to promote similar initiatives demonstrating, at the national and international level, the path to be followed in the search to promote sustainable housing, maintaining a firm step in the fight against climate change.

It is clear that EcoCasa can inspire other emerging markets, demonstrating that it is technically and economically feasible to make social housing affordable and environmentally sustainable, and at the same time offer a better quality of life to the final beneficiaries.

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Reducing the risks of mortgage default and possession in the UK; an international perspective

↳ By Peter Williams, Steve Wilcox & Christine Whitehead

1. Introduction

In late 2017, UK Finance, the successor body to the Council of Mortgage lenders in the UK published the report *Challenges for our Home Ownership Safety Net: UK and International Perspectives*. Here the authors of that report provide an updated and summarised version of their findings (Williams et al, 2017).

In the 1960s to the 1980s in the UK and elsewhere we saw an expansion of both home ownership and the mortgage market drawing in an ever-wider spectrum of households. Unsurprisingly during this period, the focus of debates was very much about access to home ownership, interspersed with arguments about red-lining and exclusion and the impact of urban regeneration. The focus was on expansion rather than addressing risk.

It was the sharp rise in the number of households in arrears or facing possession in the UK in 1990 that prompted the Conservative Government in 1991 to intervene in a sustained way in the housing market and begin to put in place a more multi-faceted ‘safety net’ to protect home owners from the market downturn. It should be stressed that there has never been an articulated plan nor a formal safety net in the UK but rather a series of measures that together make up a structure that approximates to a safety net of sorts. This article offers a reflection on this so called “safety net”, how it has developed over time and the extent to which it is fit for purpose in both current and likely future contexts. We do this through careful examination of the situation in the UK and other countries.

2. Background

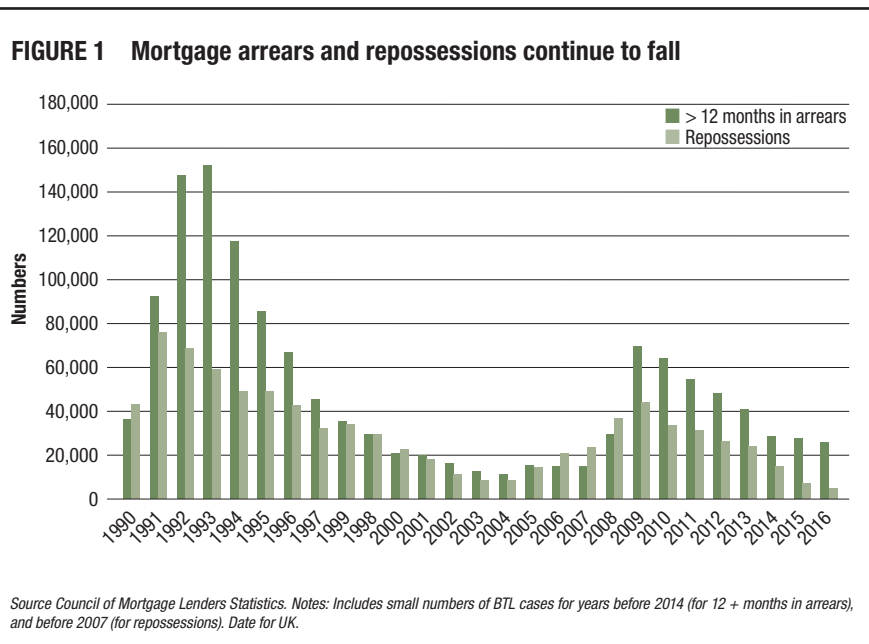
The downturn of the early 1990s marked the last time the UK had a largely ‘unmodified’ housing

market recession with 75,500 possession cases in 1991 (see Figure 1). As John Kay has argued, this was a time when ‘a perfect storm of falling prices, high interest rates, inflation and recession hit UK housing’¹. The government brought in measures in 1992 to manage this situation and these have been replicated in one form or another in subsequent market downturns.

What is striking now in 2018 is how much more oversight and management of the UK’s housing and mortgage markets there is compared to previous periods. Prior to 1990, such risks were seen as being borne mainly by individuals whereas post 1990 it was recognised there were risks to financial and economic stability as well as huge political pressure to intervene. Since 2000 in particular, a vast panoply of measures has come into place all of which impact upon risk in the housing and mortgage markets.

3. Safety nets – definitions and instruments

There are different ways of viewing the concept of safety nets. The narrowest definition of a mortgage safety net is one that covers only the provision of support to individual households who find themselves in difficulties in paying the mortgage as a result of changes in their individual circumstances, notably as a result of relationship breakdown, sickness, unemployment or loss of earnings. In other words, the safety net addresses the outcomes of unpredictable (or unpredicted) events for individuals. A more inclusive definition would include not just reductions in income but also increases in mortgage outgoings, notably as a result of increases in interest rates. Within this broad definition this review includes:



¹ Kay, J (2010) Bankers can't blame the UK housing market, Financial Times, column.

i Approaches that directly address changes in individual circumstances, notably loss of income through unemployment; sickness, accident etc. and also sometimes increases in cost. These can be put in place by government to ensure an adequate standard of living; by the industry as a cost-effective way to support those with problems; or by the wider market through insurance. In practice these measures tend to address changes in income more often than changes in housing specific costs.

ii Measures that are put in place by government and/or the industry usually in response to systemic problems in the mortgage market - such as around 1989/90 and after the global financial crisis. These help individuals even though they may be aimed more directly at stabilising the mortgage market. They tend mainly to support those who fall into arrears and/or are at risk of eviction.

iii Longer term regulatory changes often related to macro-prudential stabilisation policies which aim to ensure that those who buy can maintain their mortgages when circumstances change. These help to de-risk the mortgage and wider finance markets. However, they often do so at the cost of excluding households who have the potential to pay, notably because they are based on 'average' assessments and evaluating circumstances at the point when the mortgage is granted. The impact of these constraints may, in some circumstances, be offset by other policies such as mortgage guarantees and insurance which reduce the costs of taking on higher risk households.

4. The UK experience

How then has the safety net in the UK evolved?

4.1. 1970-1999

As higher LTV lending became more commonplace in the 1970s most lenders reduced the risks of such lending by requiring a mortgage insurance indemnity guarantee [MIG] or using their own insurance fund. The MIG policy was paid for by the borrower but was in favour of the lender.

Consequent upon the housing market downturn in the UK in 1989 to 1991 mortgage possessions rose rapidly from around 15,000 in 1989 to 45,000 in 1990 and over 70,000 in 1991.

The downturn triggered a major call on these MIG policies which in turn revealed severe problems with the arrangements in place.² Government allowed its existing Income Support for Mortgage Interest [ISMI] payments to out-of-work home buyers to be paid direct to lenders in exchange for them developing forbearance and mortgage to rent schemes to help keep households in their homes.

This began a partnership between government and lenders around a home ownership safety net. This was then tested by the 1995 changes to ISMI, when government began to require a nine-month waiting period before payments could be made and based those payments on a standardised rate of interest. In essence the lending industry was told it had clear 'ownership' of those first nine months and should respond to difficulties by offering rescheduling of the loan and other mechanisms. As part of the same announcement, the government also argued that home buyers should take out mortgage payment protection insurance [MPPI] to cover the risks of being unemployed or being out of work through ill health or an accident (Kemp and Pryce (2002) for a useful overview).

In 1997 agreement was reached with government to create a Sustainable Home Ownership initiative aimed at increasing MPPI take-up to 50% of all borrowers (a figure arrived at through research related to those who could, or could not, sustain payments for a year – the period covered by MPPI; see Whitehead and Holmans, 1999). A partnership steering group comprising lenders, insurers, government departments, the Bank of England and consumer groups oversaw the initiative.

4.2. The 2000s

In practice, with a growing economy and rising employment (and a product which had significant flaws) it proved difficult to increase take-up of MPPI to the level desired. It peaked at a little under 25% of all mortgages in 2003, although the proportion of new first-time buyers with insurance did rise at one point to 46% (with 36% of all new mortgages covered by insurance). MPPI policies were rewritten as part of an agreed framework that set a benchmark for the industry and effort was made both to increase sales and improve the payment performance of the product. Some lenders offered MPPI free with their mortgages (Ford et al, 2004).

In 2007, the Office of Fair Trading [OFT] announced it was investigating the entire payment protection insurance market covering a wide range of consumer credit with a view to referring it to the Competition Commission. The subsequent referral and the publicity around PPI led most lenders to withdraw from the MPPI market. From April 2012, point of sale of insurance with a mortgage was prohibited by the Competition Commission. In 2012 mortgage insurance sales by banks and building societies made up some 15% of sales, down from 40% in 2011³.

The partnership steering group discussed at length how it might be possible to link MPPI with ISMI (subsequently Support for Mortgage Interest [SMI]). The assumption was that private insurance or personal means would provide the short-term cover for those unable to make mortgage payments. In reality insurance only covered some risks (and was underwritten at the point of claim rather than point of sale thus exposing some households to the risk that their cover would not be available when needed), while SMI only covered those who were out of work rather than with reduced incomes – the safety net as such was full of holes.

The downturn in 2008 showed this to be the case with government reducing the waiting period from 39 weeks to 13 and increasing the value of the mortgage covered by SMI to £200,000 (from £100,000), as a means for curbing the projected rise in possessions (Stephens et al, 2008). A pre-repossession action protocol was put into place which required lenders to begin a negotiation with the borrower in difficulty in line with mortgage regulations and prior to taking any court action.

In 2009, the Government then created the *Home Owner Mortgage Support scheme* whereby lenders were indemnified against defined losses for providing extended forbearance to borrowers in difficulties and who met various conditions and had been given full advice. The scheme lasted around one year and helped only 62 families, albeit that some 30,000 households entered extended forbearance arrangements with their lenders. The terms of the scheme were so tightly drawn, it proved unattractive to lenders, though the official interim evaluation considered it provided reasonable value for money (excluding the scheme set-up costs) for the small number of households concerned (Wilcox, et al., 2010).

² The sharp rise in MIG claims resulted in insurers facing claims of around £1.65 billion in 1991 and £1.25 billion in 1992 (some 10% of the market was probably self-insured). With annual premiums totalling around £235 million, possessions were a serious cost to the insurers estimated at around £4 billion for this period, with lenders arguing they lost similar amounts (UBS Phillips

and Drew, 1991). Insurers blamed lenders for poor lending while lenders argued that the MIG policies were poorly specified and hard to claim against.

³ In 2017 the sale of life and income protection products has increased again covering perhaps 30% of buyers and on the back of the detailed mortgage advice regime now in place.

The *Mortgage Rescue scheme* was also introduced in January 2009 to help buyers who were deemed “vulnerable” and in danger of being homeless following possession, helping them become renters or shared equity holders. This proved rather more popular, and in the period to the end of March 2012 it had enabled just over 4,000 home owners to remain in their homes (HCA, 2012). The scheme was closed to new applicants in 2014, even though it was seen by the industry as a useful and more permanent policy instrument. The official interim evaluation (Wilcox, et al., 2010) found that the scheme had fairly substantial initial capital costs, and in overall cash public expenditure terms the unit cost was £45,000 per household (as a 30-year net present value). However, the evaluation also found that in resource terms the scheme cost no more than the likely costs government would face if the households were evicted.

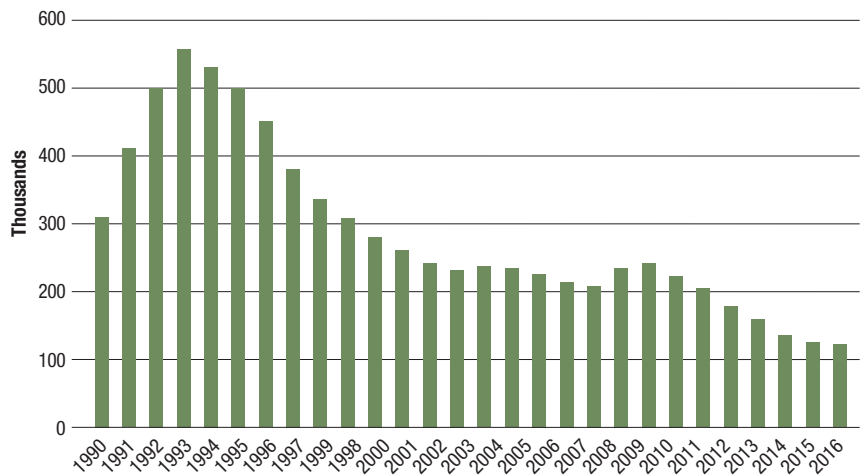
Following a lengthy Mortgage Market Review [MMR], new regulatory arrangements for home owner mortgages were introduced by the Financial Standards Authority (the forerunner to the current Financial Conduct Authority-FCA) in 2013. These reinforced the financial pressures from the Basel III provisions, to effectively restrict the provision of both high LTV and LTI mortgages, and also required more rigorous scrutiny of mortgage applicants’ incomes and outgoings. All these measures were introduced with a view to reducing the number of new home buyers at risk in the event of a subsequent downturn.

Despite all its limitations, the SMI scheme remained by far the most significant government intervention providing direct support to home owners in financial difficulties with their mortgage. The numbers of owners supported⁴ peaked at 235,000 in 2009/10 (the previous peak was 555,000 in 1993) and then declined down to 136,000 in 2015/16 with a forecast of 124,000 in 2017/18 (See Figure 2). In cost terms SMI costs peaked at £563 million in 2009/10 (the previous peak was £1,016 million in 1995) then has fallen in subsequent years to £280 million in 2015/16 (and a forecast £266 million in 2017/18).

4.3. Current importance of SMI

In 2018, SMI ceases to be a grant and becomes a loan with a charge being placed on the recipient’s mortgage. The expectation is that the borrower will repay the amount received, plus interest, either when their income stabilises e.g. by getting back into work or when their home is sold. It will, in effect, become Loans for Mortgage Interest

FIGURE 2 Decline in Support for Mortgage Interest Caseload



Source Department for Work and Pensions Expenditure Tables; UKHR 2017. Years are financial years.

(or LMI for short). This provision will apply to existing claimants (but only for any claims they make from that date), as well as to new claimants. Recently attention has been focussed on the low take up of the new loan option. With around 125,000 claimants only just under 7,000 had signed up for it two months prior to its introduction. The DWP’s own research (Finlay et al, 2017) had anticipated this with a survey of claimants showing very low levels of awareness about the changes. DWP subsequently intensified its communication programme but it is evident from these latest figures there is a huge gap with many claimants losing their support in April 2018. This will lead to accumulating arrears and ultimately lender action.

In addition, the waiting period has been re-extended from 13 to 39 weeks from April 2016. The original cut in waiting period for SMI is one of the things credited with helping people stay in their homes following the recession. SMI is available on the interest on loans up to the value of £200,000 (£100,000 if on the state’s pensioner credit but with no nine-month waiting period). In addition, for all SMI claimants payments may be reduced if the home is considered to be more expensive/ larger than needed. Taken together this does suggest greater exposure for households who have been on SMI or may need to use this type of support in the future

4.4. Tax credits and Universal Credit

The availability of in-work tax credits is also important for home owners in the absence of

any in-work benefits to assist with mortgage costs. Tax credits provide a partial cushion for households who suffer a substantial drop in their incomes from employment, such as when one partner loses his or her job while the other remains in work. The levels of income provided through tax credits are sufficient to permit a household to cover a modest mortgage of around £40k, while leaving them with a disposable income above the levels of baseline welfare benefits (Wilcox, 2003). However, with the roll out of the government’s combined Universal Credit [UC] scheme across Great Britain, planned to be completed by 2022, the tax credit regime will come to an end.

Under the UC scheme the SMI (and subsequently LMI) element will only be available to those claimants entirely out of work. SMI (and from 2018 LMI) will also continue to be available to pensioners in receipt of pension credit, though of course by then it will be a loan rather than a grant.

The only provision for working age home owners with any labour market participation – however little - as part of the new UC regime is the higher level of ‘work allowances’ – that is the earnings they can retain above basic UC allowance levels, before their UC entitlement is subject to a means tested taper. This would potentially provide cover for a £43,000 mortgage, at current interest rates. At £205 this is lower than average levels of mortgage interest payments, which stood at £277 per month in 2015/16.⁵

It should also be noted that in a low interest rate environment the repayment element of

⁴ By SMI, for claimants of all qualifying means tested benefits.

⁵ Office for National Statistics (2017), *Family Spending in the UK: financial year ending march 2016*. Office for National Statistics

average total mortgage payments is larger than the mortgage interest element, a further limitation to the support for mortgage holders under the new UC regime. It will leave home owners that do fall into difficulties much more reliant on lender forbearance and other measures if those households are to remain in their home.

4.5 Private insurance

Post the credit crunch there have been some developments in the private insurance market, with a number of schemes being offered on the market. However, the take-up of such schemes seems to be at a very modest level. These schemes include forms of mortgage indemnity guarantees that offer protection to lenders (and in some cases also to borrowers), mortgage payment waiver products, MPPI-type cover which is now really income protection, and forms of mortgage rescue such as allowing households to rent the home they were previously buying (sale and leaseback). One scheme saw a slight premium added to the cost of the mortgage which then pays for an insurance product to cover payments. We have also seen the development of an assisted voluntary sales process (Wallace et al., 2011)⁶. The extensive interventions put in place by 2009 have been substantially eroded. However, arrears and possessions have continued to decline and now remain at historic lows so that the overall impact of these changes in terms of support to borrowers in difficulty have, to date, been minimal.

5. The current outlook in the UK

There are a number of factors at work in the current benign outlook. First interest rates have remained historically low. This has eased debt servicing pressures on households and possibly allowed for debt redemption – though the evidence for this is weak. In addition, with the decline of interest only mortgages, the move to capital and repayment mortgages (which with low mortgage rates means capital repayment are accelerated in the early years), the lengthening of mortgage terms and continued house price gains resulting in improved LTVs for most borrowers which allows access to better refinancing deals, it is likely the debt/repayment position of many households will have improved.

Moreover, the industry's heightened anxiety in the earlier part of this decade that we would see rapid and sustained rate rises has diminished

and the Bank has lowered expectations of rate rises to perhaps one in 2018 and two more by 2021 almost certainly in 0.25% steps. The MPC report (BoE, 2018, May) commented 'any future increases in Bank Rate are likely to be at a gradual pace and to a limited extent'.

Second, the affordability of all new regulated mortgages since 2014 have been subject to a 3% interest rate stress test in order to increase the likelihood that borrowers have some capacity to cope with such rate rises. Third, the tighter MMR rules referred to earlier also include more extensive affordability assessment not least in terms of evidencing and documentation. This has resulted in some potentially vulnerable households being excluded. In a recent evaluation of macro-prudential regulation, the CML (Pannell, 2017) concluded 'the FPC may be limiting credit risks at the expense of shrinking overall activity and contributing to a less diverse cohort of borrowers. This may, in turn, be adding to market illiquidity and concentration risks'.

Obviously, the focus of these measures to restrict lending to more vulnerable households is very much around systemic risks to the housing market and to the financial system. However, they do have safety net consequences in that they shrink lender and by extension borrower exposure. However, given that the incidence of borrower difficulty is often related to events not foreseen by the individual, such as unemployment or sickness, no amount of regulation can protect everyone always – at an individual level there will always be risks.

The efficacy of these interventions has yet to be tested in a downturn, so it is difficult to say precisely what effect they will have. A recent IMF review of 5 countries (Hong Kong SAR, the Netherlands, New Zealand, Singapore, and Sweden; Darbar and Wu, 2015) suggests 'It is too early to gauge the full impact of the measures that have been undertaken' but goes on to argue 'there is some early evidence that the implementation of macro-prudential measures have enhanced banking system resilience and helped reduce the build-up of housing sector leverage in the cases reviewed.' This is not the same as helping potential borrowers.

In its June 2014 *Financial Stability Report* [FSR] the Bank of England highlighted the 'increasing use of macro prudential policies to reduce risks associated with the provision of mortgage

debt'⁷. Measures have included limits on loan to value [LTV] ratios, loan or debt to income [L/DTI] ratios, debt-servicing ratios [DSRs] and loan terms. The Bank noted an IMF survey of over 40 countries (Lim et al, 2011) which found that more than one third had implemented new product instruments on mortgages, including two thirds of EU countries. The question ultimately is whether such measures which are primarily about controlling risks to the financial system and the economy also prove to be significant factors in helping manage the risks faced by individual households. The Bank of England remains concerned about high household debt relative to income and the risk that an increase in unemployment to 8% could double the proportion of vulnerable households (defined as households with mortgage debt servicing ratios of 40% or greater). The Bank has also highlighted the impact the increase in higher LTV lending has had on consumption patterns. The Bank has argued that its measures have had only a 'modest effect on mortgage lending to date' partly because lenders had already adopted these standards and that they 'had not been excluding a significant number of prospective mortgagor from the market and their effect on loan size had been modest'. The Bank has concluded the measures remain appropriate and do strengthen 'resilience in the face of adverse income and unemployment shocks' (the latter estimated as a 2 to 3% rise in unemployment). Thus, while the Bank does not use the terminology of safety nets it does see all of this as building a safety margin into the system.

6. A wider view

Wallace's review *'Home-owners and Poverty: A Literature Review'* published in 2016 highlighted a number of general trends which are of significance. First, half of all poor households in the UK were in home-ownership rather than renting⁸. The proportion of poor working age households in home-ownership is rather lower at 42% (of which just over a half had a mortgage), while the proportion of poor pensioners in home-ownership is much higher at 85% (of which the great majority did not have a mortgage). Second, households fall out of home-ownership for similar reasons to entering poverty, and are most at risk in the earlier years of ownership, as a result of labour market problems, relationship breakdown, indebtedness, and lower incomes⁹. Third, despite the uncertainty regarding rising base rates in the near

⁶ Sometimes into formal mortgage to rent schemes but not exclusively.

⁷ See also Cerutti et al (2015).

⁸ See also Burrows, R & Wilcox, S (2000), *Half the Poor: Homeowners with low incomes*. Council of Mortgage Lenders. All figures given are on a 'Before Housing Costs' measure. In all cases the proportions of poor households in home ownership is somewhat lower on 'After Housing Costs' measures.

⁹ And with low rates the risk period is extended.

future, home-owners overall were better prepared for a rate rise than in the past. But there was concern that a significant pool of lower income home-owners may also be encumbered with unsecured debt and thus be vulnerable to further income or economic shocks.

She noted that among all existing households, in the period 2005-2008, the number of home-owners who sold up to alleviate payment problems (246,000) was far in excess of those who experienced formal (55,000) or voluntary possessions (80,000)¹⁰. A further key point, already noted, is that home buying households primarily fall into mortgage difficulties because of unanticipated changes of circumstances which cannot be fully eliminated by the more robust approach now being taken by lenders in respect of income assessment, the stress test, LTVs and LTIs.

As at the end of 2016 there were around 11.1 million loans on lenders books. Within this, 1.9 million were Buy to Let loans and the remaining 9.2 million homeowner loans. Within the homeowner mortgage stock, there is detailed data on 8 million regulated loans outstanding at the end of 2016 which show that over 3.3 million had an indexed LTV of less than 50%. The overwhelming majority of the 1.2 million missing will be pre-regulation (advanced before October 2004), and therefore almost all at lower LTVs.

In previous downturns detailed research has shown that high LTV are correlated with arrears and default¹¹. So the fact that, in total, over 4.5 million of the 9.2 million homeowner loans are currently at low LTVs is a significant risk mitigant. The remaining circa 4.7 million homeowner loans that are above 50% LTV will have been largely taken out in more recent years and since April 2014, the rules require most new loans to have affordability stress-tested against a higher interest rate. As at the end of 2016 over 2 million of the loans are identified as having been stress-tested in this way.

Both the LTV profile and level of stress testing give some sense of the relatively low scale of exposure across significant parts of the market. The profile of borrowers has changed over the last decade in relation to their borrowings, employment status and credit history. The evidence of contraction and change is very clear – the number and proportion of people with an impaired credit history, or with loans of 90% LTV or more (both all and FTBs) or who are

self-employed has gone down, in some cases quite sharply. This suggests that the population of borrowers today is likely to be less diverse than it was in the mid- 2000s. This may reduce overall risk levels in relation to a downturn while not forgetting the dominantly random nature of who gets into difficulty. Few borrowers have any form of insurance protection if they become unemployed and going forward we will have only very limited state safety net protection (in the form of LMI and UC). In addition, we know that the household savings ratio is at a record low.

Further ahead there is inevitably much less clarity, not least given the inevitable uncertainties surrounding the outcome of the Brexit negotiations. In the event of this, or any other factor, resulting in a severe shock to the UK economy and mortgage market, the cushion provided by interest rates falling from 5.7% in 2008 to under 3% in 2016, is unlikely to be available next time around.

If the relatively benign navigation of the last downturn has been a factor in the government's thinking and its subsequent actions to erode much of the current/future safety net, this begs the question of what form of safety net might be needed in the event of a less benign future economic and housing market environment.

7. Safety nets; a comparative view

If the UK safety net is being eroded what is the position in other countries? We examined secondary data mainly from international organisations and also made a more detailed analysis of a number of countries with developed mortgage and housing markets, based mainly on expert commentary.

7.1. Secondary material

The OECD has lately produced an Affordable Housing Database bringing together responses from all OECD member states. This includes relevant material on housing allowances across all tenures and on public spending in support of home ownership.

The housing allowance data (<http://www.oecd.org/els/family/PH3-2-Key-characteristics-of-housing-allowances.pdf>) show that some 33 OECD countries, of which 25 are in Europe, had housing allowances in place for low income households in the rented sector (sometimes only in the private rented sector because rents may

be set in relation to income in the social sector or a supply side subsidy is seen as adequate).

Around a half of these countries also had in place housing allowances for low income owner-occupiers (including 12 of the 25 European countries). One additional country (Denmark) had them only for OAPs; another, Switzerland, had allowances only in some cantons. Some other types of help for owner-occupiers were also mentioned, notably non-housing specific assistance and help with maintenance costs.

The OECD also collects information on public spending on financial support for homebuyers in three categories:

- (i) grants – which is by far the largest form of support and is mainly about increasing access for first time buyers of different types;
- (ii) mortgage subsidies and
- (iii) guarantees which are there to reduce interest rate costs by providing potential support were problems to arise.

The OECD¹² data show that some 7 European countries as well as Canada and the USA use forms of mortgage guarantee. The vast majority of this assistance is there to support access to home-ownership by reducing risks to lenders. Only 8 countries, including 5 European countries – Hungary, Ireland, the Netherlands, Norway and Portugal responded to the final question on helping borrowers in financial distress (Table PH2.1.3.). They identified particular schemes including subsidies to mortgage interest payments; contributions to paying off arrears; postponement of payments; refinancing; and mortgage to rent.

7.2. More detailed examples

We asked a range of country experts about the experience in their countries with respect to three groups of policies:

- traditional approaches put in place by government or industry to provide income support or address changes in individual circumstances, e.g., loss of income through unemployment or sickness;
- short term measures put in place by government and/or industry when there were major problems in the mortgage market – such as around 1989/90 and after the global financial crisis; and

¹⁰ See Ford, J et al (2010) Giving up homeownership: a qualitative study of voluntary possession and selling because of financial difficulties, DCLG, London.

¹¹ Though arrears and defaults are higher, only a small proportion of high LTV loans end in repossession. Loans at 100% or more are notably more risky (see FSA, 2012, datapack).

¹² <http://www.oecd.org/els/family/PH2-1-Public-spending-support-to-home-buyers.pdf>

- longer term regulatory changes often related to macro-prudential stabilisation policies aimed at ensuring those who buy can maintain their mortgages when circumstances change.

The tables 1 to 3 summarise the main expert responses as well as material from secondary sources for each of these three groups of assistance.

Table 1 describes the position with respect to housing allowances and more general income support measures. The main message is that housing specific allowances are often not available to owner-occupiers. Rather they are expected to depend on general unemployment support and on death, sickness and other loss of income protection. If there are high costs and no reversal of the situation, owner-occupiers are normally expected to adjust their housing costs by selling. The exception in some countries seems to be in relation to divorce or other family circumstance changes, where the emphasis is more on finding negotiated ways forward.

Table 2 gives an indication of the types of responses to crises that have been observed across a range of countries. In this context the countries fall into three main categories:

TABLE 1 Income related housing assistance to owner-occupiers

	HOUSING ALLOWANCES FOR OWNER-OCCUPIERS	OTHER FORMS OF ASSISTANCE FOR CHANGING CIRCUMSTANCES
Australia	No	Unemployment and sickness benefits not related to costs
Canada	Varies between provinces	Unemployment and sickness not related to costs Insurance against income loss and illness – including deferred payments Asset tests for welfare payments so must sell home
Czech Republic	Yes	Income support supplements for housing costs
France	Yes	Unemployment and sickness benefits not related to costs
Germany	Yes	Unemployment assistance /health care insurance replaces high proportion of income Not forced to sell
Hungary	No	Home maintenance allowance
Ireland	No	Fuel allowance
The Netherlands	No	National mortgage guarantee
Norway	Yes	Unemployment and sickness benefits not related to costs
Portugal	No	Unemployment and sickness benefits not related to costs
Slovenia		Unemployment and sickness benefits based on incomes not expenditures
Spain	No	Unemployment and sickness benefits not related to costs
Sweden	Yes for families; pensioners; young people	Unemployment and sickness benefits not related to costs
USA	No	—

Sources: Lunde and Whitehead, 2016; Whitehead and Williams, 2017 and commentary from country experts often based on national government and central bank publications.

TABLE 2 Responses to crises across a range of countries

	ENABLE RULE CHANGES	DIRECT SUBSIDIES	REQUIRE THE INDUSTRY TO ADJUST	GENERAL ATTITUDE
Australia	Early Release of superannuation benefits on compassionate grounds e (Australian Government) Mortgage relief loan (Queensland Government)		Requirements to consider variations in contracts when hardship Remediation when hardship the result of poor lending practices	These are 1 rules which have been clarified or tightened in response to post global financial crisis problems.
Canada	Mortgage rate renewal protection introduced in response to high interest rates in 1980/1		Mortgage law has strengthened consumer protection e.g. on foreclosure	Little problem experienced –and little discussion of need for safety net
France	A buy back scheme to transfer those in financial difficulty into social housing introduced after the 1989/90 crisis			No major problems after the global financial crisis and no changes to support
Hungary	National Asset Management Programme for residential dwellings Debt management service Prolonged moratorium on foreclosure	Early repayment at a discount exchange rate Transfer to rent with subsidised rents for lowest income households	The cost of early repayment scheme laid on banks	Extreme crisis in mortgage market caused mainly by foreign exchange loans.
Ireland	Forbearance Deferred interest scheme –‘pay 2/3 and park the rest’. Mortgage to rent scheme	Limits to penalties for mortgage arrears Subsidy support to first time buyers with LTVs over 80%	Lenders must have dedicated staff and a published policy on addressing arrears	Massive problems in mortgage market as part of overall financial crisis
The Netherlands	Extended mortgage guarantee scheme Enabled to keep tax relief and let out original home if unable to sell	Can continue to receive mortgage interest relief on remaining debt on sale. No repayment for 10, now 15 years.	Help to both lenders and mortgage borrowers through national guarantee scheme	Very significant crisis because of negative equity and incapacity to sell property
Portugal	Modifications of loan conditions, postponement of mortgage payments in response to an earlier crisis:			Because of response to earlier crisis very few problems of default and arrears
Spain	Wide range of interventions at national, regional and industry levels	Direct subsidies in Catalonia	Industry required to pay the costs associated with the changes in rules	Many mortgage borrowers in arrears and subject to foreclosure; politicised approaches to remediation etc.
Sweden	Debt reconstruction rules have been made slightly more generous		1991/2 crisis lenders renegotiated loan terms	Not hard hit by GFC so no additional measures
USA	Hardest Hit Fund established in 2010 in 18 states and the District of Columbia, modifying conditions	Mortgage payment assistance, and transition assistance programs		Problems of arrears and foreclosures dealt with differently across states

Sources: Lunde and Whitehead, 2016; Whitehead and Williams, 2017 and commentary from country experts often based on national government and central bank publications.

- those countries where there have been few problems in the past and which experienced few during and after the global financial crisis. In these countries, little or nothing has changed in terms of how the individual is treated in the face of unexpected problems;
- those where there were crises in the past – notably Australia, Canada, Portugal and Sweden where the policies put in place in response to these crises have been enough to address the issues arising from the global financial crisis. In all these cases there turned out to be few mortgage arrears and possession problems so the historic approaches cannot really be said to have been tested; and
- countries that suffered severe housing market problems associated with more fundamental economic and financial crises following on from the GFC. In these countries governments usually put in place an often hurried range of measures to limit foreclosure, to restructure mortgage payments and sometimes to transfer the household or the dwelling into the rental sector.

Some of the approaches in the third category have been supported by subsidy or tax reliefs – but quite often the costs have been transferred to the industry. Some were far too detailed and inflexible to be of much help. Many have become more formalised and are now part of more general regulation; others have been restructured; and others have simply disappeared.

In the main it would be difficult to argue that coherent safety nets had yet been put in place whichever category a country falls into. Where there is little experience of problems, it is assumed problems will not occur. Where untested changes are in place, there is little incentive to change. Where there have been major problems (notably Ireland and Spain and to a lesser degree the Netherlands) processes are still in flux.

Across countries most of the emphasis since 2008 has been on introducing regulatory changes that have limited lender capacity to make higher risk loans or increased their costs to the institutions. These constraints in turn affect who can obtain a mortgage and so impact on future risks. As we have made clear this is not a safety net in itself but reduces the need for such safety nets to be put in place – at least with respect to the mortgage market.

Table 3 includes all forms of financial regulation, and from the individual's point of view is almost wholly focussed on ensuring both

TABLE 3 Regulatory changes impacting on mortgage market

COUNTRY	SIGNIFICANT REGULATORY CHANGE SINCE 2008	SPECIFIC MACRO-PRUDENTIAL RULE CHANGES SUCH AS MAXIMUM LTV	GENERAL APPROACH
Australia	Macro-prudential management by the Reserve Bank. Regulations to improve underwriting standards	No formal rules	Stronger guidance including stress tests.
Canada	Tightened mortgage market regulation mainly to limit access	Eligibility rules for insured mortgages tightened and stress tests introduced.	
Czech Republic	In line with EU banking regulations	New Act to enable Bank to set maximum LTVs	Government guarantees to support immature mortgage market
Denmark	Increased regulation to limit systemic risk	Maximum 80% LTV in place	Advisory constraints on down payments and interest rates on high LTV loans etc.
France	Very little change in either regulation or underwriting criteria	No maximum LTV and borrowing above 100% with guarantees normal	Some additional advice in line with Basel regulations
Germany	Conservative system has remained in place	Possible law to allow the discretionary use of emergency instruments (capital ratios, LTV maxima and LTI rules)	In line with Mortgage Credit Directive
Ireland	Nationalisation of all Irish banks after 2008 Aim to maintain under-water mortgage borrowers in place. 2015 Central Bank strengthened macro-prudential regulations	80% maximum LTV put in place in 2015 (90% for first time buyers). LTI at 3.5 times income.	
The Netherlands	Temporary Regulation of Mortgage Credit introduced in 2012 tightened lending rules.	Government agreement with banks to limit LTV maximum down from 120% initially to 106% and. Now 100% in 2018. LTI rules also put in place	Slow adjustment to tightened regulatory framework Changes in mortgage tax relief – removed for interest only mortgages
Norway	From 2010 financial supervisor required deposit of 10% and now 15%	LTV maximum of 85% but can go to 100% in certain circumstances an annual repayment of 2.5% required on all loans over 70%.	Borrower must pass a stress test.
Portugal	2009 Action Plan for Risk of Non-Compliance notice from EC.	No additional mortgage regulation	If anything, moving towards easier lending
Slovenia	2016 Bank of Slovenia issued macro-prudential recommendations.	From 2016 guidance is 80% LTV; LTI increased from 50% to 67% for higher income households	Industry standards tightened since 2008
Spain	A number of legislative changes as part of overall restructuring of banking system;- stronger underwriting rules.	No formal requirements - 90% of residential loans are under 80% - but house price falls have put many into negative equity	Working towards implementation of the Mortgage Credit Directive
Sweden	Increasing regulation from 2010	Maximum LTV 85% Amortisation now required on higher LTV loans LTI caps discussed	Internal bank models generate extremely low risk weights so little incentive to modify behaviour.
USA	Substantial tightening and strengthening of federal regulatory system		Rollout of Dodd-Frank Act 2010 to curb predatory lending techniques and ensure lenders retain some risks

Sources: Lunde and Whitehead, 2016; Whitehead and Williams, 2017 and commentary from country experts often based on national government and central bank publications.

initial affordability and the capacity to pay higher mortgage costs in the future (especially through the increasing use of stress tests).

The regulatory approach does little to protect individuals from unexpected falls in income. When this happens the first port of call in

most countries is general unemployment and sickness benefits as well as more welfare payments where incomes fall below certain minima. In the main, these take no direct account of specific expenditures such as mortgage payments. However, in many Western European countries, levels of out-of-work benefits, especially those that are linked to previous earnings levels, are far higher than in the UK and so are seen to remove the need for measures specifically related to mortgage costs (Ditch, J et al, 2001).

8. Safety nets, an overview

The evidence from other countries suggests that, where the mortgage payments are not being kept up to date, the most usual approach is to ensure appropriate negotiations take place between mortgage lender and borrower to restructure payments, e.g., to extend the mortgage and to backload payments to a time when the borrower can pay. In a number of countries the government requires the lenders to subsidise individual mortgage borrowers who find themselves in difficulties.

When assistance is inadequate, owner-occupiers will normally be required to sell their property or the owner-occupier will be evicted and become dependent on broader safety nets. In some circumstances when the market as a whole is not functioning well, the property may be transferred into the rental sector where the occupier may be charged a sub-market rent or housing allowances are in place. More generally, when unexpected events occur which impact on large numbers of households, governments generally take emergency measures, mainly with the objective of keeping the status quo in place until such time as the market has recovered.

9. Conclusions

On some measures, the UK mortgage market is less exposed to the risks of arrears and possessions than it has been in the past reflecting not least a range of regulatory interventions. However, the public safety net provided by government to support individual borrowers in difficulty has itself largely disappeared. Some safeguards remain, but in terms of formal programmes to support borrowers in difficulty these have for the most part been removed or are in the process of being removed.

While the emergence of a range of macro-prudential controls and regulation have reduced the number of households who might be most exposed to a downturn, the wider

macro-economic context does suggest a less positive outlook. Households have become very used to enjoying low and falling mortgage rates and many have extended their secured and unsecured debt despite static wages. The Bank of England rightly reminds us that this poses significant risks.

So the picture is quite mixed: on the one hand there are a number of major potential risks and on the other there is currently a relatively benign situation, with little sign of deterioration (apart from around SMI) and additional controls in place to limit the flows of the 'worst' risks into the mortgage market.

9.1. What we will have in place

At the level of the individual home buyer, by 2022 there will be little in place that offers financial support or protection. SMI will have been replaced by LMI. In addition, Universal Credit is expected to have replaced tax credits and will offer more limited support (in the form of some higher work allowances) for home owners who face a loss of income, or can only find re-employment in low paid work. These provisions are very modest and will offer very little benefit to the borrower or re-assurance to the lender.

Ultimately, although the safeguards that exist for borrowers in terms of regulatory requirements/treating customers fairly, via court procedures and the potential for re-re-negotiating mortgage conditions remain, there is little from the government side that might incentivise lenders to do more than follow due process. One point to note here is that the new limits on support to mortgage holders are such that inevitably there will be higher levels of possessions than would otherwise have been the case. Where the households affected find themselves in the social or private rented sectors the government will incur costs in the form of housing benefit. These potential costs to government should be a factor when considering the construction of a more effective home owner safety net.

Clearly the macro-prudential and regulatory controls have been restructured to limit future risks and tightening the mortgage system to exclude people with poorer incomes/credit histories will help to build in a degree of resilience to rate increases. But we should not forget that arrears and possessions often arise for complex and very individual reasons. Overall, the expectation in government seems to be that lenders will exercise forbearance and that this will be the primary mechanism for overcoming a downturn. However, the appetite for forbearance

is likely to be both limited and conditional upon government playing its part in the process.

9.2. And in the context of other countries' experience?

Evidence from other countries suggests that, as in the UK, the main emphasis since 2008 has been on increasing the regulation of financial institutions in line with international requirements. This is mainly for macro-prudential reasons but has the direct effect of limiting the number of households at risk when circumstances (either market or personal) change.

Across all countries while income and affordability are taken into account at the point the mortgage is taken out, these do not address issues around specific changes in individual circumstances such as sickness, unemployment or income loss except as a side-effect of stress testing. Problems when they arise are sometimes covered by insurance but in most countries these are mainly addressed by general support that takes no account of specific costs such as mortgage repayments. If this leaves the mortgage borrower in financial distress, then it is normal for there to be negotiation between the borrower and the lender, often within a framework specified by the regulator or government legislation. At the limit, owner-occupiers face eviction and must move to the rental sector, where they usually benefit from a stronger safety net at greater government cost.

One issue that stands out from both international and UK experience is that specific safety nets tend to be put in place only in response to crises. Further, they may not survive until the next crisis, which itself may have very different attributes. More generally, the international evidence suggests that the need for mortgage-specific safety nets depends in large part upon the generosity of the broader system of income support.

The two most obvious differences between the UK and many other countries are:

- first, social security in the UK is less generous and less likely to be related to past levels of income than in many Western European countries – so more households are likely to face difficulties in meeting their housing outgoings; and
- second, and partly as a result, the UK is more generous than many other countries in providing support to distressed owner-occupiers and more generally treats housing differently from other essentials in a way which is quite unusual. Because of

this a mortgage specific safety net system has proved necessary in the past – and it is more than likely that a stronger system than is now in place will be required at some point in the future.

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Defaulting tenants and mortgage debtors in South Africa should not be sheltered under the PIE Act¹ principles

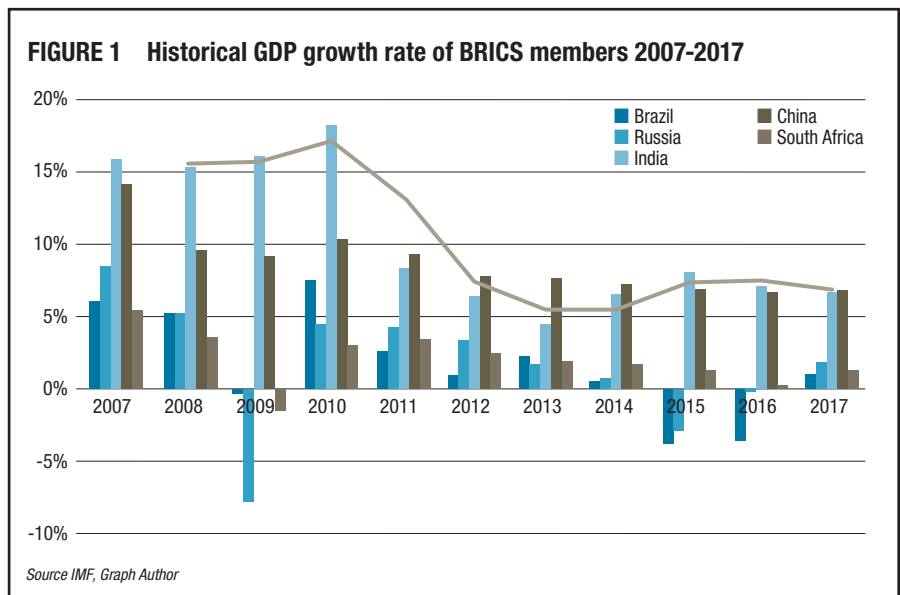
↳ By Vuyisani Moss²

1. The South African economy

After recovering from technical recession in early 2017, South Africa's economic growth remained slow for a fifth consecutive year in 2017. For 2017 as a whole the South African economy grew by 1.3% compared to 0.6% growth for 2016. South Africa's GDP value represents 0.48% of the world economy and 35% of Africa's GDP according to the 2016 trading economic report. South Africa is also part of the club of major emerging economies known as the BRICS (Brazil, Russia, India, China and South Africa [SA]); SA became a member in 2010.

It is estimated that the BRICS club account for 25% of global GDP and 40% of the world's population. BRICS membership gives South Africa direct access to global markets and access to capital as the bloc plays an influential role in the global economy and political landscape. Given the size of the BRICS country economies, comparatively speaking SA's is just fractional but its membership is anchored within the international economic architecture as China is the second largest economy just behind the USA.

China contributed \$41 billion towards the BRICS funding pool, while Brazil, India and Russia contributed \$18 billion and South Africa \$5 billion. According to the IMF Projected GDP Ranking (2016-2020) Report, USA remains the largest economy followed closely by China, India's economy is ranked eighth, Russia eleventh, Brazil twelfth and South Africa's economy is ranked at number 42. The graph below, Figure 1 illustrates GDP historically performance of the BRICS grouping over the last ten years from 2007-2017.



The South African economy is forecast to grow by 1.6% in 2018 and at risk of being downgraded again after Standard & Poor's [S&P] downgraded South Africa's economy in April 2017, by one notch with a negative outlook, pushing the country's credit rating to sub-investment grade for the first time since the early 2000's. With respect to revenue and expenditure patterns, the 2018 Budget proposes the necessary fiscal measures to reduce the deficit and stabilise the debt over the medium term.

Explicitly, the consolidated budget deficit is projected to decline from 4.3% of GDP in 2017/18 to 3.6% in 2018/19 and 3.5% in 2019/20. According to the country's Treasury, the narrower deficit, stronger rand and lower borrowing costs will result in gross government

debt stabilising at 56.2% in 2022/23 and declining thereafter, with net debt peaking at 53.2% in 2023/24.

1.1. Employment trends in South Africa

Employment growth remained lacklustre in the fourth quarter of 2017, despite three consecutive quarterly increases in real GDP growth. According to Statistics South Africa's Quarterly Labour Force Survey, 15.634 million people were employed in the formal and informal sectors in South Africa bringing the unemployment rate to 27.70% in 2017. The unemployment rate in South Africa averaged 25.52% from 2000 until 2017. The unemployment rate reached an all-time high of 31.20% in the first quarter of 2003 and a record low of 21.50% in the fourth

¹ The Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998 [PIE Act].

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quarter of 2008. The expanded definition of unemployment including discouraged workers³ remains stubbornly high at 36.30%.

1.2. South Africa's household finances

The debt to disposable income reflects the stock of debt on the household sector's balance sheet, which reflects households' ability to repay principal debt. The household debt as a percentage of disposal income has been declining from 85.7% in 2008 to 71.9% in 2017. South Africa's national saving rate as measured by the South African Reserve Bank [SARB] had decreased from 16.0% in the third quarter of 2017 to 15.8% in the fourth quarter of 2017. The ratio of household savings to disposable income however remains weak hovering around the 0.8% mark. The deterioration reflected marginally weaker savings by households. Based on statistics published by the National Credit Regulator [NCR], the state of consumer credit risk profiles paints a distressing picture. In 2016, of the 24 million credit active consumers, only 59.8% were in good standing while 40.2% had impaired credit records.

1.3. The housing supply ratio in South Africa

With credit statistics reflecting a gloomy outlook in relation to the credit profile of the consumers, there is an impact on both prospective homeowners and existing mortgage account holders. It is unsurprising that the low-income homeownership market in South Africa is dominated by government's subsidised delivery instruments. The government views direct property ownership as a cornerstone not only to promote prestige, security and comfort but to alleviate poverty and create household wealth. Government recognises that property ownership is one of the leading wealth building vehicles and that introducing policy and legislative reforms with deepening impact is the foundation to servicing the underserved markets. Since 1994, an estimated 4.3 million households have benefited from the delivery of 2.8 million government-subsidised houses, and about 121 784 social rental units as according to the leading delivery indicators. This equates to R500 billion worth of disbursements for top housing units, bulk services, social and economic amenities. This is a remarkable realization by any standard.

The 2016 Community Survey report by Statistics South Africa shows that 79.0% of

South Africans (13.4 million households) live in a formal dwelling, representing an increase of 5.7 million households since 2001. According to Statistics SA, annual delivery by the private sector has declined dramatically since the 2008 global credit crisis. During that time, approximately 70 058 units were delivered outside the state subsidised housing market and in 2015 the figure was merely 39 671 of housing units delivered. The 2016 Community Survey further reports that 13.0% of households are living in informal⁴ housing in South Africa while 54.7% of households fully owned their properties and 18.4% of households were renting the properties. A total of 23.1% of households were living in Reconstruction and Development Programme [RDP] or on fully subsidised state housing, underlining government's deliberate strategy to support the large vulnerable and marginalised sections of the population.

On the other hand, the performance of governments Development Finance Institutions [DFIs] has not met the envisaged expectations as mandated. This was validated by the findings of the 2016 study on "Evaluations of Governments' Approach to Affordable Housing Market 1994-2013", revealing that housing finance initiatives backed by the state have serviced a small portion of the affordable housing demand in the market. While the housing units built over the 20-year period have only addressed a mere fraction of 3.9% of the affordable housing demand. The study further shows that during the same period the banking sector had the greatest impact on housing finance, having serviced 19.1% of the demand for affordable housing. The banks' contribution relative to an acute housing backlog and government expectation is also marginal. South Africa's income disproportion has become the principal barrier to housing access and affordability as the country has become the most unequal country in the world.

2. The property market in South Africa

In total there are approximately sixteen million households in South Africa, the majority of which (5.4 million) are earning below R4000⁵ per month. This segment of the market relies heavily on state subsidised products for their housing needs. The other category is that of 4.9 million (31%) households who have monthly incomes of R4000 to R10 000 and data reveals that only

one for every 236 households will be able to access mortgage finance. Another income classification is that of 2.7 million households (17%) earning from R10000 to R20000 per month and one for every 48 households in this grouping could access mortgage finance. The biggest part of the urban affordable housing stock is existing houses subsidised fully by government in the form of Breaking New Ground [BNG] stock and older townships and mortgage advances to this sector market remain a critical challenge.

The outlook clearly shows that the residential property market activity and levels of confidence remain subdued. This is due to the fact that affordability of housing is measured by trends in house prices, disposable income and the mortgage interest rate. The latest ABSA Housing Review report shows that the 2016 average nominal price of a home in the affordable housing segment (homes measured at 40 m² – 79 m² and priced up to R600 000) has not changed much and remained at around R416 000 in 2016 while the data from Eighty20 indicates that an entry level price of a new house in this segment is about R352 000.

As the data illustrates, mortgage credit contracts remain concentrated on the upper income segments of the market. The majority of written mortgages are extended to individuals in the greater than R15 000 income category which comprises of more than 85% of total mortgages granted.

Figure 2 below shows the number of mortgages granted between 2009 and 2016 that were in favour of individuals with a gross monthly income of greater than R20 800 per month for both rand values and number of mortgage advances.

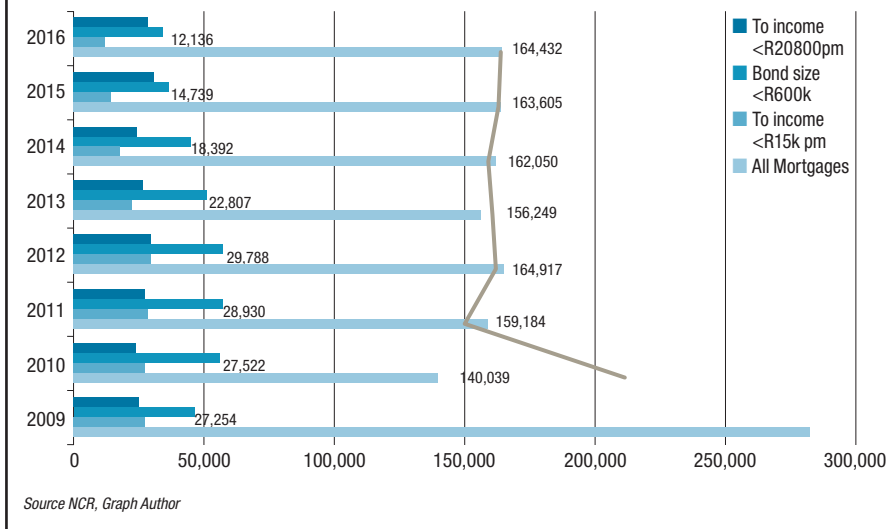
The majority of mortgage agreements granted during this period were in excess of R600 000 extended to households earning above R15 000. This analysis as measured above in Figure 2 consistently demonstrates that the growth in mortgage finance and advances in terms of number and value of loans had been on a downward trend after peaking in 2009 with 27,254 mortgages against 12,136 in 2016 in the affordable housing segment. This highlights the uneven distribution and gross disproportion comparatively in terms of the total of all mortgage loans as well as size of mortgages. As shown above the total number equated to 282,636 in 2009 and 164,432 in 2006. From the banking sector mortgage advances

³ Individuals who have given up looking for a job due to no prospect of finding one and are not counted as active in the labour force.

⁴ Informal housing refers to makeshift structures not erected according to approved architectural plans, e.g. shacks in informal settlements and backyards.

⁵ US\$= 12,07ZAR (06 April 2018)

FIGURE 2 Number of mortgages granted by size and income 2009-2016



performance data, the affordable housing market is substantially thin compared to the conventional property market.

3. The interpretation intricacies of the PIE Act

The Prevention of Illegal Eviction from and Unlawful Occupation of Land Act 19 of 1998 [PIE Act] applies to all land throughout South Africa, and to occupiers who have no rights of occupation. PIE Act highlights in detail the strict procedural requirements to be followed and the circumstances that need to be considered by a court before an eviction is carried out. The definition of an unlawful occupier under the PIE Act relates to a person who occupies land without the express or implied consent of the owner or person in charge of such land. In its ordinary meaning the definition of an unlawful occupier means that PIE applies to all unlawful occupiers, irrespective of whether their occupation of such land was once lawful.

The PIE Act doesn't protect buildings and structures that don't perform the function of a form of dwelling or shelter for humans or that are occupied by domestic persons. A number of landmark judgements by the Courts in South Africa had since provided a significant interpretation of the PIE Act especially in relation to tenants and mortgage debtors. For instance, in June 2017 the Constitutional Court rescinded the ruling by the High Court of South Africa, on 10 September 2013 in which an eviction order was granted against the occupiers from a block of flats in Johannesburg. The eviction order was granted by the High Court on a purported agreement between the parties concerned.

The applicants were 180 occupiers of the property which was owned by a private company since 1985 and was then purchased by a property investor who intended to spend more than three million rand on its upgrade. Once refurbished the new owner would offer the residential apartments for rent. This offer would be extended to the applicants should they apply and qualify for leases in the property. It was argued at the High court by the property investors that an agreement was for an eviction between residents represented by their Ward Councillor also a resident. The High Court held that once the parties had reached agreement, the mandate of the Court to determine the issues was terminated. Thus, the High Court found that this was an amicable arrangement by the parties involved and ruled that an eviction was justified on the basis of this mutual agreement. However, on appealing the eviction order at the Constitutional Court the residents disputed that the Ward Councillor's consent to the eviction order was representative of the position of all the applicants. They further argued that any assumption that the Ward Councillor was a resident himself was also incorrect. The Ward Councillor by his own admission had no mandate to bind the applicants and no authority to represent the 180 applicants regarding the eviction order. The Constitutional court ruled that the High Court that granted the eviction had erred in assessing what it saw as the applicants' consent.

It deliberated on the factual consent without conducting an enquiry to establish its validity and legal effectiveness. It found that the High Court failed to probe the matters that it was statutorily required to observe, which in this case is the Constitution and PIE Act. In addition,

the Ward Councillor who confirmed that the applicants had agreed to the eviction order, did not have a mandate to do so, nor was he one of the applicants. The Court maintained that eviction carried out was unjust or inequitable. Accordingly, the eviction order was set aside by the Constitutional court and the matter was remitted to the High Court for the direction and the Constitutional court ordered it be dealt with expeditiously.

A precedent had already been set in the 2002 Constitutional Court Judgment in relation to tenants and mortgage debtors. In both cases a lease contract had expired, the mortgagor had the property repossessed and they both refused to vacate the properties hence an eviction order was sought in Court. The Constitutional Court ruled in favour of both the tenant and the mortgagor debtor. Thus, the judgements and rulings are due to incoherencies that exist in the application and interpretation of the PIE Act. This subsequently appeared to have subjected the Act to intervene and interpret formal credit agreements and lease contracts entered into between borrowers and creditors as well as lessors and lessees. This was not the intended purpose of the of the PIE Act.

There are protection measures and statutory frameworks developed in South Africa exclusively to protect financially struggling tenants and mortgage debtors against any unjust practices and unbecoming market conduct. These include the National Credit Act, Consumer Protection Act; Housing Consumer Protection Measures Act; Rental Housing Act. In addition, the Office of the Banking Ombudsman is also an intermediary lever for mortgagors while the tenants have the Rental Housing Tribunals for recourse and the services are free of charge. Since its promulgation the PIE Act has had various interpreted and implementation challenges and it has thus become inevitable to clarify the limitations underpinned in the Act and remedy the limitations. This is evidenced by cases differently interpretation by the Magistrate Court, High Court and eventually settled at Constitutional Court, which is the country's apex Court. This is precisely because the incoherencies of legalisation subject themselves to these varying interpretations.

3.1. Overextending the PIE Act; principles carry costly risks

In interpreting and applying the PIE Act the Courts in their rulings appear to have exercised their discretion towards interpreting the legislation to be inclusive of a category for which it was not intended. However, the ambiguities

and lack of precision within the text of the Act mean that it is liable to be extended in scope and misinterpreted when considered by the courts. Inevitably, the textual ambiguity when the Act was drafted gets manifested when the Act is tested robustly through court cases. This has been illustrated by divergent judgments made by the High Court, Supreme Court of Appeal and Constitutional Court delineating on the proper interpretation of the concept of unlawful occupier in the PIE Act.

On the one hand, it has been held that it applies only to people who unlawfully took occupation of land and remain in unlawful occupancy viz. informal settlers or squatters. On the other hand, it has been established that it also applies to people who lawfully took occupation of the land under a contractual obligation but unlawfully remain in occupation after their right had expired viz. ex-tenants, ex-mortgagor defaulters. PIE defines unlawful occupier as a person who occupies land without the express or tacit consent of the owner or person in charge, or without any other right in law to occupy such land.

Thus, the courts have been battling to comprehend the correct meaning of unlawful occupier and in the process opting to demarcate to whom is it applicable and to which categories of property. PIE was intended to apply to the unlawful occupation of land and not to defaulting ex-tenants and defaulting mortgage debtors who simply remain in unlawful occupation. Furthermore, PIE provisions and principles cannot be defined and interpreted outside the obligations of the Constitution. Section 26(3) of the Constitution states that no person may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. The difficulty is that the PIE Act does not clearly define the meaning of 'home' which has left it up to the courts to define and interpret within the fitting context of unlawful occupier. As a result, there has been a series of judgments in the courts dealing directly or indirectly with the meaning of unlawful occupier.

3.2. Defaulting mortgagors and tenants cannot be sheltered under the PIE Act

As regards defaulting mortgagor debtors, a number of protection measures and statutory frameworks are available to both struggling tenants and mortgage debtors to protect them against any unjust practices and unbecoming market conduct. These include amongst others

the National Credit Act of 2005; the Consumer Protection Act of 2009; Housing Consumer Protection Measures Act of 1998; Rental Housing Act of 1999; the Rental Tribunals and Office of the Banking Ombudsman. Through the National Credit Act, a defaulting mortgage debtor can for instance apply for debt review and then possibly receive a new, more affordable payment plan from the lender long before the foreclosure gets initiated.

In fact, the process of repossession starts when the credit provider advises the defaulting consumer of the intent to take legal action through the issuing of a Section 129 letter issued in terms of the National Credit Act. This letter advises the consumer to rectify the default. The letter is usually sent after four successive months of non-payment. Before that there would have been formal communication by the creditor to the debtor about outstanding payments and advice on options to mitigate any difficulties by the debtor. Alternatively, the mortgage debtor would be advised to seek help from a debt counsellor, failing which the credit provider will formally proceed with legal action. It is estimated that South Africa has about 6.1 million formal homes, 30% of which are mortgaged properties. In South Africa the big four banks (Standard Bank, First National Bank, ABSA bank and Nedbank) collectively have just over 90% of mortgage market share.

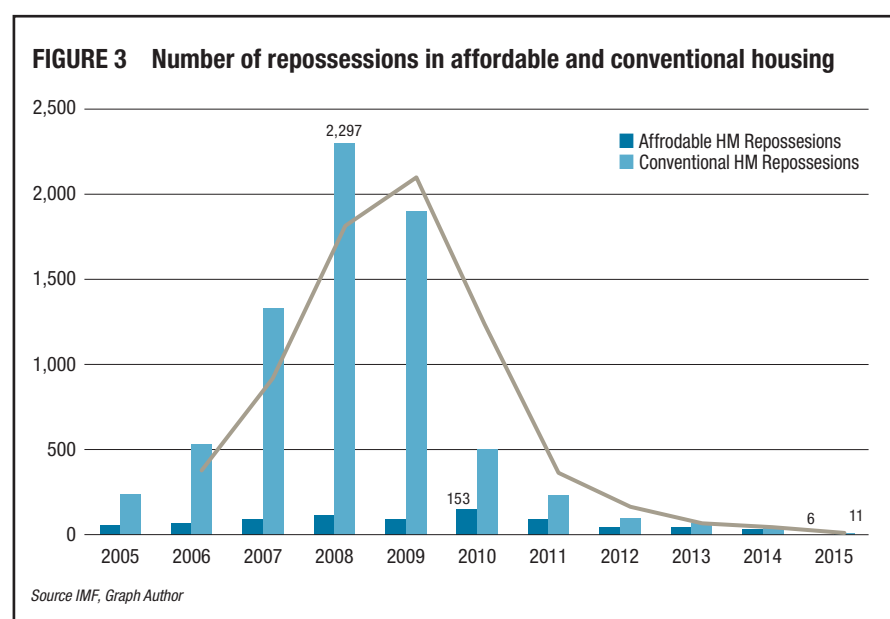
For distressed homeowners, the big four banks have mechanisms to assist heavily indebted mortgage account holders to evade foreclosures

and their devastating effects. The ABSA bank offers its struggling mortgage debtors the 'Help You Sell', the First National Bank has the 'Quick Sell'; the Nedbank has the 'Assisted Sales Programme' and Standard Bank offers 'Easy Sell' intervention.

With South Africa's fragile economy, job losses combined with pressure on households' disposable income and borrowers' repayment ability, both tenants and mortgage debtors are susceptible to defaults exposing banks to higher non-payment risks. This demonstrates a continued upward trajectory of non-payment behaviour. For instance, the National Credit Regulator data for mortgages in arrears for longer than three months which are classified as Non-Performing Loans [NPLs] had risen to 3.4% of the value of total. See Figure 3 below for historical trends in property repossessions in South Africa.

With regard to defaulting tenants, residential rental trends also reflect a concerning outlook in tenant payment behaviour. According to the data from Tenant Profile Network [TPN]⁶ as at the end of 2017, just over 6% of tenants in South Africa were not paying rent. Tenants who were defaulting the most are those paying rent of up to R3,000 a month (12.35%), followed by those paying above R20,000 a month (6.95%). It is important to note that 72% of the tenants remained in the paid-on-time category.

Overall, this highlights a growing multitude of over-indebted consumers, who find themselves



⁶ TPN is the largest credit bureau in Africa to specialize in vetting tenants for rental properties and produces quarterly reports through its Residential Rental Monitor.

unable to make full and timeous payments on their credit and monthly fixed living expenses. Subsequently they will eventually default and be forced to vacate the property with mortgagors risking repossession of their properties.

Accordingly, the obligations of tenants as well as landlords are thus covered in statutory as well as non-statutory law in South Africa. The lease contract signed between the lessor and the lessee remains the primary arbitrator. In terms of the Consumer Protection Act, a landlord can cancel a fixed-term lease if a tenant has failed to rectify a material breach after being given at least 20 business days' notice to remedy the breach. A lease can be in verbal or written form, but a written lease agreement is recommended. If the breach is not rectified within the specified period, the lessor can send the lessee a written notification of cancellation and instruct the tenant to vacate the property by a certain date.

Both the landlord and the tenant must adhere to the provisions of the Rental Housing Act obligations which regulate the rental housing market in South Africa. Any disputes arising can mainly be arbitrated by the Rental Housing Tribunals. It is against this backdrop that the application of the Prevention of Illegal Eviction from an Unlawful Occupation of Land Act 19 of 1998 [PIE Act] cannot be the mechanism to protect the defaulting mortgage debtors and tenants as this was not intended by PIE principles. For that reason, the PIE Act has to be reconfigured to coherently articulate its intended principles and objectives without any ambiguity as legislatures supposedly envisaged.

4. Policy proposals to remedy PIE Act limitations

It is fundamental to note from a policy practice perspective that while the Constitutional judgements as embedded in section 26 of the Constitution declare that everyone has the right of access to adequate housing, this right however cannot be viewed arbitrarily. The right to adequate housing has to be qualified by section 26(2) interpretation as the overarching principle. Principally, this article proposes adjustments and reforms in relation to certain applicable provisions of the Act to define and clarify certain limitations of the PIE Act in particular Section 2 to assert its intended meaning by endeavouring to exclude those with mortgage-based agreements and tenants with lease contracts or terminated lease agreements from undiscerning protection under the PIE Act.

The court judgements appeared to be requiring the Act to intervene and interpret formal credit

agreements and lease contracts entered into by borrowers and creditors as well as lessors and lessees. These contracts are embedded in their terms and conditions and contraventions of such agreements should primarily be subjected to the agreed formal contract principles. They must be subjected to corresponding legislative measures and consumer protection statutes. Similarly, tenants with terminated lease contracts should not be protected by the provision of the PIE Act but through pertinent legislative instruments and rental housing mechanisms.

The article further recommends that the PIE Act be expressively assertive on the definition of "home". The Constitution states that no person may be evicted from their home, or have their home demolished, without an order of court made after considering all the relevant circumstances. The difficulty with regard to this is that PIE Act does not define 'home', which has left it up to the court to define and interpret it. The policymakers and legislatures have to define 'home' adequately to mitigate the risk of misinterpretation and misconception of what the PIE Act intended to address. This incoherence leaves the courts with a quandary of having to interpret of what the Act hypothetically intended to espouse.

A home in South Africa is defined by Statistics South Africa as a permanent structure intended to provide protection against the natural elements and which is suitable to be occupied for residential purposes or partially for residential purposes. The Act should then state that a 'home' is a dwelling where a person has lived for a certain period of time which the Act can reasonably recommend on the basis of international best practice and international treaties. The definition should be in sync with Constitutional obligations as well as the United Nations universal guidelines.

In conclusion, the first point of pursuit should rather be to promote the concept of meaningful engagement and participation on evictions by all parties involved. This principle carries an undertaking that prior to carrying out any evictions, and particularly those involving large groups all feasible alternatives should be explored in consultation with the affected persons.

This is with a view to avoiding, or at least minimizing, the need to use force while evicting. In cases where evictions are unavoidable, adherence to legislation, protective standards and available measures consistent with international human rights commitments becomes paramount as enshrined by the African Charter on Human and Peoples' Rights to which South Africa is signatory.

5. Concluding remarks

In interpreting and applying the PIE Act the Courts in their judgements appeared to have exercised their discretions towards interpreting the legislation to be inclusive of certain categories for which it was not intended. But due to its over-extended meaning the legislation subjects itself to a diverse range of interpretations. It is without a doubt that applying the PIE Act on defaulting mortgagors and defaulting tenants is an over-reach and carries costly risks from the point of view of both the investors and law administrators. The application and administration process of the PIE Act is monotonous, convoluted and can be very protracted, confirming the observation that the principles of Act were intended for unlawful occupation of land and residential properties. This will adversely impact the property market as investors will feel susceptible and unprotected because of the long-drawn-out Court processes under PIE. The property investors, especially those owning multi-storey buildings, are likely to be financially distressed owing to non-payment of rent, municipality rates, electricity supply costs as well as water and sanitation charges during the prolonged court process. When the Constitutional Court (as these cases after a series of Appeals are often settled at the Constitutional Court) issues the eviction ruling and debt judgment after many years of litigation, they might not enforce the collection of the amount owed because many tenants do not possess assets worth attaching. It is against this context that the overall purpose of this article is to attempt to promote adjustments and reforms specifically aimed at addressing the underlying incoherencies, misinterpretations and unintended misconceptions of the PIE Act. The legislative objectives of the Act were never intended to cover residential buildings but unlawful occupation of land, as defaulting tenants and mortgagors are primarily covered by a number of other legislative measures and legal procedures. Fundamentally, the first point of pursuit should rather be to promote the concept of meaningful engagement and participation by all parties involved. This principle carries an undertaking that prior to initiating any court processes and subsequent evictions, all feasible alternatives should have been explored in consultation with the affected persons. If these fail then protection measures and statutory frameworks developed in South Africa exclusively to protect financially struggling tenants and mortgage debtors against any unjust practices should be applied, rather than overstretching the PIE Act and banking on the Courts for clarification and interpretation. Since its promulgation the PIE Act has had various interpretation and implementation challenges

and it has thus become unavoidable to identify and clarify the limitations and remedy the inconsistencies underpinned in the PIE Act.

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The financialisation of housing and the housing affordability crisis in Sydney

↳ By Alan Morris

1. Introduction

Post World War Two, homeownership rates in Australia continually increased and by 1966, around 70% of all households were homeowners (Paris, 1993). Through the life-course, almost all Australian households were ultimately able to access home ownership and pay off their mortgage. The gendered division of labour meant that this was usually accomplished on one full-time salary. It was a period of rapid economic growth, near full employment and strong trade unions. Forrest's (2011: 17) analysis of the context for homeownership in advanced economies in the period up to the early 1970s, captures the Australian scenario:

The homeownership of the pre-neoliberal era ... was about solidity and security—part of the Fordist social contract of relatively stable employment and wages, stronger trade unions, an expanding welfare state and regulated financial institutions.

Private renting in Australia was viewed primarily as a transitional stage in the lifecycle (Kendig, 1984) and the number of households in this tenure declined from around 44% in 1947 (Parliament of Australia, 2009) to 19% in 1995–96 (ABS, 2007). The social housing sector was a small (it never exceeded seven percent of the housing stock), but was a vital source of housing for low-income households (AHURI, 2017).

Over the last three decades the housing market in Australia, as in many other advanced economies, has undergone a profound change: housing is increasingly viewed as a means to accumulate capital. The shift in the way housing is conceptualised has played a central role in the dramatic increase in house prices in Sydney, Australia's largest city. The reconceptualisation, combined with the globalisation of the real estate industry, has resulted in a spectacular increase over the last two decades in local and foreign investors buying residential property in Sydney (Rogers, 2017).

What this article sets out to do is to examine the impacts of the financialisation of housing on housing in Sydney. What I argue is that it has played a central role in precipitating Sydney's housing affordability crisis. The article first defines the financialisation of housing. It then sketches the features of Sydney's housing crisis. The final section maps out how the financialisation of housing has contributed to the crisis.

2. Defining the financialisation of housing

Aalbers argues that the contemporary period is characterised by finance capital penetrating every societal realm including the household. He defines financialisation as

the increasing dominance of financial actors, markets, practices, measurements and narratives, at various scales, resulting in a structural transformation of economies, firms (including financial institutions), states and households (Aalbers, 2016: 2).

Drawing on this definition, the financialisation of housing has three interrelated key dimensions. A fundamental feature is a shift in the way housing is viewed. Rather than being regarded primarily as a means of acquiring adequate and secure shelter, it is increasingly treated as a commodity and investment. A second aspect is the creation of a policy environment by governments that facilitates and encourages the financialisation of housing. This is done by lessening regulation, creating tax regimes which encourage speculation and deemphasising social housing. The final aspect, globalisation of the real estate market is another central feature. These three dimensions are briefly discussed in turn.

Although housing for most households is still primarily driven by the desire to have security, control over personal space and protection against poverty in retirement, increasingly it is treated as a source of accumulation. Madden and Marcuse (2016, 4, italics in original) conclude,

Housing is under attack today ... Most immediately, there is a conflict between housing as lived, social space and housing as an instrument for profitmaking—a conflict between housing *as home* and *as real estate*.

Over the last three decades, governments and financial institutions have played a major role in accentuating the financialisation of housing (Aalbers and Haila, 2018; Rolnik, 2013). This is exemplified by the loosening of credit and the “resultant inclusion of middle- and low-income consumers into financial circuits [and] the takeover of the housing sector by global finance” (Rolnik, 2013: 1059). This has resulted in housing finance increasing dramatically and the residential mortgage market representing a considerable proportion of the GDP. In many countries housing has become the key activity of the financial sector:

... the lion's share of bank's lending activities these days is in real estate ... housing is not simply yet another domain of financialisation. In terms of size and impact, it is the key domain of financialisation (Aalbers and Haila, 2018: 9).

An important policy development linked to the financialisation of housing has been a global tendency for governments to limit, to varying degrees, their investment in social housing resulting in an increasing proportion of households having to depend on the private market for their accommodation. This withdrawal is linked to the accentuation of asset based welfare: home ownership and the capacity to draw on this substantial asset (the home) is supposed to reduce the need for dependence on state-managed social transfers (see Doling and Ronald, 2010). The notion that governments have a duty to ensure that all citizens, regardless of their resources or income, have a secure and affordable home, is increasingly presented and viewed as anachronistic (Rolnik, 2013). As a result, social housing is being sold

off, existing stock is often poorly maintained and little new social housing stock is being built (Scanlon et al., 2014).

Running parallel to the decline of social housing and the emphasis on home ownership, has been the tendency of governments to lighten the regulation of the private rental sector resulting in households in this housing tenure being increasingly vulnerable to untenable rent increases and eviction (Morris et al., 2017). The reduction of regulation is occurring in a context where the private rental sector in many countries has grown substantially over the last two decades (Forrest and Hirayama, 2015). Interestingly in the United Kingdom there has been a policy shift. In order to diminish the advantage investors historically have had in the market and encourage homeownership, the government has reduced the tax advantages enjoyed by landlords and introduced a property tax surcharge for owners of investment properties (see Martin et al., 2018).

The financialisation of housing has led to residential real estate investment becoming a central part of the global economy. Economic elites view investing in real estate in countries other than their own, as a safe and rational investment option: “A global wall of money is looking for High-Quality Collateral [HQC] investments, and housing is one of the few asset classes considered HQC” (Aalbers and Haila, 2018: 7).

The end result of the financialisation of housing in many contexts, has been the increasing inability of large swathes of the population to access affordable, secure and adequate housing. In Australia, many low-income and, to an increasing extent, middle-class households, are in precarious housing situations. This precarity has serious implications for mental health and well-being. Australia has been in the forefront of the financialisation of housing and its impact on the housing market in Sydney have been severe, as the next section illustrates.

3. The features of Sydney's housing crisis

The crisis has various components – the growing incapacity to purchase a home, housing stress, insecurity of tenure and homelessness are the most significant.

3.1. The growing incapacity to purchase a home

A central feature of Sydney's housing crisis is the diminishing capacity of households to enter into homeownership due to the high price of property relative to income. Sydney is Australia's most expensive housing market and the median house price in Sydney has surged over the last two decades, outstripping wage growth and inflation. Between 2007 and 2017, house prices in Sydney more than doubled. At the beginning of 2018, the median house price in Sydney was \$1.058 million (about \$US800,000) up from \$874,000 in 2014 and \$561,500 in June 2008 (Duke and Robertson, 2018; Wade, 2015). The median apartment price at the beginning of 2018 was \$774,000 (Duke and Robertson, 2018) up from \$630,000 at the end of 2016, and \$412,000 in 2012 (Duke, 2016).¹

Not surprisingly, the relentless increase in house prices has impacted on the capacity of households in Sydney to enter into homeownership. In June 2011, 65.2% of Sydney households were homeowners; in June 2016, 62.3% were. In the same period, the proportion of outright homeowners dropped from 30.4% to 29.1% (Stone et al., 2017). The proportion of households in the private rental sector [PRS] increased from 25.1% in 2011 to 28.1% in 2016, whilst the proportion in social housing dropped from 5.2% to 4.8% (Stone et al., 2017).

Most potential first-time homebuyers in Sydney are locked out of the market². A Reserve Bank of Australia report concluded that a medium-income first-time home buyer in Sydney could afford just over 10% of homes sold there in 2016 and that in order to find an affordable house, first time buyers had to move about 50 kilometres from the centre (La Cava et al., 2017). The investment bank, UBS, calculated that a person earning \$80,000 and saving 5% of their gross income, would take around 40 years to save a 10% deposit for an average priced Sydney home (Haslem et al., 2017).

3.2. Housing stress

A large proportion of households in Sydney are in housing stress.³ The data for housing stress in Sydney vary and the cost of housing and the prevailing interest rates make it a complex calculation. At the end of 2016, mortgage

payments accounted for 42% of average disposable income of a Sydney household, after a 25% deposit (Robertson, 2017). The 2016 Census found that about a third of Sydney households with a mortgage were in housing stress (Janda, 2017).

Low-income (bottom 40% of income earners) private renters in Sydney are particularly vulnerable. The median rent in Sydney in April 2018 was \$525 a week, the net pay of a worker on the minimum wage was \$599. A recent report on the private rental sector in 15 UK cities and 72 cities worldwide found that globally Sydney is the 8th most expensive city in which to rent (Nested, 2017). The most recent rental affordability report (second quarter of 2017) indicated that the average Sydney household in the PRS spends around 29% of their household income on rent and that “Rents remain Severely to Extremely Unaffordable within a 10-kilometre radius from the Sydney CBD ...” (SGS Economics & Planning, 2017). In some inner-city suburbs, an average household would have to devote around 60% of the household income to rent.

In its latest annual snapshot of rental affordability, Anglicare, one of Australia's largest charities, painted a bleak picture of Sydney's rental market for households dependent on government benefits or the minimum wage for their income:

Sydney stands out for the extraordinary crisis in affordability revealed in this year's data – there were no affordable and suitable properties for any household type, with the exception of a couple where both are earning minimum wage, and for them, there was just 4% of properties available (Anglicare Australia, 2018: 6).

3.3. Insecurity and homelessness

The minimal regulation of the PRS means that private renters in Sydney and elsewhere in Australia face constant *de jure* insecurity. In New South Wales [NSW], once the fixed term of the written agreement/ lease between the landlord and tenant ends (fixed terms of leases rarely extend beyond 12 months), the landlord is able to ratchet up the rent to as much as the market can bear and can ask the tenant to vacate without providing any reasons as long

¹ Noteworthy, is that there has been a decline in Sydney housing prices. In June 2018, it was reported that Sydney house prices were 4.2% lower than their July 2017 peak (Yeates, 2018a).

² Nationally, about one in three first-time home-buyers are getting financial support from their parents in order to enter the property market. The figure in Sydney is not available, but is likely to be a lot higher. In May 2016, the Prime Minister, Malcolm Turnbull, suggested that wealthy parents should assist their children into the housing market (Bourke, 2016).

³ I am using the definition of housing stress / housing affordability introduced in 1991-92 by the National Housing Strategy, an initiative of the Australian federal government. It refers to low-income households, defined as those with incomes in the bottom 40 per cent, having to use 30% or more of their income for housing (rent or mortgage).

as the tenant is given 90 days written notice. A substantial proportion of private renters, especially those on a low-income, live in perpetual fear of having to leave their rented property (Morris et al., 2017).

An increasing number of people in Sydney are falling out of or are unable to access the private housing market or social housing. Census figures indicate that homelessness in Sydney increased by 48% between 2011 and 2016, from 28,191 to 37,715 (Pawson et al., 2018). Much of the increase was invisible taking the form mainly of severe over-crowding 'defined as requiring four or more extra bedrooms to accommodate the people who usually live there' (ABS, 2018).

4. The financialisation of housing and Sydney's housing crisis

The determination of successive Australian governments to create conditions that enhance the financialisation of housing has led to housing policy that has exacerbated the housing affordability crisis in Australia, most particularly in Sydney. Jacobs (2015: 55) concludes that the notion the Australian governments (state and federal) are actually interested in resolving the housing affordability crisis is misplaced:

... addressing the systemic causes that shape the current affordability crisis is less of a priority for governments than the main objective of protecting the wealth and opportunities for profit for homeowners and investors.

The government's policy supporting the financialisation of housing is underpinned by its creation of a highly favourable tax and financial regime for local investors, the drive to reposition social housing property so as to minimise any increase and allow private developers into the space and to welcome foreign investment in new residential developments and, de facto, in established homes. These are discussed in turn. What is noteworthy is that despite a record number of homes being built in Sydney over the last five years, prices continued to climb spectacularly. Thus although 31,000 new homes were built in Sydney in the 12 months ending October 2016, house prices in the city climbed by 15.5% during this period (Ong and Janda,

2017; Visentin, 2016). In 2016, the population increased by around 80,000 over the previous year (ABS 2017a). The current projection is that Sydney's population will increase by 3 million over the next 40 years. If we presume 2.6 persons per household (the current number), about 1.15 million more homes will need to be built or 29,000 annually (Pearson, 2018).

4.1. The favourable tax regime for local investors

The favourable tax regime for local investors in residential property has contributed to a massive expansion of Australian households owning an investment property. There are now 2.03 million landlords in Australia representing 15.7% of all taxpayers (CoreLogic, 2016, p. 4). In 2016, it was estimated that "investors own 27% of Australian dwelling stock by number and 24% by value" (CoreLogic, 2016). About one in five households own more than one property (ABS, 2017b). The key tax concession for investors in residential property is "negative gearing". It allows investors to deduct expenses on their property (depreciation costs, the interest on the loan required to buy the property, rates and maintenance costs) from the income they receive as rent and from other income such as salary. Negative gearing goes hand in hand with a generous capital gains tax for investors. When an investor sells a property s/he is taxed on only 50% of the nominal capital gain/ profit. These tax concessions encourage investors to take out larger loans and pay higher prices for properties than they would otherwise and this in turn drives up the cost of housing and makes it difficult for non-investors, especially first-time home buyers, to compete. In short, it encourages property speculation. Even the governor of the Reserve Bank of Australia has argued that scrapping negative gearing and the capital gains tax discounts would enhance housing affordability: "It's likely that it would reduce demand for a while, and if you have less demand for a while, you'd have lower prices and that would take the heat off the housing market" (in Ong, 2017).

The favourable tax regime, low interest rates, easy access to credit and the perception that the Sydney property market is a highly secure investment, has encouraged an unprecedented influx of local investors (ASIC, 2017). The investor share of housing finance in NSW increased from 35% in 2001 to 60% in 2014. In the year ending

March 2014, \$45 billion dollars was borrowed to purchase residential property in NSW. Most of the purchases would have taken place in Sydney. This was 76% above the level of credit extended in the same period in 2010-2011 (Collins and Janda, 2014). There was a slowdown in loans to investors in 2015 as banks cracked down on investor loans amidst fears of the market overheating. However, the continued upward trend in housing prices in Sydney (and Melbourne) saw banks soften their stance and in the year ending November 2016, loans to investors grew by 21.4% (Yeates, 2017). Australia-wide, in 2017, two out of every three loans to investors were interest only loans, whereas for homeowners the figure was one in four (ASIC, 2017). These loans are high risk as when the interest-only period ends, the repayments are much higher than they would be with a conventional home loan.

In the face of mounting concern about untenable house prices, the possibility of a rise in interest rates⁴ and the inability of an increasing proportion of households to access home ownership, especially in Sydney and Melbourne, the government endeavoured to stabilise house prices. In March 2017, the Australian Prudential Regulation Authority [APRA] instructed the banks to cut back on interest only mortgages and to be more restrictive on loans to investors. The new rules required banks to limit the flow of new interest-only lending to 30% of total new mortgage lending for residential properties. The restrictions led to a 10.1% decline in new lending to investors in 2017 (Yeates, 2018b) and house prices in Sydney in 2017 fell by 0.5%, the first decline since 2012 (Duke, 2018). The increasing trepidation of investors and the tightening of loan approvals by the banks, led to lending to investors dropping to 42% of all new loans in Australia in June 2018 – the lowest since 2012 (Yeates, 2018c).

4.2. The financialisation and neglect of social housing

A major contributor to the housing crisis in Sydney has been the failure of successive federal and state governments to bolster the supply of social housing⁵. This is part of a global trend. Even in countries that historically have had a sizeable social housing component, there has been a reconceptualization of social housing.

... [W]e have witnessed a shift away from subsidized rental housing. What arguably

⁴ Since September 2016 the interest rate has been at a record low of 1.5 per cent. The Reserve Bank of Australia (RBA) has constantly expressed concern about the implications of an interest rate rise for the many highly indebted households.

⁵ Historically housing provided by the Australian government has been referred to as public housing. Public housing is administered by the housing authorities of the respective states and territories.

Over the last two decades the profile of government subsidised housing has become more complex with the increasing importance of community housing. Community housing is subsidised housing, the subsidy is provided by government, but the home is not necessarily government built, and the administration is mainly done by non-government organisations. When public housing and community housing are discussed in combination, the term social housing is used.

started with Thatcher's Right to Buy in 1980 became a general and international policy on social housing privatization by the turn of the century (Aalbers, 2017: 543).

Aalbers goes on to argue,

... Funding for social housing was not only cut, but frequently also taken away from the state, making social housing providers increasingly dependent on financial markets for their continued existence (Aalbers, 2017: 543).

In NSW there has been a continuous push by the state government to transfer public housing to community housing providers / non-profit organisations. By the end of 2017, about one in five social housing dwellings in NSW were managed by community housing providers and the aim is to increase this to 35% in the next decade (NSW Government, 2016). Between 2011 and 2016 the number of households in public housing in NSW declined from 111,448 in 2011 to 108,637 in 2016 and in the same period the number of households in community housing increased from 24,298 to 26,897 (Australian Government, 2018) an overall decline of 214 dwellings. In the same period, Sydney's population increased by 432,000. In NSW, the state where Sydney is located, the official waiting list for social housing is around 60,000 households.

Public housing policy in Sydney at present is being driven by a policy called the "Communities Plus program". The program has all the elements of the financialisation of public housing. It involves selling public housing land to developers and creating a social mix of social housing tenants, "affordable housing" (this is partially subsidised rental housing), private renters and homeowners. A proportion of the money generated by the sales to the private sector is reinvested in social housing (NSW Government, 2017). The NSW government has declared that under the program 40,000 private homes will be built and 23,000 new and replacement social housing will be provided over a 15 to 20-year period. The split between new and replacement social housing is not clear.

4.3. Foreign investors loom large

Investment in Australian residential and commercial real estate by foreign investors has grown dramatically in the last decade with proposed foreign investment in residential real estate increasing from \$34.7 billion in 2013-2014 to \$60.8 billion in 2014-2015 and to \$72.4 billion in 2015-2016 (Australian Government, 2017;

Australian Government, 2016). In 2015-2016, residential real estate accounted for 29% of all approved direct foreign investment proposals. Next was manufacturing, electricity and gas with 23% and then commercial real estate with 20% (Australian Government, 2017). Foreign investment in real estate thus accounted for just under half of all foreign direct investment in 2015-2016, equivalent to \$122.1 billion, a 25% increase on the previous year. About a third of all residential real estate approvals were in NSW and almost all NSW approvals would have been in Sydney. The foreign investment rules prevent foreign nationals from purchasing established properties.

The increase in Chinese real estate investment in Australia since 2013 is staggering. The Foreign Investment Review Board approved \$5.9 billion in property investment from Chinese investors in the year ended 30 June 2013, up from \$4.2 billion in 2012 (Brewer, 2014). In the year ending June 2014, Chinese investors spent \$12.4 billion on residential and commercial property and in the year ending June 2015, \$24.3 billion (Somasundaram, 2016; Tan, 2016a). In 2015-2016, Chinese investment in real estate totalled at least \$31.9 billion (Australian Government, 2017). Next highest was the United States with \$8.2 billion. In 2016, it was estimated that 30% of all new housing in Australia was sold to Chinese investors and that this figure is higher in the case of apartments in inner-city areas (Tan, 2016a). Despite a crackdown by the Chinese government on the movement of capital out of China, a Credit Suisse report concluded that foreign buyers accounted for 26% of all new property purchases in NSW (almost all would have been in Sydney) and that Chinese buyers accounted for 87% of the value of foreign purchases in the first half of 2017 (Irvine, 2017). A tightening up on capital outflows by the Chinese government combined with a tightening of rules for investment in residential real estate by foreign investors resulted in a dramatic plunge in investment in the year ending June 2017. Foreign investment in residential real estate fell from \$72 billion in 2015-16 to \$25 billion in 2016-17 (Australian Government, 2018).

The existing federal government legislation allows foreign investment in new residential property without any restrictions. The managing director of Qualitas, a major Australian real estate management firm, commented that it is common in new developments that 40% of purchasers are foreign. Although the internet has greatly facilitated the growth of the global real estate industry (Rogers et al.

2015; Rogers, 2017), a growing trend is Sydney property developers travelling to Shanghai and Beijing to sell apartments off the plan. Several of the larger real estate companies in Sydney have set up China/Asian divisions (Wong, 2017). It is noteworthy that temporary residents who have a visa beyond 12 months, this would include international students, are able to purchase established property (Rogers et al., 2015).

Although foreign investors are not eligible to purchase properties that are not newly built, it would appear that there are various ways around the regulations. One method is using relatives or friends who are citizens. As Wong (2017: 100) argues,

... when studying transnational real estate, it is necessary to take into account the global forces behind the transnational networks and practices of major actors, in particular, the contemporary migrants who become essential buyers or brokers in the transnational social fields.

Besides using contacts within Australia, Chinese-based purchasers are able to obtain a significant investor visa or set up holding companies and buy established properties under Foreign Investment Review Board rules (Tan, 2016b). The data suggest that Australian residential property is a major site for money laundering. In 2016, the Australian Transaction Reports and Analysis Centre [AUSTRAC] confirmed that 5,886 Chinese transactions totalling \$3.36 billion were filed as "suspect matter reports" of which about \$1 billion were related to property transactions (Chung, 2017). In 2015, the Paris based Financial Action Task Force stated that large amounts of money were being laundered out of China into Australian real estate (Chung, 2017).

Chinese investment is no longer confined to the purchase of residential properties built by Australian companies. Some of China's biggest property developers are now involved in the Sydney property market. For example, a state-owned enterprise based in Shanghai, Greenland Holding Group, had four projects worth \$1.4 billion on its books at the end of 2014 (Johanson, 2014). A recent entrant into the Sydney housing market is Yang Huiyan, who is reputed to be one of China's richest women. Her company is heading up a \$500 million project Sydney. A large proportion of these apartments will be bought by Chinese investors off the plan. Wang Peng, a Chinese property developer, commented,

The amount of Chinese developers entering the Australian market is increasing exponentially and the only reason these businesses dare to venture into this market is because there is the scale and the demand (Wen, 2014).

The entry of Chinese developers is also having an impact on prices. They have the capital at their disposal to outbid local developers and in the process push up the price of land. For example, in 2016, the Dahua Group, one of China's largest property companies, outbid three local companies when it purchased a 134-hectare site in Sydney's west (Johanson, 2016).

A contentious and complex question is what impact is the entry of foreign capital having on residential property prices in Sydney. There is no consensus. Rogers et al. (2015) concludes,

While foreign investment may affect the supply of and/or demand for housing, and therefore housing prices, it does not necessarily follow that foreign investment is the sole or even a central cause of house price increases.

The director of a company that specialises in assisting overseas clients acquire property, has a different view: "It is no longer in question of "if" capital inflows from Asia are impacting our property markets, the questions should rather be "how exactly are they doing so?" and "to what extent?" (in Malpass, 2015). Wong (2017: 113) concludes,

Whilst Chinese purchasers made up a small proportion of overall property sales in Australia, they caused [a] disproportionate impact in certain locations such as Sydney.

The impact of Chinese investors on the price of new apartments has been recognised by the Reserve Bank of Australia:

If a significant subset of buyers reduce their demand sharply, this can weigh on housing prices, and Chinese buyers are no exception to this given their growing importance in segments of the Australian market (RBA, 2016).

At the very top end of the property market, Chinese buyers have pushed up prices. Sydney residential property has become a favoured place for extremely wealthy Chinese to invest. During the annual Chinese holiday, the Chinese Golden week, Chinese investors fly into Sydney and in some cases are chauffeured

to prospective high-end properties in 'Rolls Royces' by Mandarin speaking real estate agents (Melocco and Wen, 2016, 2016). In 2015, the home of James Packer, one of Australia's richest individuals, was sold for \$70 million to Chau Chak Wing, a Chinese businessman who also has Australian citizenship. He claimed he did not see the house before the purchase (Macken and Wen, 2015).

5. Conclusions

What is evident is that in order to understand the contemporary housing crisis in Sydney it is necessary to take account of the financialisation of housing. Probably the primary factors underpinning the most recent spike in house prices in Sydney (since 2012) have been the historically low interest rates combined with a tax regime that greatly encourages local investors to invest in residential property. Most housing scholars agree that negative gearing and the generous capital gains tax in a climate of low interest rates, have encouraged investors to enter the Sydney residential real estate market in droves. The scenario of investors outbidding first time homebuyers is a constant theme in the Sydney media.

Besides local investors, the data clearly indicate that in the last five years the impact of foreign investment has become a lot greater. The recent surge in real estate investment by Chinese investors has certainly pushed up the price of housing in new developments, especially in apartment block developments in Sydney's inner-city areas. The increasing presence of Chinese developers has further cemented the impact of Chinese investors. Fears about China's economic stability and house prices, the appreciation of the yuan against the dollar, the large Chinese community in Sydney and the perception that Sydney is a pleasant and safe place in which to invest, have all contributed to Chinese investors viewing Sydney real estate as a sensible and safe investment.

The minimal government support for the social housing sector and the selling off of social housing in gentrifying neighbourhoods (see Morris, 2017), can be tracked back to the financialisation of housing. Successive governments have instilled the belief that housing is not a government responsibility and individuals need to make their own way in the housing market. In addition, public housing land in some areas of Sydney has become extremely valuable and the NSW government is determined to sell off large sections of this public land to developers.

Affordable, adequate and secure housing are essential components of a decent life. However, Sydney's status as a global city in the context of the financialisation of housing makes it likely that for a large part of Sydney's population, housing will continue to be a source of anguish rather than comfort and security.

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Regulation of the Swedish housing market

↳ By Alexandra Leonhard

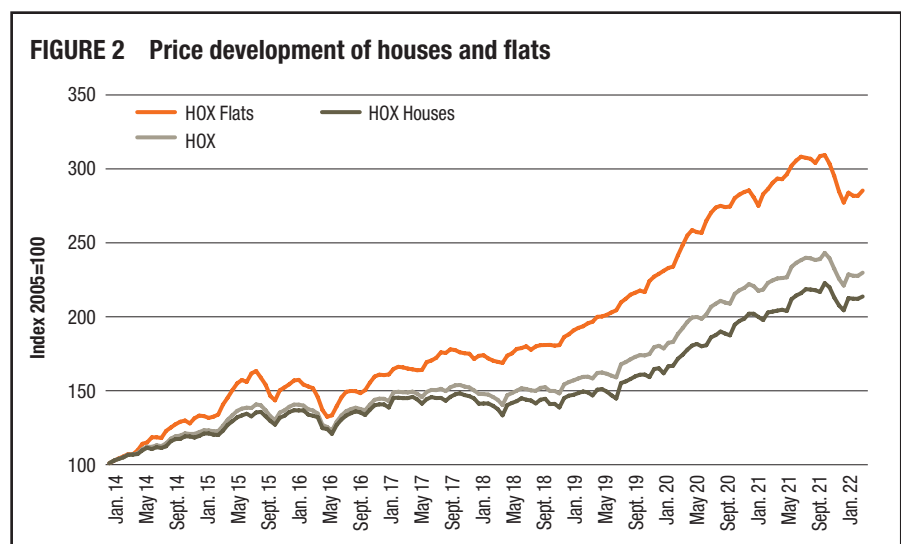
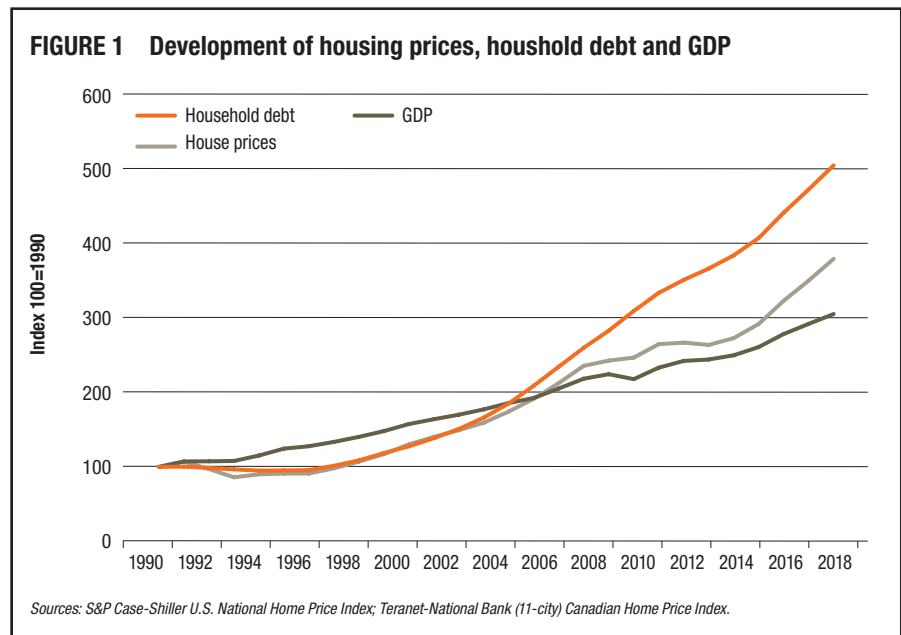
1. Introduction

Housing prices and household debt in Sweden have been trending upwards during the last three decades primarily due to the increased availability of mortgages and shortage of housing in urban areas. Many international observers, OECD, IMF and the European Commission have given this much focus in their analyses, outlooks and recommendations to Sweden. The Swedish authorities and the government share their concern about this unhealthy development. This article will chronologically go through the policy measures implemented to dampen rising prices and growing household debt. However, one can conclude that the measures have not been overly successful in dampening either prices or debt on the aggregate level – until very recently.

Household debt has grown by more than 450% since 1990, whereas GDP has grown 200%. This means that household debt to GDP and household debt to disposable income is currently at 83% and 170%, respectively.

2. Fall of 2010, LTV ceiling is introduced and set at 85%

The global financial crisis only had short-lived negative effects on Sweden and caused only a minor disruption to the growth of debt and house prices. But the developments in countries such as Denmark, the Netherlands and the UK gave insight to what may happen to consumption and economic growth if house prices fall quickly. To slow down the quickly rising prices the Finansinspektion (Swedish Financial Supervisory Agency) introduced a Loan-To-Value [LTV] ceiling. The LTV ceiling was set at 85% and introduced in the fall of 2010. Before, mortgages had rarely exceeded the value for the purchased home, i.e. Sweden did not have a situation like in the Netherlands where the LTV ratio reached 120%. Swedish data from 2008 shows that the average LTV ratio on new mortgages was 70%. The banks



also had a system with two types of mortgages, the so called “base and top” loans. The base was the mortgage with less risk as they had an LTV ratio of around 75-90% depending on institution. The top loan made up the rest and sometimes reached an LTV ratio of 100%. It had a higher interest rate and the bank demanded a quicker repayment. Despite the banks’ higher

interest rate and repayment requirement on the top loan, the average LTV ratio of new mortgages increased over time. In 2002 the average LTV ratio was below 60% but had reached 70% by 2008.

Did the ceiling have an impact on prices and borrowing? The rising prices came to a halt

and stabilised for some years. At the same time the euro-crisis occurred and caused instability in the EU. It is of course impossible to decide if prices were prevented from increasing due to the ceiling or the euro-crisis, the answer is probably that both things affected prices.

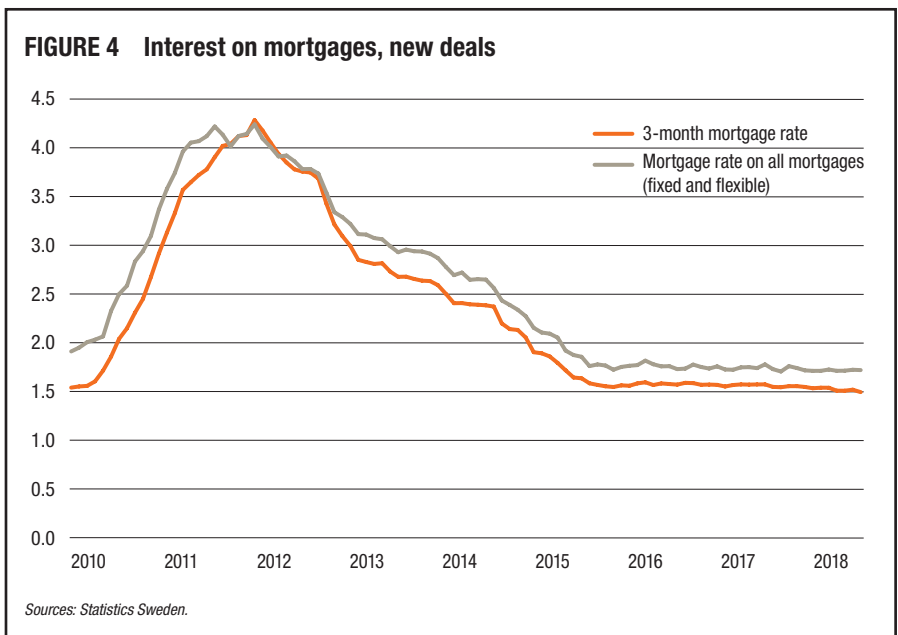
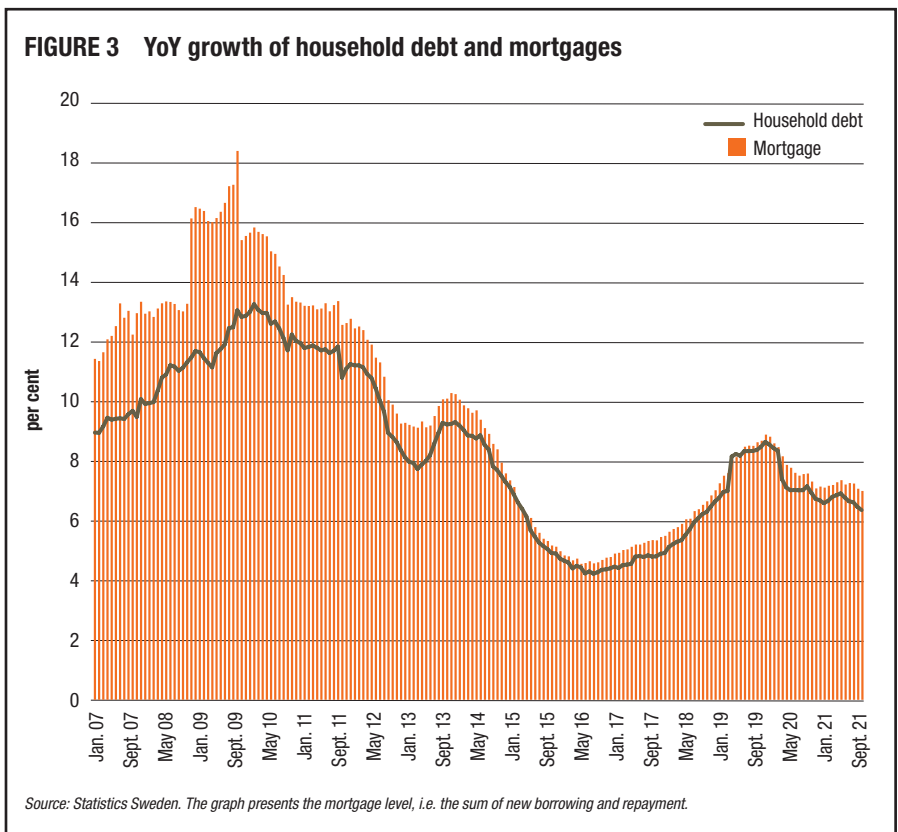
Even though house prices stayed relatively unchanged until 2013, household debt continued to grow at a pace that was faster than house prices. A closer look at household debt shows that it has grown in parallel with the value of mortgage lending. Even though prices did not increase between 2010 and 2013, the net value of lending continued to grow. The annual growth rate came down to 4% in the winter of 2012-13.

The LTV ceiling did have a further impact on the housing market. It makes it more difficult for first time buyers to enter the housing market, as the rule only applies to new mortgages. With prices rising, first time buyers have become more and more reliant on parents or relatives to help them with their equity. There are also some signs that credit without security has increased somewhat after the ceiling was introduced.

3. The Riksbank's policy rate started to increase in 2010; an additional reason for prices to level out?

The interest rate paid on mortgages may, furthermore, provide some answers as to why debt growth slowed in 2011 and then accelerated again in 2013. Lending normally increases when interest rates fall. Starting to increase in 2010, the interest rate on mortgages peaked at 4.2% in December of 2012. This period is when mortgages grew the slowest. As the interest rate started to fall, mortgages began to grow faster.

The increase in the mortgage rate was a consequence of the Riksbank raising the policy rate, first during the summer of 2010 when the policy rate was raised from 0.25 to 0.5 in July. The rate was further increased in small steps of a quarter of a percentage point from July 2010. The policy rate reached 2% in October 2011. The reasoning behind this was that the financial crisis had passed, inflation was above target, reaching 3% (the target being 2%), and GDP had grown by an impressive 4.2% in 2011. But as the euro-crisis caused instability in Europe, the Riksbank started cutting the policy rate in December 2011. It came down to 1% one year later and in March 2015 the policy rate had sunk to -0.25% and the Riksbank began to



stimulate the market by quantitative easing [QE] measures. In December 2016 the policy rate was lowered even further to -0.5% and QE continued. The policy rate is currently still at -0.5% and the Riksbank re-invests in government bonds as they reach maturity. Hence, the policy rate is still very low and so are mortgage rates. After the hike in mortgage interest rate, seen in the graph above, prices began to grow and debt started accelerating.

4. 2013 & 2014, a floor on banks' risk-weights on mortgages is introduced & raised

Under the Basel II regulations banks were allowed to use their own models (approved by the Fininspektion) to calculate risk. Since Swedish banks have never experienced major losses on mortgages in modern times,

mortgage lending appears almost risk-free when using models based on past statistics. This resulted in very low risk-weights on mortgages. On average the risk-weights among the banks were as low as 5%. In two steps the minimum risk-weight on mortgages were raised to 25% by the Finansinspektion¹. This measure, did not, significantly disrupt the rise in house prices or household debt.

5. Stricter over-all capital requirements on banks

In the fall of 2014 the Finansinspektion introduced a package of stricter capital requirements on banks which were to be implemented over the coming years. Their report in December 2017² shows that Swedbank and Handelsbanken have common equity tier [CET] 1 capital of more than 20% of their risk-weighted assets and SEB and Nordea have CET (1) capital of 17.2 and 17.5% respectively.

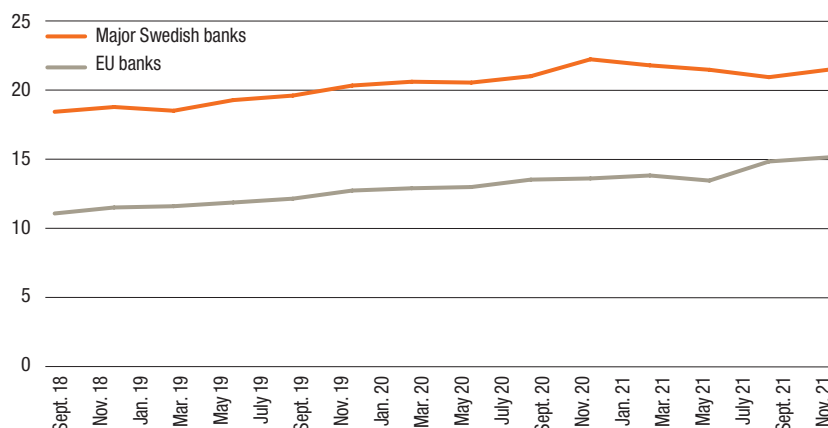
The banks argue that they have had to raise margins on mortgages to build up equity. And the graph below shows just how much larger the margins are now, compared to what they were 10 years ago.

However, as they raised margins to generate more equity, they also raised net profits and the dividends on shares have been substantial.

6. 2014, a repayment recommendation is agreed upon between the Finansinspektion and the bankers' association

Despite, the LTV ceiling and stricter capital requirements, house prices and household debt growth picked up as soon interest rates fell. To stop this development other measures were considered. One thing that made it easy to borrow much money, even with the LTV ceiling, was that banks did not require households to repay their mortgages. An agreement was made between the Finansinspektion and the bankers' association which recommended banks to require their mortgage-customers to repay if their mortgage exceeded 50% of the property's market value. It was recommended that they amortise 2% of the mortgage annually when the LTV was above 70% and 1%, down to 50% LTV. Even though this was

FIGURE 5 Risk weighted CET-1 ratio



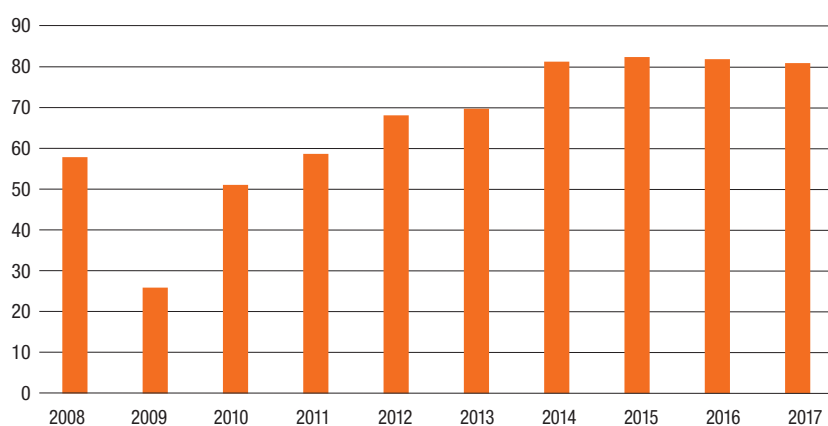
Source: Finansinspektionen, May 2018.

FIGURE 6 Margins on mortgages



Source: Macrobond.

FIGURE 7 Total Net profit in the four major banks in SEK billion



Source Finansinspektionen, May 2018.

¹ The Riksbank's strong suggestion has been 35% for many years.

² It can be found at www.fi.se and by direct link: https://www.fi.se/contentassets/b2daaf0c7da74f1f8705974ea77f21a4/kapital_pm_2017q4_rev180309.pdf

a step in the right direction it did, as with the LTV ceiling, only apply to new mortgages. But with the low mortgage rates, the repayment recommendation had practically no impact on the aggregate development of house prices and mortgage growth. The recommendation has been superseded, as a requirement was introduced two years later.

7. 2016, repayment requirement is introduced in June

During the talks of a requirement some banks followed the recommendation from 2014 with more or less flexibility – some scored larger market shares. It may be that the talk raised awareness among households about the need to start to repay. Surveys from the Finansinspektion show that the rate of repayment has risen. The proportion of households with debt that now repay has increased. However, the period before borrowers completely repay their mortgages is still long, as when the LTV-ratio reaches 50% households no-longer have to repay.

The talks of a repayment requirement may have had a positive effect on house prices. They rose quickly in 2015 and the first part of 2016. Annually, prices grew by 13% in 2016 and almost 9% in 2017, with some geographical differences.

At the same time the stock of mortgages grew at an annual rate of 8%.

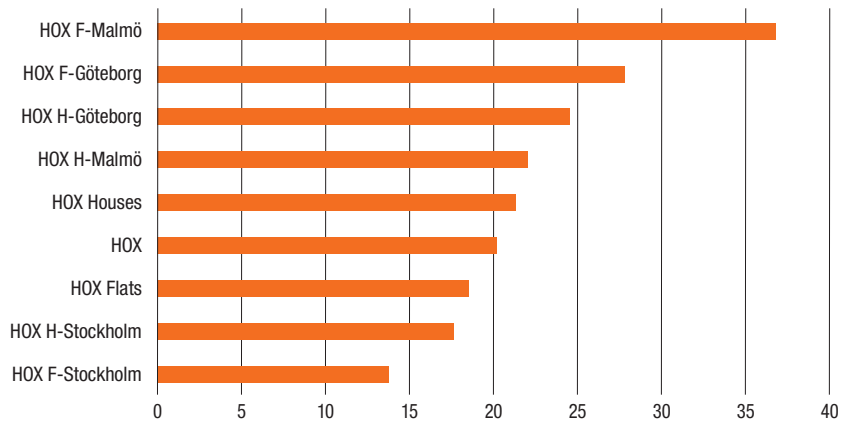
8. 2018, sharpened repayment requirement is introduced in March

As the price of housing seems to be accelerating, further measures had to be taken. Finally, the Finansinspektion started to look at the size of mortgages relative to households' income. A sometimes-heated discussion on the merits of a debt-to-income ceiling began. Agencies, actors in the market and politicians continued to look at the value of the home. However, as we know, this value can fluctuate and when it loses value, the bank and household are reliant on the income of the household to keep paying interest and survive without having to sell.

The sharpened requirement is explained by the Finansinspektion in this way:

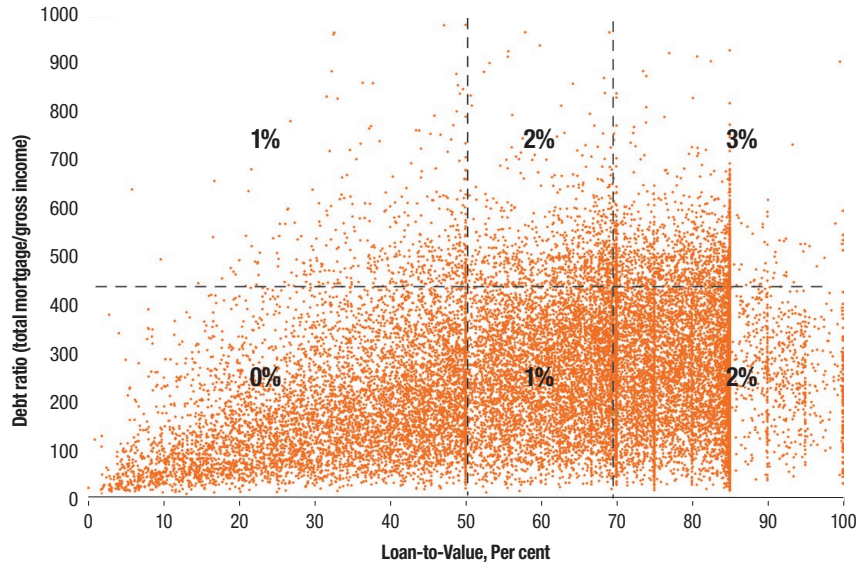
Debt to income is presented on the vertical axis and it shows that if you have a mortgage that is more than 450% of your gross income you will have to repay 1% of the mortgage annually. Hence, if you have an LTV-ratio of 75% and a debt ratio above 450% you must repay 3%.

FIGURE 8 Price increase from June-15 to June-17



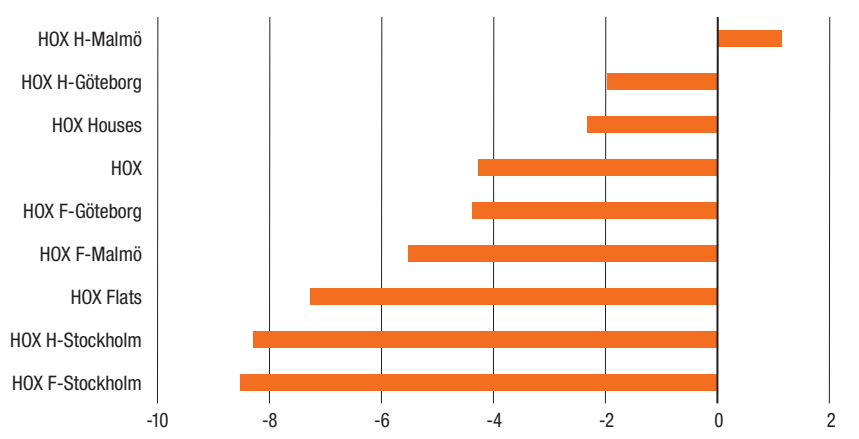
Source: Valueguard.

FIGURE 9 How the sharpened repayment requirement works



Source: Finansinspektionen.

FIGURE 10 Price change from April-17 to April-18



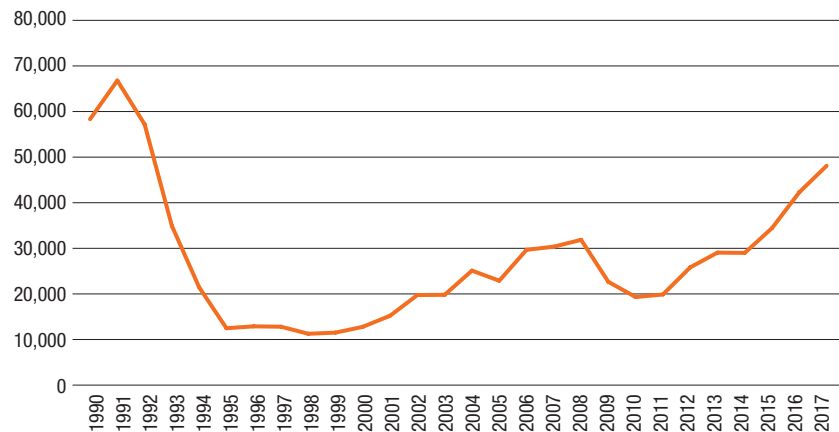
Source: Valueguard.

So, what has happened to prices and mortgages? Well, the stock of mortgages is still growing at a rate of more than 6% annually. Prices, on the other hand, have fallen since the peak in April last year in all regions and across all types except for houses in Malmö.

There are, of course, other factors that may explain the fall of prices. Construction has been booming with almost 50 000 new homes completed in 2017.

The larger supply of houses had a dampening effect on house prices. A large number of new homes has been constructed in Stockholm and in the major university cities during the last couple of years. In these cities there is an excess supply of newly built apartments. The market for owner occupied houses is more balanced than the market for owner-occupied apartments. The government has supported the construction sector by giving support to, among other things, investments in student homes, homes for the elderly, as well as cleaning of land that has been contaminated thus hindering construction in attractive areas to a value of around 6 billion SEK in 2018. These programmes are relatively small and have just been introduced.

FIGURE 11 Number of completed homes, per annum



Source: Statistics Sweden.

Therefore, their impact on housing construction has so far been very modest.

With the banks looking more at households' income, the high price level may in itself cause problems for those wishing to obtain credit as incomes are not increasing as fast as prices

have. Both repayment requirements seem to have affected Stockholm the most looking at the price movement. The price level is significantly higher in Stockholm compared to Göteborg and Malmö, so it makes sense that measures that are anchored to your income, more or less implicitly, will have an effect on your borrowing.

European Federation for Living: Spring Conference 2018

↳ By Alix Goldstein

The European Federation for Living [EFL] recently concluded their 2018 spring conference held in Paris, France. A large number of housing professionals gathered at the headquarters of Paris Habitat, the largest housing association in the city, to learn, discuss, and exchange ideas on alternative models for financing affordable housing. Polylogis, a French housing association, and PERL, a French real estate consultancy firm, hosted the conference alongside Paris Habitat.

High profile speakers addressed the audience and shared their knowledge and visions. Professor Christine Whitehead from the London School of Economics gave a detailed presentation on different financial models for affordable housing across Europe. She explained the history of social housing and the move to private funding. Current approaches to financing the sector include shifts towards other sources of subsidies, particularly public land, inclusionary zoning, regulatory requirements, and tariffs and guarantees, regeneration, including densification and mixed-use redevelopments, strong existing asset bases to allow borrowing at relatively low interest rates; and the use of bonds, complex financial instruments, and sales. Higher rent to existing tenants is the most traditional way of funding housing, but is also underpinned with political tension. Professor Whitehead spoke about major trends in the sector and the challenges associated with a reduction in funding from the State. She saw worsening income distribution in many European countries and increasing problems of revalorization as the predominant challenges facing European social housing. Professor Whitehead set the stage for significant discussions on alternative financing models in the affordable housing sector.

On the heels of Professor Whitehead came best practice presentations from four European countries. Ms. Marina Alcalde-Irisson, CFO of Paris Habitat, presented on the French situation. She explained how French investment in social housing is high. Unlike other European

countries, France continues to build social dwellings regardless of the economic environment. This is imperative because 1.8 million people want social housing in France, a third of whom live in Paris. Around 12,000 people are allotted housing in Paris every year. It is very hard to move from social dwellings to rental dwellings in Paris. The gap is enormous, and, therefore there is not a lot of housing turnover. Paris is committed to reducing its backlog. The responsibility for housing is shared between the state and local authorities. They have made an agreement: social housing must account for 25% of all dwellings by 2025. Paris wishes to go even further and aspires to reach 30% by 2030.

Mr. Harry Platte, CEO of the Netherlands-based housing association, Parteon, presented on the Dutch situation. Social housing in the Netherlands was subsidized by the state until 1995. It is still highly dependent on the government but financially independent. 7.4 million homes exist in the country, 2.2 million of which are social homes, comprising almost a third of all homes. 20 billion euros were put into the social housing sector to start off privatization processes. As a result, values increased, rent decreased, and taxes grew to more than 35% of total rental income. In reaction, Dutch housing associations had to predominantly focus on return on investments.

Gewobag is a housing association in Berlin, Germany. Mr. Markus Terboven a board member of the organization, presented on the German context of social housing. Gewobag is completely owned by the city of Berlin, however, they have to self-finance themselves. They use the European Investment Bank as a main funding source to finance new construction.

Mr. Austen Reid, Group Director of Development of the U.K. based housing association Clarion, and Ms. Helen Wilson, Head of Strategic Partnership and Projects also at Clarion, presented on the British housing situation. Mr. Reid explained the maturity process of social housing associations over the last

30 years. In the 1980's, if an association made a loss, it could be claimed back from the government. Now, housing associations must be more self-sufficient. In a climate where there is significant reduction in capital subsidy for new housing, owner-occupation is in decline, and the rental sector increasingly fills the gap, the social housing sector is simultaneously residualized. Clarion wants to generate profit from sales, asset disposal, and the rental portfolio. There is an emergence of many housing associations taking a more commercial position, focusing on affordability but also developing mixed tenure. Mixed tenure provides flexibility in meeting housing targets.

Ms. Carine Bernede, Director of Green Spaces and Biodiversity at Paris City Hall spoke about green spaces in the urban area of Paris and making the city more sustainable. She focused on rooftop gardens and how to create projects that are successful and profitable. She was followed by Magister Susanne Bauer, Chairman of the Eurocities Working Group on Housing. Susanne Bauer explained the concept of Eurocities and its Eurovision. She described how 81.5 million Europeans are housing cost 'overburdened,' spending more than 40% of their income on housing. Increasing prices and supply shortages only exacerbate the housing affordability gap. Development land is not a commodity or economic asset like any other. It is not mobile, it is not possible to replace it, and it cannot be reproduced. There are other challenges, alongside land availability, to housing affordability as well. These include economic and demographic pressures, lack of credit or public finance, and supply delivery blockages. Susanne Bauer indicated that policy responses, such as social and affordable supply programs, finance and subsidy mechanisms to assist target groups, and planning mechanisms, are ways to help decrease the housing affordability gap.

Examples of alternative models for financing affordable housing continued with the United States. Dr. Anita Blessing and Dr. Rob Wiener

explained the current American context. Many Europeans might wonder how low-income people in the uber-capitalistic United States can be housed? What many may not know is the large amount of government help provided to the public housing sector. The key to success is to fit regulations to investors' motivations and provide incentives. The low-income tax credit is a federal tax exemption that was created as a response to red-lining. The government awards developers credit for proposals for affordable rentals that best fit federal and local criteria. The developers trade the credits to a syndicator. The syndicator sells the credits to investors for development capital to help finance the affordable project. Investors can then write off the tax. This is the main source of equity for affordable rentals. The U.S. Community Reinvestment Act, enacted in 1977, was developed in part as a response to red-lining, a practice prevalent in the United States. This Act provided public disclosure of bank lending patterns and developed societal responsibilities for banks with access to tax payer-funded benefits. It also assessed services and community development of affordable housing, the low-income housing tax credit, community facilities, cheap loans to not-for-profit housing providers, and social banks. Ultimately, Dr. Blessing left the group with a few lessons Europe can learn from the U.S. These included participatory governance and empowering local communities to negotiate sustainable investment; connecting regulation to investors' different motivations,

such as profit, reputation legitimacy, and opportunism; involving investors in development of regulation; untapped governance powers for sustainable finance; and new investment solutions for disadvantaged areas.

Dr. Rob Wiener built off Dr. Blessing's presentation with specific examples of financing models conducted in California. In 2006, the California Global Warming Solutions Act created the Cap and Trade program and the Greenhouse Gas Reduction Fund [GGRF]. The Cap and Trade program essentially made private companies pay the State for the right to pollute. This provided incentives for companies to reduce greenhouse gas emissions. The Cap section of Cap and Trade sets firm, annual limits on greenhouse gas emissions per industry and creates penalties for exceeding the caps. Emissions now decline 3% every year. The Trade section of Cap & Trade develops a carbon market for companies to buy and sell allowances that permit them to emit certain amounts of greenhouse gases. Payments from Cap and Trade contribute in part to the large GGRF, which also funds housing projects holistically. Since 2014, 20% of this fund is required to go towards affordable housing and transit improvements, and 50% is required to go towards disadvantaged populations.

Following the presentations on the U.S. situation, Dr. Mathias Hain gave guests an update on the status of EFL Expertise and

EFL as a social impact tool. EFL Expertise wishes to bring investors that would like to invest in sustainable projects together with housing associations. They want to make it clear that housing is a safe and sustainable investment. Dr. Jean-Pierre Schaefer of the National Committee for Cities in France complimented Dr. Hain's presentation well with more information about social impact investing. Dr. Schaefer explained how impact investing is a small, but growing trend, especially in the Netherlands and Denmark. Characteristics of impact investment include intentionality, competitive financial return, long-term horizon and range of asset classes, and impact measurement. Sustainable investment grows faster.

The EFL conference ended just as it began, with a bang. Within the theme of the conference, alternative models for financing affordable housing, EFL positions itself at the core of current discussions on the future of affordable housing. Reduced public funding for social housing all over Europe requires new solutions, and sharing of effective ideas across European countries is one way to discover positive results.

EFL is a non-profit organization made up of 56 member and associates organizations from 13 European countries. Members include social housing associations, universities and research institutes, and private businesses working in the affordable housing sector. EFL represents 1.2 million affordable homes across Europe.



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